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	Hardware, Internet &	World W1	ide Web an	nd Produc	ctivity	ty tools	s incluc	dıng W	/ord, E	ixcel,	Power	Point	, and	Publis	sher.	-
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Cours	Able to Perform Hard	ware trou	hleshootin	a unders	stand	l Hardy	vare co	omnon	ents a	nd inte	er dene	enden	cies			
$\frac{cor}{cor}$	To Understand about the internet and its associated technologies															
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	Task 1: Identify the p	eripherals	s of a comp	puter, con	mpon	nents in	n a CP	U and	its fur	nctions	. Drav	v the	block	t diagr	am	of
	the CPU along with th	ne configu	ration of e	each perip	pheral	al and s	submit	to you	ur inst	ructor.						
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	Task 3: Every student	t should in	ndividually	y install N	MS wi	vindow	vs on th	ne pers	sonal c	omput	ter. La	b inst	ructo	r shou	ld	
	verify the installation and follow it up with a Viva.															
	Task 4: Every student should install Linux on the computer. This computer should have windows installed. The															
	system should be configured as dual boot with both Windows and Linux. Lab instructors should verify the															
	installation and follow	v it up wit	h a Viva.													
02				Interne	et & V	World	l Wide	e Web								
	Task1: Orientation &	Connectiv	vity Boot (Camp: Stu	tudent	nts shou	uld get	conne	ected to	o their	Local	Area	Netw	/ork ai	nd	
	access the Internet. In the process they configure the TCP/IP setting. Finally, students should demonstrate, to the															
	instructor, how to acco	ess the we	bsites and	l email. If	f there	re is no	o intern	net con	nectiv	vity pre	eparati	ons n	eed to	obe m	ade	by
	the instructors to simu	late the V	VWW on t	the LAN.	•											
	Task 2: Web Browser	rs. Surfing	the Web:	Students	s custo	tomize	their v	veh br	owser	s with	the LA	AN m	oxv s	setting	rs.	
	bookmarks, search too	olbars and	l pop-up bl	lockers. A	Also,	, plug-i	ins like	Macr	omedi	ia Flas	h and	JRE f	for ap	plets :	shou	ald
	be configured.												_	-		
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	Task 4: Cyber Hygier	ne: Studen	nts would b	be expose	ed to t	the va	rious t	hreats	on the	e inter	net and	l wou	ıld be	askec	lto	
	configure their compu	uter to be	safe on the	e internet	et. The	ney nee	ed to ci	ustom	ize the	eir brov	wsers	to blo	ock po	эр		
03		winoaus i		Word		Google	docun	nent								
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	Task 1: Word & Goog	gle docum	ent Orient	tation: Th	he mei	entor n	eeds to	o give a	an ove	rview	of Mic	crosof	ft (MS	S) offi	ce&	Z
	Google document, Im	portance	of MS offi	ice & Goo	ogle d	docum	ient, D	etails	of the	four ta	asks ar	nd fea	tures	thatw	oul	d
	be covered, using word & Google document – Accessing, overview of toolbars, saving files, Using help and															
	resources, rulers, lorm	nai paintei	ι.													
	Task 2: Using Word &	& Google	document	to create	e a pro	roject c	certific	ate. Fe	eatures	s to be	covere	ed: - 1	Form	atting	Fon	ıts,
	Drop Cap, Applying T	ſext effect	ts, Using C	Character	Space	cing, B	Borders	s and C	Colors,	Inser	ting He	eader	and l	Footer	, Us	sing

	Date and Time option
	Task 3: Creating project abstract Features to be covered: -Formatting Styles, inserting table, Bullets and Numbering, Changing Text Direction, Cell alignment, Footnote, Hyperlink, Symbols, Spell Check, Track Changes.
	Task 4: Creating a Newsletter: Features to be covered: - Table of Content, Newspaper columns, Images from files and clipart, Drawing toolbar and Word Art, Formatting Images, Textboxes, Paragraphs and Mail Merge.
04	Excel & Google Sheet
	Excel & Google sheet Orientation: The mentor needs to tell the importance of MS office & Google sheet, give the details of the four tasks and features that would be covered in each. Using Excel & Google sheet – Accessing, overview of toolbars, saving excel files, Using help and resources.
	Task 1: Creating a Scheduler - Features to be covered: Gridlines, Format Cells, Summation, auto fill, Formatting Text
	Task 2: Calculating GPA - Features to be covered: - Cell Referencing, Formulae – average, std. deviation, Charts, Renaming and Inserting worksheets, Hyper linking, Count function, LOOKUP/VLOOKUP
	Task 3: Split cells, freeze panes, group and outline, Sorting, Boolean and logical operators, Conditional Formatting.
05	Power point & Google Presentation
	Task 1: Students will be working on basic power point utilities and tools which help them create basic power point presentations. PPT Orientation, Slide Layouts, Inserting Text, Word Art, Formatting Text, Bullets and Numbering, Auto Shapes, Lines and Arrows.
	Task 2: Interactive presentations - Hyperlinks, Inserting –Images, Clip Art, Audio, Video, Objects, Tables and Charts.
	Task 3: Master Layouts (slide, template, and notes), Types of views (basic, presentation, slide slotter, notes), and Inserting – Background, textures, Design Templates, Hidden slides.
06	Google Forms
	Task 1: Students will be working on basic Google form utilities and tools which help them create basic forms- Creating custom form, sharing the form, getting responses, question types in forms.
	Task 2: Templates in google forms: Purpose of template, Template gallery, creating own template.
	Task 3: Limitations of google forms: File upload restrictions, absence of pop-up forms.
07	Case Studies based on the concepts covered in the syllabus
Refer	ence Books:
01	Comdex Information Technology course tool kit Vikas Gupta, WILEY Dreamtech
02	The Complete Computer upgrade and repair book, 3rd edition Cheryl A Schmidt, WILEY Dreamtech
03	Introduction to Information Technology, ITL Education Solutions limited, Pearson Education.
04	IT Essentials PC Hardware and Software Companion Guide Third Edition by David Anfinson and Ken Quamme. – CISCO Press, Pearson Education.
05	IT Essentials PC Hardware and Software Labs and Study Guide Third Edition by Patrick Regan – CISCO Press, Pearson Education.
A 140	native NDTEL/SWAVAM Courses
Alter 01	https://elearn.nptel.ac.in/shop/nptel/digital-skilling/?v=c86ee0d9d7ed
01	hups.//eteam.npter.ac.ni/shop/npter/ugnar-skining/.v=co0cc00/0//cu

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DEPARTMENT OF INFORMATION TECHNOLOGY

1. PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

PEO 1: Produce industry ready graduates having the ability to apply academic knowledge across the disciplines and in emerging areas of Information Technology for higher studies, research, employability, product development and handle the realistic problems.

PEO 2: Graduates will have good communication skills, possess ethical conduct, sense of responsibility to serve the society and protect the environment.

PEO 3: Graduates will have excellence in soft skills, managerial skills, leadership qualities and understand the need for lifelong learning for a successful professional career.

PROGRAMME OUTCOMES (POs)

Engineering Graduates will be able to:

1. Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

2. Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

3. Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

4. Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

5. Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

6. The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

7. Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

9. Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

10. Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

11. Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

12. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

1. Ability to design, develop, test and debug software applications, evaluate and recognize potential risks and provide innovative solutions.

2. Explore technical knowledge in diverse areas of Information Technology for upliftment of society, successful career, entrepreneurship and higher studies.

VISION OF THE DEPARTMENT

To be a premier Information Technology department in the region by providing high quality education.

MISSION OF THE DEPARTMENT

• Nurture young individuals into knowledgeable, skilful and ethical professionals in their pursuit of Information Technology.

• Transform the students through excellent teaching learning process and sustain high performance by innovations.

• Extensive partnerships and collaborations with foreign universities.

• Develop industry-interaction for innovation and product development.

5. Evaluation Criteria

For practical subjects, there shall be a Continuous Internal Evaluation (CIE) during the semester for 30 internal marks and 70 marks are assigned for Lab/Practical End Semester Examination (SEE). Out of the 30 marks for internals, day-to-day work in the laboratory shall be evaluated for 10 marks towards lab report, 10 marks for conduct of experiments and results, 5 marks for viva-voce will make as one set of marks secured in CIE of lab session. The average of 10 best set of marks secured by student out of total lab sessions held. Besides, 5 marks towards the final % of attendance of lab sessions attended by the student in that practical subject.

5.1 Allocation of Internal Marks

Total marks for lab internal are 30 marks. Marks distribution is as follows

Lab Report	10 marks
Experiment setup/ Program Writing and Execution	10 marks
Viva-voce	5 marks
% of Attendance	5 marks

5.2 Allocation of External Marks

Total marks for lab External are 70 marks. Marks distribution is as follows.

Program Writeup	30 marks
Execution and Result	20 marks
Viva-voce	10 marks
Record	10marks

6. Introduction about Lab

There are 30 systems installed in this lab. Their configurations are as follows:

- All systems are configured in single mode i.e., Students can boot from Windows XP or Linux as per their lab requirement. This is very useful for students because they are familiar with different operating systems so that they can execute their programs in different programming environments.
- Software installed: windows operating systems and Linux operating systems and application software's like Microsoft office, as per the lab requirements.
- Systems are provided for students in the 1:1 ratio.
- Systems are assigned numbers and same system is allotted for students when they do the lab.

i) Standard Operating Procedure (SOP)

a) Explanation about the experiment by the concerned faculty using PPT covering the following aspects:

- 1. Name of the experiment/Aim
- 2. Software/Hardware required
- 3. Commands with suitable options
- 4. Test Data
 - 1. Valid data sets
 - 2. Limiting value sets
 - 3. Invalid data sets
- b) Writing of shell programs by the students
- c) Compiling and execution of the program

ii) Writeup in the Observation Book

Observation book format is as follows:

- a) Name of the Experiment/Aim
- b) Software/Hardware required
- c) Commands with suitable options
- d) Test Data
 - 1. Valid Data Sets
 - 2. Limiting Value Sets
 - 3. Invalid Data Sets
- b) Results for Different Data Sets
- c) Viva voice Question and Answers
- d) Errors Observed during Compilation and Execution
- e) Signature of the Faculty

7. Guidelines to the Students

a) Disciplinary to be maintained by the students

- > Students are asked to carry their lab observation book and record book.
- Students must use the equipment's with care, any damage caused to the equipment by the student is punishable.
- > Students are not allowed to use their cell phones/pen drives/CDs.

- > Student need to maintain proper dress code.
- Student are supposed to occupy the systems allotted to them.
- > Students are not allowed to make noise in the lab.
- After completion of each experiment student need to update their observation notes and same to be reflected in the record.
- Lab records need to be submitted after completion of each experiment and get it corrected with the concerned lab faculty.
- If a student is absent for any lab, he/she need to complete the experiment in the free time before attending the next lab.

b) Steps to perform experiment

- Students have to write the date, aim, software and hardware requirements for the experiment in the observation book.
- Students have to listen and understand the experiment explained by the faculty and note down the important points in the observation book.
- > Students need to write procedure/algorithm in the observation book.
- Student must analyze and develop/implement the logic of the program in the respective platform.
- After successful execution the results need to be shown to the faculty, and the same must be noted in the observation followed by viva voice.

c) Instructions to maintain the record

- Weekly updation of the record is a must before the commencement of the next lab session.
- Incase the record is lost the student must write all the experiments and inform the same to the respective faculty.
- > Records must be submitted in time, if not their evaluation marks will be deducted.

1. PC Hardware

Task 1: Identify the peripherals of a computer, components in a CPU and its functions. Draw the block diagram of the CPU along with the configuration of each peripheral and submit to your instructor.

Introduction to Computer Hardware:

Hardware is the physical appearance of the devices or tools. It is what which we can touch and feel. Computer Hardware consists of the Monitor, CPU, Keyboard, Mouse and all other devices connected to the computer either externally or internally.

The Mother Board

There are primarily two types of motherboards, AT motherboard, and ATX motherboard. AT mother boards. The AT and ATX motherboards differ in the form factor. Full AT is 12" wide x 13.8" deep, and Baby AT is 8.57" wide x 13.04" deep. Full-ATX is 12" wide x 9.6" deep and Mini-ATX is 11.2" wide x 8.2" deep. Other major differences include power supply connector, and keyboard connector. AT has 5-pin large keyboard connector, whereas ATX has 6-pin mini connector. Similarly, AT has single row two connectors \pm -5V, and \pm -12V, whereas ATX motherboard has double row single connector providing \pm -5V, \pm -12V, and \pm 3.3V.

The important constituent components of an ATX Motherboard are given below:



USE & KEYBOARD
 PARALLEL PORT
 RAM SLOTS
 IDE CONTROLLER
 CMOS BATTERY
 CPU SLOT

USB
 CPU CHIP
 FLOPPY CONTROLLER
 PCI SLOTISA SLOT
 AGP SLOT
 POWER SUPPLY PLUG IN

1. Mouse & keyboard:

Keyboard Connectors are two types basically. All PCs have a Key board port connected directly to the motherboard. The AT-style keyboard connector is quickly disappearing, being replaced by the smaller mini DIN PS/2-style keyboard connector.

2. USB (Universal serial bus):

USB is the General-purpose connection for PC. You can find USB versions of many different devices, such as mice, keyboards, scanners, cameras, and even printers. a USB connector's distinctive rectangular shape makes it easily recognizable. USB has a number of features that makes it particularly popular on PCs. First, USB devices are hot swappable. You can insert or remove them without restarting your system.

3. Parallel port:

Most printers use a special connector called a parallel port. Parallel port carry data on more than one wire, as opposed to the serial port, which uses only one wire. Parallel ports use a 25-pin female DB connector. Parallel ports are directly supported by the motherboard through a direct connection or through a dangle.

4. CPU Chip:

The central processing unit, also called the microprocessor performs all the calculations that take place inside a pc. CPUs come in Variety of shapes and sizes. Modern CPUs generate a lot of heat and thus require a cooling fan or heat sink. The cooling device (such as a cooling fan) is removable, although some CPU manufactures sell the CPU with a fan permanently attached.

5. RAM slots:

Random-Access Memory (RAM) stores programs and data currently being used by the CPU. RAM is measured in units called bytes. RAM has been packaged in many different ways. The most current package is called a 168-pin DIMM (Dual Inline Memory module).

6. Floppy controller:

The floppy drive connects to the computer via a 34-pin ribbon cable, which in turn connects to the motherboard. A floppy controller is one that is used to control the floppy drive.

7. IDE controller:

Industry standards define two common types of hard drives: EIDE and SCSI. Majority of the PCs use EIDE drives. SCSI drives show up in high end PCs such as network servers or graphical workstations. The EIDE drive connects to the hard drive via a 2-inch-wide, 40-pin ribbon cable, which in turn connects to the motherboard. IDE controller is responsible for controlling the hard drive.

8. PCI slot:

Intel introduced the Peripheral component interconnect bus protocol. The PCI bus is used to connect I/O devices (such as NIC or RAID controllers) to the main logic of the computer. PCI bus has replaced the ISA bus.

9. ISA slot (Industry Standard Architecture):

It is the standard architecture of the Expansion bus. Motherboard may contain some slots to connect ISA compatible cards.

10. CMOS Battery:

To provide CMOS with the power when the computer is turned off all motherboards comes with a battery. These batteries mount on the motherboard in one of three ways: the obsolete external battery, the most common onboard battery, and built-in battery.

11. AGP slot:

If you have a modern motherboard, you will almost certainly notice a single connector that looks like a PCI slot, but is slightly shorter and usually brown. You also probably have a video card inserted into this slot. This is an Advanced Graphics Port (AGP) slot

12. CPU slot:

To install the CPU, just slide it straight down into the slot. Special notches in the slot make it impossible to install them incorrectly. So, remember if it does not go easily, it is probably not correct. Be sure to plug in the CPU fan's power.

13. Power supply plug in:

The Power supply, as its name implies, provides the necessary electrical power to make the pc operate. The power supply takes standard 110-V AC power and converts into +/-12-Volt, +/-5- Volt, and 3.3-Volt DC power.

CPU (Processor):

The central processing unit (CPU, occasionally central processor unit) is the hardware within a computer system which carries out the instructions of a computer program by performing the basic arithmetical, logical, and input/output operations of the system.



• The Central Processing Unit takes the input data from the input devices and processes it according to the set of instructions.

• After that generate the output and sends the output to the output devices.

The CPU is composed three parts

i. ALU: Arithmetic Logical Unit (ALU) is used to do the arithmetic operations on data by adding, subtracting, dividing, multiplying and incrementing and decrementing.

• It is also used for Logical operations like AND, OR, NOT and X-OR.

ii. CU: Control unit is mainly used for generating the electronic control & timing signals for program execution.

• It controls all the operations of the computer.

iii. Registers: CPU also possesses the memory to hold the data temporarily during the execution of an instruction.

• These are small memory locations in CPU.



Fig: Block Diagram of Computer

SMPS (Switched mode Power Supply):

A switched-mode power supply (switching-mode power supply, SMPS, or switcher) is an electronic power supply that incorporates a switching regulator to convert electrical power efficiently.



Cabinet:

A computer cabinet is an enclosure with fitted, fixed or removable side panels and doors. The cabinet contains a computer rack for mounting computers or other electronic equipment.



CPU heat Sink and fan

A computer fan is any fan inside, or attached to, a computer case used for active cooling, and may refer to fans that draw cooler air into the case from the outside, expel warm air from inside, or move air across a heat sink to cool a particular component.



RAM (Random Access Memory)

RAM (random access memory) is the place in a computer where the operating system, application programs, and data in current use are kept so that they can be quickly reached by the computer's processor. RAM is much faster to read from and write to than the other kinds of storage in a computer, the hard disk, floppy disk, and CD-ROM. However, the data in RAM stays there only as long as your computer is running. When you turn the computer off, RAM loses its data. When you turn your computer on again, your operating system and other files are once again loaded into RAM, usually from your hard disk.



HDD (Hard Disk Drive):

The hard disk is housed inside the hard drive, which reads and writes data to the disk. The hard drive also transmits data back and forth between the CPU and the disk.



FDD (Floppy Disk Drive)

A Floppy Disk Drive (FDD) is a hardware device used to read from and write data onto floppy disks, which are removable storage media that were widely used for data storage and transfer in the late 20th century. Floppy disk drives were commonly found in personal computers, video game consoles, and other devices. Here's more about it:

Key Features of Floppy Disk Drives:

Size & Form Factor: The most common floppy disk sizes were 3.5 inches and 5.25 inches, with the 3.5-inch disk being the more widely used in the later years.

Storage Capacity: The storage capacity of floppy disks ranged from 360 KB for single-sided 5.25-inch disks to 1.44 MB for high-density 3.5-inch disks.

Read/Write Mechanism: The drive used a magnetic head to read and write data on the floppy disk's magnetic surface. It was a mechanical device that moved the disk to access different sectors.

Media: Floppy disks were typically made of a flexible disk coated with magnetic material and enclosed in a plastic casing. These disks could be removed and reused for data storage. Evolution:

5.25-inch Floppy Disk: The original floppy disk, introduced in the 1970s, was 8 inches but later reduced to 5.25 inches. It could hold 360 KB of data.

3.5-inch Floppy Disk: Introduced in the 1980s, this smaller and more durable disk could hold up to 1.44 MB of data. It became the industry standard for PCs until the early 2000s.



CD-ROM Drive

A CD-ROM Drive (Compact Disc Read-Only Memory Drive) is a type of optical disk drive that is used to read data stored on CD-ROMs (Compact Discs), which are typically used for distributing software, music, and other data in a digital format. Unlike floppy disks, which store data magnetically, CD-ROMs use laser technology to read and write data.

Key Features of a CD-ROM Drive:

Reading Data: CD-ROM drives use a laser to read data encoded in the form of microscopic pits and lands (the bumps and flat areas on the surface of the disc) that are encoded in a spiral track from the center of the disc outward.

Data Storage Capacity: A standard CD-ROM can hold up to 700 MB of data, which was a significant improvement over floppy disks, which only stored a few megabytes of data.

Media: The CD-ROM itself is a 120 mm (4.7 inches) optical disc, typically made of polycarbonate plastic and coated with a reflective metal layer (usually aluminum) where the data is stored.

Read-Only: As the name suggests, CD-ROMs are "read-only," meaning the data stored on them cannot be modified. Once data is written to a CD-ROM, it cannot be altered. (Writable versions of CDs, such as CD-R and CD-RW, allow users to burn their own data onto them.)

Operation:

Laser Technology: Inside the drive, a laser beam is directed at the surface of the CD, and the reflected light is analyzed by a detector to interpret the data. The pattern of pits (indentations) and lands (flat areas) represents binary data (1s and 0s).

Data Access: CD-ROM drives read data sequentially, meaning they must access the data in the order it appears on the disk. For faster access, some drives have caching or buffer memory that stores frequently accessed data temporarily.



CD Writer

A CDROM (compact disk read-only memory), also written as CD-ROM, is a type of optical storage media that allows data to be written to it only once.



Different Screws Used



AGP (Accelerated Graphics Port) Card

Stands for "Accelerated Graphics Port." AGP is a type of expansion slot designed specifically for graphics cards.



LAN (Local Area Network) card

A network interface card (NIC) is a computer circuit board or card that is installed in a computer so that it can be connected to a network. Personal computers and workstations on a local area network (LAN) typically contain a network interface card specifically designed for the LAN transmission technology, such as Ethernet or token ring.





Task 2: Every student should disassemble and assemble the PC back to working condition.

Parts of Computer System

The computer system is made up of following external devices:

- □ CPU Cabinet
- □ Monitor
- □ Keyboard
- □ Mouse
- □ Printer/scanner [if attached]



Switch off the power supply and detach power cable



Remove The CPU Cabinet Cover



Detach Internal Cables







Remove Hard Disk Drive



Remove RAM

Disassembling the computer system

1. Detach the power cable:

The disassembling of the computer system starts with externally connected device detachment. Make sure the computer system is turned off, if not then successfully shut down the system and then start detaching the external devices from the computer system. It includes removing the power cable from electricity switchboard, then remove the cable from SMPS (switch mode power supply) from the back of the CPU Cabinet. Do not start the disassembling without detaching the power cable from the computer system. Now remove the remaining external devices like keyboard, mouse, monitor, printer or scanner from the back of CPU cabinet.

2. Remove the Cover:

The standard way of removing tower cases used to be to undo the screws on the back of the case, slide the cover back about an inch and lift it off. The screwdrivers as per the type of screw are required to do the task.

3. Remove the adapter cards:

Make sure if the card has any cables or wires that might be attached and decide if it would be easier to remove them before or after you remove the card. Remove the screw if any, that holds the card in place. Grab the card by its edges, front and back, and gently rock it lengthwise to release it.

4. Remove the drives:

Removing drives is easier. There can be possibly three types of drives present in your computer system, Hard disk drive, CD/DVD/Blue-ray drives, floppy disk drives (almost absolute now a day). They usually have a power connector and a data cable attached from the

device to a controller card or a connector on the motherboard. CD/DVD/Blue Ray drive may have an analog cable connected to the sound card for direct audio output.

The power may be attached using one of two connectors, a Molex connector or a Berg connector for the drive. The Molex connector may require to be wiggled slightly from side to side and apply gentle pressure outwards. The Berg connector may just pull out or it may have a small tab which has to be lifted with a screwdriver.

Now Pull data cables off from the drive as well as motherboard connector. The hard disk drive and CD/DVD drives have two types of data cables. IDE and SATA cables. The IDE cables need better care while being removed as it may cause the damage to drive connector pins. Gently wiggle the cable sideways and remove it. The SATA cables can be removed easily by pressing the tab and pulling the connector straight back.

Now remove the screws and slide the drive out the back of the bay.

5. Remove the memory module:

Memory modules are mounted on the motherboard as the chips that can be damaged by manual force if applied improperly. Be careful and handle the chip only by the edges. SIMMs and DIMMs are removed in a different way:

• **SIMM** - gently push back the metal tabs while holding the SIMM chips in the socket. Tilt the SIMM chip away from the tabs until a 45% angle. It will now lift out of the socket. Put SIMM in a safe place.

• **DIMM**- There are plastic tabs on the end of the DIMM sockets. Press the tabs down and away from the socket. The DIMM will lift slightly. Now grab it by the edges and place it safely. Do not let the chips get dust at all.



Remove the power supply:

The power supply is attached into tower cabinet at the top back end of the tower. Make sure the power connector is detached from the switchboard. Start removing the power connector connected to motherboard including CPU fan power connector, cabinet fan, the front panel of cabinet power buttons and all the remaining drives if not detached yet. Now remove the screws of SMPS from the back of the cabinet and the SMPS can be detached from the tower cabinet.

6. Remove the motherboard:

Before removing all the connectors from the motherboard, make sure u memorize the connectors for assembling the computer if required, as that may require connecting the connectors at its place. Remove the screws from the back of the motherboard and you will be able to detach it from the cabinet. Now remove the CPU fan from the motherboard. The heat sink will be visible now which can be removed by the pulling the tab upward. Finally, the processor is visible now, which can be removed by the plastic tab which can be pulled back one stretching it side way.



Remove the motherboard

Assembling the computer system

The assembling of the computer system is exactly the opposite of disassembling operation. Before starting assembling the computer system, make sure you have the screws and a screwdriver for those.

The first step for assembling the computer system starts with mounting the processor on the processor socket of the motherboard. To mount the process, you don't need to apply any force. The special ZIF (zero insertion force) sockets are usually used to prevent any damage to the processor pins. Once the processor is mounted, the heat sink will be attached on top of the processor. The CPU fan is also attached on top of the heat sink. Now the motherboard is

to be fixed vertically in the tower case and the screws are fixed from behind of the motherboard.

Now line up the power supply at the top back end of the cabinet and screw it. The power connectors for motherboard power supply and CPU fan power supply are to be connected. If the cabinet cooling FAN is required then it is to be screwed at the back-end grill of the cabinet and its power connector is to be connected from SMPS.

Install the CD/DVD drives at the top front end of the cabinet and screw it. Install the Hard disk drive and floppy disk drive below CD/DVD drive and screw it. Make sure once screwed there is no vibration in either of the CD/DVD, Hard disk or Floppy disk drives.

Now select the appropriate data cable and connect one end of the cable to its drive socket and another end at its appropriate connector on the motherboard. For SATA hard disk drive or CD/DVD drives use SATA cable and its power cable, else use IDE data cable. Do the proper jumper settings as per the usage requirement.

It is time now to mount the memory modules on the motherboard by aligning the RAM to its socket on the motherboard and press it downward. Make sure the side tab are fixed into the RAM notch. If not, you may still have to press a bit.

Install the internal cards to its socket and attach the cables or power cable to it. The selection of right socket or slot is required as per the type of socket.

Cover the tower by placing it and pressing towards front side and screw it. Connect the external devices with CPU at its appropriate socket. It includes mouse and keyboard at PS2 or USB connectors. Monitor at the video output socket. Connect the power cable to the back of tower in SMPS. Plug in the power cable to the electric board.

Task 3: Every student should individually install MS windows on the personal computer.

AIM: To install Windows XP

PROCEDURE:

1. Keep on press the delete button and go to advanced BIOS feature.[BIOS- Basic Input Output System]

2. And go to boot sequence. Select first boot drivers. CD ROM and press F10 to save the bios feature. Yes and then enter. Press any key to boot from CD. Press enter to setup windows XP. $3 E_{R} = T_{0}$ agree the license

- 3. F8 = To agree the license.
- 4. Press ESC to don't repair the windows XP setup.
- 5. Press 'p' to delete the previous partitions. Then press enter.
- 6. Press 'L' to delete the partition.
- 7. Press 'C' to create the partition in the un partition space.

8. Press enter to setup windows XP on the selected items. BASIC FILE SYSTEMS: FAT: File Allocation Table.

NTFS: New Technology File System.

Format using NTFS partition BASIC STEPS IN INSTALLATION:

- \Box Collecting information.
- □ Dynamic update.
- □ Preparing installation
- \Box Installing windows.
- \Box Tracking installation.

 $\hfill\square$ Select the language as English (United States), then press ok. Enter your name and organization.

 \Box Enter the product key.

 $\hfill\square$ Enter the computer name and give password (if necessary) then ok. Then select the date and time.

 \Box Then select the typical setting.

Windows XP Installation process

Installing Windows XP can take up to two hours. To make the process more manageable, it has been broken up into several sections. When you are ready, install Windows XP:

- Part 1: Begin the installation Part 2: Continue the installation
- Part 3: Complete the installation

Part 1: Begin the installation

Insert the Windows XP CD into your computer and restart your computer. If prompted to start from the CD, press SPACEBAR. If you miss the prompt (it only appears for a few seconds), restart your computer to try again. Press any key to boot from CD..

Windows XP Setup begins. During this portion of setup, your mouse will not work, so you must use the keyboard. On the Welcome to Setup page, press ENTER.

 \Box Windows XP Setup begins. During this portion of setup, your mouse will not work, so you must use the Keyboard. On the Welcome to Setup page, press ENTER.



 \Box On the Windows XP Licensing Agreement page, read the licensing agreement. Press the PAGE DOWN key to scroll to the bottom of the agreement. Then press F8.



 \Box This page enables you to select the hard disk drive on which Windows XP will be installed. Once you complete this step, all data on your hard disk drive will be removed and cannot be recovered. It is extremely important that you have a recent backup copy of your files before continuing. When you have a backup copy, press D, and then press L when prompted. This deletes your existing data.



 \Box Windows XP erases your hard disk drive using a process called formatting and then copies the setup files. You can leave your computer and return in 20 to 30 minutes.

	Please wait while Setup formats the partition
C:	Partition1 [New (Raw)] 16370 MB < 16370 MB free>
	on 16379 MB Disk 0 at Id 0 on bus 0 on atapi [MBR].
-	
	tup is formatting 35%
Se	
Se	

Part 2: Continue the installation

 \Box Windows XP restarts and then continues with the installation process. From this point forward, you can use your mouse. Eventually, the Regional and Language Options page appears. Click Next to accept the default settings. If you are multilingual or prefer a language other than English, you can change language settings after setup is complete.

Regional a You car	nd Language Options n customize Windows XP for different regions and langu	ages.
3	Regional and Language Options allow you to change currencies and the time are displayed. You can also a languages, and change your location setting.	the way numbers, dates, dd support for additional
	The Standards and formats setting is set to English (U location is set to United States.	nited States), and the
	To change these settings, click Customize.	Customize
	Text Input Languages allow you to enter text in many a variety of input methods and devices.	different languages, using
	Your default text input language and method is: US ke	eyboard layout
	To view or change your current configuration , click D	etails. Details

 \Box On the Personalize Your Software page, type your name and your organization name. Some programs use this information to automatically fill in your name when required. Then, click Next.

indows XP Pr	ofessional Setup		J
Personalize Setup u XP softv	e Your Software ses the information yo vare.	u provide about yourself to personalize your Windows	2
Æ	Type your full name	and the name of your company or organization.	
	Na <u>m</u> e:	Tony Allen	
	Organization:	Contoso, Inc.	
		< Back Next >	

 \Box On the Your Product Key page, type your product key as it appears on your Windows XP CD case. The product key is unique for every Windows XP installation. Then, click next.

Part 3: Complete the installation

□ Windows XP will spend 20 or 30 minutes configuring your computer and will automatically restart when finished. When the Display Settings dialog appears, click OK. On the Thank you! Page, click Finish.



TASK 4: Every student should install Linux on the computer. This computer should have windows installed. The system should be configured as dual boot with both windows and Linux.

Linux Installing Steps:

Step 1. Download the .iso or the OS files onto your computer from this link <u>http://www.ubuntu.com/download/desktop</u>.

Step 2. Burn the files to a CD.

Step 3. Boot your computer from the optical drive and follow the instructions as they come.

Download Ubuntu

Visit this link to download Ubuntu.



You can select 32/64-bit versions as per your choice.

PART C) Create a Machine in Virtual Box Step-1) Open Virtual box and click on new button

Oracle VM VirtualBox Manag	ger 🖸 🛋 🏵
File Machine Help	C Details C Snapshots
Terringo Start Davard	Wekcome to VirtualBox! The left part of this window is a list of all virtual machines on your computer. The list is empty now because you haven't created any virtual machines yet. In order to create a new virtual machine, press the New button in the main tool bar located at the top of the window. You can press the F1 key to get instant help, or visit www.virtualbox.org for the latest information and news.

Step-2) In next window, give the name of your OS which you are installing in virtual box. And select OS like Linux and version as Ubuntu 32 bit. And click on next

G Create	e Virtual Machine
Name Please of type of be used Name: Type: Version:	and operating system thoose a descriptive name for the new virtual machine and select the operating system you intend to install on it. The name you choose will throughout VirtualBox to identify this machine. UBNTU Linux Ubuntu (32 bit)
	Hide Description Next Cancel

Step-3) Now Allocate Ram Size To your Virtual OS. I recommended keeping 1024mb (1 GB) ram to run Ubuntu better. And click on next.

	? ×
Create Virtual Machin	ne
Memory size	
Select the amount of me virtual machine.	mory (RAM) in megabytes to be allocated to the
The recommended memo	ory size is 512 MB.
·····	1024 🖨 MB
4 MB	4096 MB
	Next Cancel

Step-4) Now To run OS in virtual box we have to create virtual hard disk, click on create a virtual hard drive now and click on create button.

The virtual hard disk is where the OS installation files and data/applications you create/install in this Ubuntu machine will reside

? <mark>- × -</mark>
Create Virtual Machine
Hard drive
If you wish you can add a virtual hard drive to the new machine. You can either create a new hard drive file or select one from the list or from another location using the folder icon.
If you need a more complex storage set-up you can skip this step and make the changes to the machine settings once the machine is created.
The recommended size of the hard drive is 8.00 GB.
O not add a virtual hard drive
 Create a virtual hard drive now
Use an existing virtual hard drive file
Empty 👻 🐼
Create Cancel

Step-5) select VHD (virtual hard disk) option and click on next.

? <u>×</u>
Create Virtual Hard Drive
Hard drive file type
Please choose the type of file that you would like to use for the new virtual hard drive. If you do not need to use it with other virtualization software you can leave this setting unchanged.
VDI (VirtualBox Disk Image)
VMDK (Virtual Machine Disk)
VHD (Virtual Hard Disk)
HDD (Parallels Hard Disk)
QED (QEMU enhanced disk)
QCOW (QEMU Copy-On-Write)
Hide Description Next Cancel

Step-6) Click on dynamic allocated and click on next. This means that the size of the disk will increase dynamically as per requirement.



Step-7) Allocate memory to your virtual hard drive .8GB recommended. Click on create button.

File location and	l size					
Please type the name folder icon to select a	of the new virtual h different folder to o	hard drive fil create the fi	e into the b le in.	ox below or	click on t	he
UBNTU						
Select the size of the file data that a virtual	virtual hard drive in machine will be able	megabytes	This size is the hard d	the limit on t	the amou	unt
		0			8	.00
4.00 MB		Ģ		2.00 TB		.00
4.00 MB		Q , ,	1 1 1	2.00 TB		.00
4.00 MB		Ģ <u>,</u>		2.00 TB		.00

Step-8) Now you can see the machine name in left panel

File Machine Help		
New Settings Start Disca	> [d	Details 🞯 Snapshots
UBNTU	📃 General	Preview
Operation Off	Name: UBNTU Operating System: Ubuntu (32 bit)	
	System	
	Base Memory: 1024 MB Boot Order: Floppy, CD/DVD, Hard Disk Acceleration: PAE/NX	UBNTU
	Display	
	Video Memory: 12 MB Remote Desktop Server: Disabled Video Capture: Disabled	
	Storage	
	Controller: IDE IDE Secondary Master: [CD/DVD] Empty Controller: SATA SATA Port 0: UBNTU.vhd (Normal, 8.00 GB)	
	Audio	j
	Host Driver: Windows DirectSound Controller: ICH AC97	

So a Machine (PC) with 8GB Hardisk, 1GB RAM is ready.

How to Install Ubuntu

Step 1) Select the Machine and Click on Start

Oracle VM VirtualBox Manage	r	
File Machine Help		
New Settings Start Discard		Details 💿 Snapshots
UBITU	General	Preview
Powered Off	Name: UBNTU Operating System: Ubuntu (32 bit)	
	System	
	Base Memory: 1024 MB Boot Order: CD/DVD, Hard Disk, Floppy Acceleration: PAE/NX	UBNTU
	Display	
	Video Memory: 12 MB Remote Desktop Server: Disabled Video Capture: Disabled	
	Storage	
	Controller: IDE IDE Primary Master: [CD/DVD] ubuntu-14.04-desktop-i386. Controller: SATA SATA Port 0: UBNTU.vhd (Normal, 8.00 G8)	iso (970.00 MB)
	Audio	
	Host Driver: Windows DirectSound Controller: ICH AC97	
	(= .	
		See

Step 2) Select the Folder Option



Step 3) Select the Ubuntu iso file

🖉 🚺 🚺 ədm	in 🕨	Downloads >	*	Search D	ownloads	-
Organize 🔻 New	folder				800 -	
🔆 Favorites	â	Name	Date modified Type Size 3/24/2014 6:17 PM File folder 4/23/2014 11:42 AM File folder 4/23/2014 11:42 AM File folder 4/21/2014 11:52 AM File folder 4/25/2014 11:52 AM File folder 4/25/2014 11:59 PM File folder 4/25/2014 1:59 PM File folder 4/25/2014 1:59 PM File folder 4/26/2014 1:50 PM File folder Select a file to preview. 5/5/2014 10:47 AM ISO File 993,			
E Desktop		🔒 audio	3/24/2014 6:17 PM	File folder		
😹 Downloads		3 Compressed	4/23/2014 11:42 AM	File folder		
Secent Places		3 Documents	4/21/2014 11:52 AM	File folder		
L Google Drive	H	JDM Latest 7.1 Full Version Cracked For E	5/5/2014 10:07 AM	File folder		
😹 Сору		😹 Music	4/25/2014 1:59 PM	File folder		
Stopbox		📕 Programs	4/22/2014 4:00 PM	File folder		Select a
		Video	4/16/2014 1:04 PM	File folder		to previ
Jubraries	-	wbuntu-14.04-desktop-i386	5/5/2014 10:47 AM	ISO File	993,	
da Apps			le ds >			
Documents						
J Music						
E Pictures						
Videos	-	e[•	
F	ile nar	ne: I		All virtual	ontical disk file	es (*.dr. 🔻
	ine men	ine (I		Antituder	optical alsk int	C) (.01

Step 4) Click Start



Step-5) You have an option to Run Ubuntu WITHOUT installing. In this tutorial will install Ubuntu



Step-6) Click continue.



Step-7) Select option to erase the disk and install Ubuntu and click on install now. This option installs Ubuntu into our virtual hard drive which is we made earlier. It will not harm your PC or Windows installation

ITU [Running] - Oracle VM VirtualBox ne View Devices Help				ferrally.	
			1	En	•
Install					
Installation type					
This computer currently has no detected operating systems. What would you like to do?					
Erase disk and install Ubuntu Warning: This will delete any files on the disk.					
Encrupt the new Uburbu installation for security					
You will choose a security key in the next step.					
Use LVM with the new Ubuntu installation This will set up Logical Volume Management. It allows taking snapshots and easier partition resizing.					
C Samethian alca					
You can create or resize partitions yourself, or choose multiple partitions for Ubuntu.					
	Ouit	Back	6	tall Nou	5
	Quit	Dock	-	Latt NOV	2
		20.4-			


Step-8) Select your location for setting up time zone, and click on continue

Step-9) Select your keyboard layout, by default English (US) is selected but if you want to change then, you can select in the list. And click on continue

English (US) English (US) - Cherokee English (US) - English (Colemak) English (US) - English (Dvorak alternative international no dead keys) English (US) - English (Dvorak, international with dead keys) English (US) - English (Dvorak, international with dead keys) English (US) - English (US, alternative international) English (US) - English (US, alternative international)
Back Continue

Step-10) Select your username and password for your Ubuntu admin account. This information has been needed for installing any software package into Ubuntu and also for login to your OS. Fill up your details and tick on login automatically to ignore login attempt and click on continue

BNTU (Running) - Oracle VM VirtualBox		(contrest in
nine view perices nep		🛞 🏣 🖪 👀
🐵 Install		
Who are you?		
		5 m
Your name:	shahid	
Your computer's name:	shahid-VirtualBox	
	The name it uses when it talks to other computers.	
Pick a username:	shahid	
Choose a password:	Fair password	
Confirm your password:	••••••	
	O Log in automatically	
	Require my password to log in	
	Encrypt my nome rolder	
	Back	Continue
		Continue

Step-11) Installation process starts. May take up to 30 minutes. Please wait until installation process completes.

2010 UBNTU (Running) - Oracle VM VirtualBox		
Machine View Devices Help	-	t₄ En 40) 🕸
Welcome to Ubuntu 14.04		
Fast and full of new features, the latest version of Ubuntu makes computing easier than ever. Here are just a few cool new things to look out for	>	
► Installing system	Skip	
	•	
B O P	e 🗐 🖷	Right Ctrl





2. Internet & World Wide Web

Task 1: Orientation & Connectivity Boot Camp: Connected to the Local Area Network and access the Internet. Configure the TCP/IP setting.

CONNECTING LAN on PC

Note: Do not connect the LAN cable until instructed.

- On the PC, click Start, then Control Panel, then Network Connections
- Click Local Area Connection
- In the dialog box, click on Properties
- Select Internet Protocol (TCP/IP) then click Properties

 A rest of the state of the second seco		LANGUAR
is compaction uses the	following James	
Client for Micros	oft Networks	
File and Printer S	haring for Microsof	t Networks
🛛 📳 QoS Packet Sch	neduler	
Internet Protocol	(TCP/IP)	
Instal	Uninstal	Properties
Description	<u></u>	S
Transmission Control Pr wide area network prot across diverse intercon	otocol/Internet Pro ocol that provides o nected networks.	tocol. The default communication
	ALC: THE PARTY OF	

- Select Use the following IP address
- Enter an IP address and Subnet mask. For example:
- IP address: 141.121.74.0
- Subnet mask: 255.255.0.0

neral	
ou can get IP settings assigne is capability. Otherwise, you n e appropriate IP settings.	d automatically if your network supports eed to ask your network administrator fo
C Obtain an IP address auto	matically
 Use the following IP address 	HE
IP address:	141 . 121 . 74 . 0
Subnet mask:	255.255.0.0
Default gateway:	12 (2) 20 T
C Obtain DNS server addres	as automotically
Use the following DNS se	rver addresses:
Preferred DNS server:	
Alternate DNS server:	
	Advanced.

- Click OK
- Click Close
- Click Close

Task 2: Web Browsers, Surfing the Web: Students customize their web browsers with the LAN proxy settings, bookmarks, search toolbars and pop-up blockers. Also, plug-ins like Macromedia Flash and JRE for applets should be configured.

Web Browsers

A web browser is a software application that allows users to access and view content on the internet. It retrieves information from a web server and displays it on the user's device.



Surfing the Web

• Web browser provides the means to the searching and also helps to download the web content.

- Web browsers support most of the famous Internet Protocols like HTTP,FTP.
- Common file formats a browser accepts are HTML
- Well known browsers natively support a variety of other formats in addition to HTML such as JPEG,PNG,GIF image formats

• Different web browsers available in the market are: Silver Smith, Mosaic, Netscape, Mozilla, Opera, Lynx, Safari, Alta Vista, Ask Jeeves, sssGoogle

Bookmark:

Each web browser is built-in with the support of Internet Bookmarks which serve as a named anchor – primarily to URLs. The primary purpose of this book mark is to easily catalog and access web pages that the web browser user has visited or plans to visit, without having to navigate the web to get there. Or It in a browser is a saved URL for a web page that allows you to quickly access it again without having to type in the address or search for it

Add book mark in Chrome browser

Add book mark--->open any web site---> click on three dots à book marks and list---> Book mark this tab---> Give any name a press done.

Show all book marks in Chrome browser

Show book marks---> click on three dots à book marks and list--->Show all book marks

Pop-up Blockers:

It is a program that prevents pop-ups from appearing in a browser, such as from a webpage or multiple internet windows. Most browsers have a built-in pop-up blocker that's enabled by default. Pop-up blockers are useful for preventing annoying ads from interrupting you while you're browsing a page. However, they can also block useful information, such as option screens for printing or downloading, or pop-ups that confirm downloads or show page results. You may need to disable your pop-up blocker to access information that appears in a new window, open a login screen, or print something.

Navigation:

chrome://settings/content/popups?search=pop

Plug-ins:

A plug-in is a software component program that interacts with a main application to provide a better integration of the media. The basic difference between application programs and plug-ins is that multimedia files are launched in a separate window where as in plug-ins multimedia play in the browser window.

Few famous plugins are:

- Apple Quick Time
- Macromedia flash
- Microsoft Media Player
- Adobe Shockwave
- Sun Micro systems Java Applet

Search Toolbars / Browser Toolbar

It is an add-on that enhances a browser's functionality and improves the user's browsing experience. Toolbars are specific to each browser and must be installed in the corresponding browser before they can be used.

1. In Google type: search toolbars chrome plug-in

2. Choose:

https://chromewebstore.google.com/detail/searchbar/fjefgkhmchopegjeicnblodnidbammed?hl =en

Macromedia Flash browser plug-ins

The Macromedia Flash plug-in, now known as Adobe Flash, was used to create and play interactive multimedia content, such as videos, presentations, and websites, in web browsers

Macromedia Flash chrome plugin

 In Google type: Macromedia Flash chrome plug-in
 Choose: <u>https://chromewebstore.google.com/detail/flash-player-for-</u> chrome/oakbcaafbicdddpdlhbchhpblmhefngh

JRE for applets should be configured

The Java Runtime Environment (JRE) is software that Java programs require to run correctly. Java is a computer language that powers many current web and mobile applications. The JRE is the underlying technology that communicates between the Java program and the operating system.

Applet: It is a java small program that is embedded in another application or software platform to perform a specific task which makes web pages more interactive and dynamic. **Compiling: javac appletname.java, Running: appletviewer appletname.java, Run under HTML page also.**

```
Helloworld applet program
```

```
import java.applet.Applet;
import java.awt.Graphics;
public class HelloWorld extends Applet {
    // This method is called when the applet is loaded
    public void paint(Graphics g) {
        // Display "Hello, World!" on the applet window
        g.drawString("Hello, World!", 20, 30);
    }
}
```

The <applet> HTML tag was used to embed Java applets (small Java applications) in web pages. It was widely used in the late 1990s and early 2000s to provide interactive content like games, animations, and forms. However, the <applet> tag has been deprecated and is no longer supported in modern browsers (starting from Java 9, released in 2017). As of now, it is

considered obsolete, and developers are encouraged to use alternative technologies like HTML5, JavaScript, and CSS for interactive web content.

<applet code="AppletName.class" width="300" height="200"> Your browser does not support Java applets. </applet>

Attributes of the <applet> Tag

Here are the common attributes used with the <applet> tag:

code: Specifies the Java class file (e.g., AppletName.class) to be loaded and executed by the applet.

width: Specifies the width of the applet (in pixels).

height: Specifies the height of the applet (in pixels).

align: Specifies the alignment of the applet with respect to surrounding content.

alt: Provides alternative text to be displayed if the applet cannot be run.

name: Names the applet, which can be used to refer to the applet in JavaScript.

archive: Allows you to specify a JAR (Java ARchive) file containing the applet's class files.

ssExample of Using the <applet> Tag

<applet code="HelloWorld.class" width="300" height="200">

<param name="message" value="Hello, World!">

Your browser does not support Java applets.

</applet>

In this example:

The code attribute specifies the Java class HelloWorld.class.

The width and height define the size of the applet.

A <param> element is used to pass parameters (in this case, the message "Hello, World!").

Procedure To Configure Lan Proxy Settings:

- select tools menu in Internet Explorer
- Select Internet Options
- Select Connections
- You end up in two options
- $\hfill\square$ Dial-up and virtual network settings
- □ LAN setting

• The selection at this step is dependent on the kind of connection you are trying to configure. They are:

- \Box Dial-up modem connection
- \square LAN connection
- $\hfill\square$ DSL or Cable modem

Task 3: Search Engines & Netiquette: Students should Know What Search engines are and how to use the search engines.

Search Engines

It is software that helps users find information on the web by searching for keywords or phrases. Search engines use algorithms to rank websites based on how relevant they are to the search query. Search engines Examples: Google Search, Bing, Yahoo, Brave Search, Yandex Search, DuckDuckGo, Baidu, Startpage, Naver e.t.c

Limitations:

Search engines visit web sites only several weeks. Search engines cannot see information in other data bases later on. On the internet a search engine is a coordinated set of programs that includes: A spider (crawler or bot) that goes to every page or representative pages on every web site that wants to be searchable and reads it , using hypertext links on each page to discover and read site's other pages.

Pros:

- You can select the search terms
- You can use the same search terms with multiple search engines
- You can change search terms as much as you wish
- You will normally receive numerous links
- Its fast

Cons:

• There are so many different search engines it may be difficult to choose

• You will normally receive too many links often making it difficult to identify the most relevant sites.

• The vast majority of links may be only marginally relevant or altogether irrelevant

Meta Search Engines:

Meta search engines or "met crawlers" don't crawl the web themselves. Instead they search the resources of multiple search engines by sending a search to several search engines at once aggregating the result.

Pros:

- You only need to use one search tool which is time- efficient
- You only need to learn how to use one search engine reducing learning curve
- You benefit from the difference among several search tools at once

Cons:

• Meta search services may not be able to leverage each individual search engines full range of query tools resulting in less refined searches

• You cannot personally select the search engines queried by meta search services.

Task 4: Cyber Hygiene: Students would be exposed to various threats on the internet & would be asked to configure their computer to be safe on they need to customize their browsers to block pop ups, block active x downloads to avoid viruses or worms

Antivirus:

Antivirus software is a program that either comes installed on your computer or that you purchase and install yourself. It protects your computer against most viruses, worms, Trojan horses and other unwanted invaders that can make your computer sick.

Firewall:

A firewall is a special software or hardware designed to protect a private computer network from unauthorized access. A firewall is a set of related programs located at a network gateway server which protects the resources of the private network from users from other networks.

Viruses:

It is a program that spreads by first infecting files or the system areas of a computer or network router's hard drive and then making copies of itself. Some viruses are harmless, others may damage data files, and some may destroy files.

- ijpes of thases							
Virus Name	Purpose						
Resident	It is present in RAM and takes acces your system operations.						
Multipartite	It spreads by performing unauthorized actions on OS, folders, & programs.						
Direct Action	t attaches to .COM or .EXE and infect, modify files in a computer's						
	lirectory spreading itself to other systems.						
Browser	t infects your browser and redirects you to malicious websites.						
Hijacker							
Overwrite	It destroys data stored in computer by overwriting it with random data						
Web Scripting	It take control of your browser, changing its settings, redirects to						
	fraudulent sites, sending spam / even stealing sensitive data (login						
	credentials)						
File Infector	By targeting executable files (.exe), file infector viruses slow down						
	programs and damage system files when a user runs them.						
Network	Network viruses travel through network connections and replicate						
	themselves through shared resources.						
Boot Sector	It slowdowns system, disappear files, encrypt files and corrupts os.						
FAT	It damages FAT, DOS files access and crash entire system.						

Types of viruses

Students would be exposed to various threats on the internet & would be asked to configure their computer to be safe on they need to customize their browsers to block pop ups, block active x downloads to avoid viruses or worms

To help students configure their computers and browsers for safety on the internet, it's important to teach them how to make their browsers more secure. Here are steps to customize popular browsers for blocking pop-ups, blocking ActiveX downloads, and avoiding viruses or worms:

1. Blocking Pop-Ups

Pop-ups can be a source of annoyance and potential security threats. Most modern browsers provide built-in options to block pop-ups. Here's how students can configure their browsers:

Google Chrome

- 1. Open Google Chrome.
- 2. Click the three-dot menu (top right) and select Settings.
- 3. Scroll down and click on Privacy and security.
- 4. Select Site Settings.
- 5. Under the **Content** section, click **Pop-ups and redirects**.
- 6. Set the option to **Blocked** (recommended).

2. Blocking ActiveX Downloads (Internet Explorer / Edge Legacy)

ActiveX controls were once used to enable certain web content but can also be a source of security vulnerabilities. Modern browsers like Chrome and Firefox do not support ActiveX, but if using **Internet Explorer** or **Microsoft Edge Legacy**, students should disable it for safety.

Internet Explorer

- 1. Open Internet Explorer.
- 2. Click the gear icon in the upper right corner and select Internet Options.
- 3. Go to the **Security** tab.
- 4. Click on **Custom level**.
- 5. Scroll down to the ActiveX controls and plug-ins section.
- 6. Disable the following settings:
 - Run ActiveX controls and plug-ins: Set to Prompt or Disable.
 - Script ActiveX controls marked safe for scripting: Set to Prompt or Disable.
- 7. Click **OK** to save the settings.

3. Avoiding Viruses and Worms

Viruses and worms can often be spread through malicious websites, downloads, and email attachments. Here's how to configure browsers to avoid security threats:

Enable Security Features in Browsers:

Google Chrome:

- 1. Open Chrome.
- 2. Click the **three-dot menu** and go to **Settings**.
- 3. Under **Privacy and security**, ensure the following settings are enabled:
 - **Safe Browsing (Enhanced Protection)**: This provides extra protection against dangerous websites.
 - **Protect you and your device from dangerous sites**: Ensure this is enabled to block malicious sites and downloads.

Enable Antivirus and Anti-Malware Software:

Browsers are important, but ensuring that **antivirus software** is active on the computer is key. Students should have an antivirus program installed and set to update regularly. Popular antivirus software includes:

• Windows Defender (built into Windows)

- Norton Antivirus
- McAfee
- Kaspersky

4. Additional Security Measures

- **Update Software Regularly**: Ensure that both the browser and operating system are always up to date with the latest security patches.
- Use a Firewall: Always have a firewall enabled on the computer to block unauthorized access to the network.
- **Be Careful with Downloads**: Only download software and files from trusted websites. Avoid downloading files from unfamiliar sources or email attachments from unknown senders.
- Use Strong Passwords: Encourage students to use strong, unique passwords for their online accounts and enable two-factor authentication (2FA) where possible.

5. Recommended Browsing Habits:

- Avoid clicking on suspicious links or pop-ups that ask for personal information or software downloads.
- **Check website URLs**: Ensure that the URL is secure (starts with "https://") before entering any sensitive information.

Conclusion

By following these steps, students can customize their browsers to block pop-ups, prevent ActiveX downloads, and better protect their systems from viruses and worms. A combination of browser security settings, antivirus software, and good browsing habits will help ensure that their online experience is as safe as possible.

03. Word & ssssGoogle document

Task 1: Word & Google document Orientation: The mentor needs to give an overview of Microsoft (MS) office & Google document, Importance of MS office & Google document, Details of the four tasks and features that would be covered, using word & Google document – Accessing, overview of toolbars, saving files, Using help and resources, rulers, format painter.

Overview of Microsoft Office & Google Docs

Microsoft Office is a suite of productivity applications developed by Microsoft, widely used for creating and managing documents, spreadsheets, presentations, and more. Microsoft Word, part of the MS Office suite, is a word-processing software used for creating, editing, and formatting text documents.

Google Docs is a free, cloud-based word-processing tool provided by Google. It allows users to create, edit, and store documents online, providing access from any device with an internet connection. Google Docs is part of the larger Google Workspace suite, which also includes tools like Google Sheets and Google Slides.

Importance of MS Office & Google Docs

1. MS Office is one of the most widely used office productivity suites in the world, with Microsoft Word being the go-to word-processing software for businesses, educational institutions, and individuals.

2. Google Docs, with its cloud-based nature, offers collaboration features that make it easy for teams or individuals to work together on documents in real time, making it a popular choice for remote work and group projects.

3. Both tools are essential in the modern workplace, educational environments, and for personal productivity due to their ease of use, powerful features, and compatibility across different platforms.

Details of the Four Tasks and Features to Be Covered:

1. Accessing Microsoft Word & Google Docs:

a. Microsoft Word: To access MS Word, users must install it as part of Microsoft Office or Microsoft 365. It can be opened from the Start Menu (Windows) or Applications folder (Mac).

b. Google Docs: Accessible via a web browser on any device. Users need a Google account to use Google Docs. Documents can be created directly from the Google Docs homepage or through Google Drive.

2. Overview of Toolbars:

MS Word: The toolbar in MS Word contains key tools such as file options, text formatting, page layout, and review functions. It also includes access to specialized features like spell check, font styles, and paragraph settings.

Google Docs: Similar to Word, Google Docs features a toolbar with options for formatting text, inserting images, adding tables, and organizing document structure. It also offers collaborative tools such as comments and suggestions.

3. Saving Files:

MS Word: Files can be saved locally on a computer, or to cloud services like OneDrive, using the File > Save or Save As options. MS Word also supports saving in multiple formats such as .docx, .pdf, and more.

Google Docs: Documents in Google Docs are automatically saved to Google Drive, making them accessible from any device with an internet connection. Users can also download documents in various formats such as .docx, .pdf, and .rtf.

4. Using Help and Resources:

MS Word: MS Word provides an in-depth help system through F1 or the Help menu, offering tutorials, articles, and troubleshooting advice for users.

Google Docs: Users can access the Google Docs help system by selecting Help from the toolbar. It also offers resources like video tutorials, troubleshooting steps, and links to Google's support documentation.

5. Key Features to Cover:

Rulers:

MS Word: The ruler in MS Word helps adjust margins, indents, and tab stops. It's located at the top of the document window and provides an accurate guide for layout design.

Google Docs: Google Docs also has a ruler feature that allows users to set up page margins, indents, and tab stops. It can be accessed by enabling the View > Show Ruler option.

6. Format Painter:

MS Word: The Format Painter tool in MS Word allows users to quickly copy the formatting from one section of text and apply it to another. This can be found on the Home tab and is useful for maintaining consistent formatting across a document.

Google Docs: Google Docs has a similar feature known as Paint Format, accessible through the toolbar. Users can select text with the desired format, click the Paint Format icon, and then apply the formatting to other parts of the document.

Summary:

This orientation session aims to provide users with a comprehensive understanding of Microsoft Word and Google Docs, focusing on accessing, navigating toolbars, saving files, utilizing the help resources, adjusting rulers for layout design, and using the format painter for consistent styling. These tools are integral for efficient document creation and editing, whether for personal, academic, or professional use.

Task 2: Using Word & Google document to create a project certificate. Features to be covered: - Formatting Fonts, Drop Cap, Applying Text effects, Using Character Spacing, Borders and Colors, Inserting Header and Footer, Using Date and Time option.

Formatting Fonts

In Microsoft Word, formatting fonts is a key aspect of enhancing the visual appeal and readability of your document. Here's how you can format fonts in Microsoft Word:

1. Selecting Text:

• To change the font of text, first highlight the text you want to format. Click and drag your mouse over the text or hold Shift and use the arrow keys to select it.

2. Changing the Font:

- Go to the **Home** tab on the Ribbon.
- In the **Font** group, you'll see a **Font** dropdown list. Click the dropdown arrow, and a list of available fonts will appear.
- Scroll through the list or type the name of the font you want to use and click on it.

3. Changing Font Size:

- Next to the **Font** dropdown, there's a **Font Size** box. You can either:
 - Select a size from the dropdown list.
 - Manually type a specific size and press Enter.
 - \circ $\;$ Use the up and down arrows to increase or decrease the font size.

4. Bold, Italics, Underline, and Other Styles:

- **Bold:** Press Ctrl + B or click the **B** icon in the Font group.
- Italics: Press Ctrl + I or click the I icon in the Font group.
- Underline: Press Ctrl + U or click the U icon in the Font group.
- **Strikethrough:** Click the **abc** icon with a line through it in the Font group to strike through the text.
- **Subscript/Superscript:** Use the icons with an "X" below or above text to format subscripts or superscripts.

5. Changing Font Color:

- In the **Font** group, click the **Font Color** button (a letter "A" with a color bar beneath it).
- Choose a color from the palette, or select **More Colors** for custom color options.

6. Text Highlighting:

- In the **Font** group, click the **Text Highlight Color** button (a highlighter icon).
- Select a color to highlight your text.

7. Advanced Font Settings:

- For more options, click the small arrow in the bottom right corner of the **Font** group to open the **Font dialog box**.
- In the dialog box, you can adjust:

- Font style (Regular, Bold, Italic, etc.)
- Size (In points, from 1 to 1638)
- Effects (Strikethrough, Superscript, Subscript, etc.)
- Character Spacing (Kerning and scaling)
- Underline style (Double underline, dotted underline, etc.)

8. Applying a Font to Paragraphs:

- If you want to apply the font settings to an entire paragraph (not just a specific word or letter), select the entire paragraph and then change the font as described above.
- You can also use styles, which apply a pre-defined set of font, color, and spacing settings to a paragraph or section.

9. Saving a Custom Style:

- Once you've formatted a font the way you like, you can save it as a custom style.
- Go to the **Styles** group on the **Home** tab, click **More** (down arrow), and select **Create** a **Style**.
- Name the style and click **OK**. You can now apply this custom style throughout your document.

10. Changing the Font in a Specific Section or Heading:

- Word provides specific styles for headings (Heading 1, Heading 2, etc.).
- Select the text you want to use as a heading, then apply one of these styles from the **Styles** group.

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Drop Cap:

A **Drop Cap** in Microsoft Word is a decorative feature that enlarges the first letter of a paragraph, making it stand out. It's commonly used in books, newsletters, and articles. Here's how to add and customize a drop cap in MS Word:

Steps to Add a Drop Cap:

- 1. Select the Paragraph:
 - Place the cursor at the beginning of the paragraph where you want the drop cap to appear.
- 2. Go to the Insert Tab:
 - On the **Ribbon**, click the **Insert** tab.
- 3. Choose Drop Cap:
 - In the **Text** group, click the **Drop Cap** button. A dropdown menu will appear.
- 4. Select a Drop Cap Style:
 - None: Removes any existing drop cap.

- **Dropped:** This style places the large letter inside the paragraph (it drops into the text).
- In margin: This style places the large letter in the left margin, outside the main text.

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Applying Text effects:

In Microsoft Word, **Text Effects** allow you to apply various styles to text, such as shadows, glows, reflections, and 3D effects, to enhance the visual appeal of your document. Here's how to apply text effects:

Steps to Apply Text Effects in MS Word:

- 1. Select the Text:
 - Highlight the text you want to apply the effect to. You can select a word, sentence, or even an entire paragraph.

2. Go to the "Home" Tab:

• On the **Ribbon**, click the **Home** tab to access the font formatting options.

3. Find the "Text Effects" Button:

- In the **Font** group (on the left side of the Ribbon), look for the **A** button with a glowing effect beneath it. This is the **Text Effects and Typography** button.
- Click on the **Text Effects** button to see a dropdown menu with different options.

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Common Text Effects:

1. Shadow:

- Adds a shadow behind the text to create depth.
- Hover over the **Shadow** effect in the dropdown menu to see the available styles. Click on one to apply it.

2. Reflection:

- Creates a mirrored effect beneath the text, making it appear as if it's reflected on water or a surface.
- Hover over the **Reflection** options to see the different styles and click to apply.
- 3. **Glow:**
 - Applies a glowing effect around the text, giving it a neon-like look.
 - Hover over the **Glow** options to choose from different colors and intensity levels.

4. Soft Edge:

- \circ $\;$ Adds a soft, blurred edge around the text, making it look like it's fading out.
- Hover over **Soft Edges** in the dropdown and select a style.

5. **3D Effects:**

- Adds a three-dimensional effect, making the text look like it's raised or recessed.
- Select a **3D** effect from the dropdown to apply it.

6. Transform:

- This effect allows you to change the shape of the text, such as bending it into a curve or a wave.
- Hover over **Transform** and select a style, such as **Arch**, **Wave**, or **Deflate**.

7. Text Fill and Outline:

- \circ These effects modify the color or appearance of the text itself:
 - **Text Fill:** Changes the color inside the text.
 - Text Outline: Adds a border around the text in a different color.
- You can access these under **Text Fill** and **Text Outline** in the **Text Effects** dropdown.

Using Character Spacing

In Microsoft Word, **Character Spacing** refers to adjusting the amount of space between individual letters or characters in a selection of text. This feature can help improve the appearance of your document, whether you're working with titles, headings, or body text. It can be used to create more stylish or readable text, fit text into a specific area, or even for design purposes in things like posters and flyers.

Here's how to adjust Character Spacing in MS Word:

Step-by-Step Guide to Adjust Character Spacing in MS Word:

1. Select the Text

• First, highlight the text you want to adjust. This can be a single word, sentence, paragraph, or even a part of a heading or title.

2. Open the Font Dialog Box

- Go to the **Home** tab on the ribbon.
- In the **Font** group, click the small **dialog box launcher** (the tiny arrow) in the bottomright corner of the **Font** section. This opens the **Font dialog box**.
- Alternatively, right-click the selected text and choose **Font** from the context menu, and then select the **Advanced** tab.

3. Navigate to the Advanced Tab

- In the Font dialog box, click on the Advanced tab (sometimes labeled Character Spacing in older versions of Word).
- Here, you'll find options to adjust the spacing between characters, as well as kerning options.

4. Adjust Character Spacing

- In the **Spacing** section, you'll see a dropdown labeled **Spacing**. The options are:
 - Normal: This is the default setting where no additional spacing is applied to the text.
 - **Expanded:** This increases the space between characters. You can set how much space to add by typing a number in the **By** field. For example, if you set it to **2 pt**, the spacing between characters will increase by 2 points.

• **Condensed:** This decreases the space between characters. Similarly, you can set the **By** field to control how much closer the characters should be. For example, setting it to **-1 pt** will bring characters 1 point closer together.

5. Kerning for Fonts (Optional)

- In the same dialog box, you'll also see an option for Kerning for fonts:
 - **Kerning** refers to adjusting the spacing between specific pairs of letters to ensure the text looks balanced and visually appealing. For instance, letters like "A" and "V" might have more space between them.
 - To enable kerning, check the box labeled Kerning for fonts and specify a point size. The kerning will only apply to font sizes above the point size you set. For example, if you set kerning to apply at 12 pt, only text at 12 pt or larger will have its kerning adjusted.

6. Preview the Changes

• As you adjust the settings, you can see a live preview of your changes in the text you've selected. This will help you fine-tune the spacing until you're satisfied with the look.

7. Click OK to Apply

• Once you've set the character spacing to your liking, click **OK** to apply the changes.

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Borders and Colors

In Microsoft Word, **Page Borders** and **Page Colors** allow you to add visual interest and style to your document. You can use these features to create a professional look for reports, flyers, invitations, or any type of document. Here's how to add and customize page borders and page colors:

Adding Page Borders in MS Word

1. Open the "Design" Tab

• Go to the **Design** tab on the Ribbon (this is where you'll find options for page borders and other document formatting).

2. Click on "Page Borders"

• In the **Page Background** group, click on **Page Borders**. This will open the **Borders** and **Shading** dialog box.

3. Choose the Border Style

- In the Borders and Shading dialog box, go to the Page Border tab.
- Here, you can choose from different styles:
 - **None:** No border will be applied.
 - **Box:** A simple border around the entire page.
 - **Shadow:** A border with a shadow effect around the page.
 - **3D:** A three-dimensional border.
 - **Custom:** You can design your own border style using the options below.

4. Customize the Border:

- Style: Choose from a variety of lines, including solid, dotted, dashed, and more.
- Color: Select a color for the border. You can choose from basic colors or use More Colors for custom shades.
- Width: Adjust the width of the border line (thin, medium, thick, or custom).
- Art: For creative effects, you can select from a list of artistic borders, such as flowers, geometric patterns, or holiday-themed borders.

5. Apply the Border:

- Under Apply to, choose where you want the border to be applied:
 - Whole document: Applies the border to all pages.
 - **This section:** If your document is divided into sections, you can apply the border only to the current section.
 - First page only: Adds the border only to the first page.
 - All except the first page: Adds the border to all pages except the first one.
- After customizing your border, click **OK** to apply it to your document.

Adding Page Color in MS Word

1. Open the "Design" Tab

• Go to the **Design** tab again.

2. Click on "Page Color"

• In the **Page Background** group, click on **Page Color**. This will open a dropdown menu with color options.

3. Choose a Color:

- You can select from the theme colors, standard colors, or **More Colors** if you need a custom shade.
- If you choose **More Colors**, a color palette will open where you can define a specific RGB or HSL color value.

4. Fill Effects (Optional):

- If you want a gradient, texture, or pattern, click on Fill Effects at the bottom of the Page Color dropdown.
 - **Gradient:** Allows you to choose a color gradient for a fading effect from one color to another.
 - **Texture:** Adds a textured background (like marble, paper, or fabric).
 - **Pattern:** Adds a patterned background (such as stripes, dots, etc.).

5. Apply the Color:

• Once you select the color or effect you want, it will immediately be applied to the background of the page.

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Header and Footer:

In Microsoft Word, **Headers** and **Footers** are areas at the top and bottom of each page in your document, where you can add information that repeats on every page, such as page numbers, titles, dates, or logos. Here's how to insert and customize headers and footers in MS Word:

Inserting a Header or Footer

- 1. Open the "Insert" Tab
 - Go to the **Insert** tab on the Ribbon.
- 2. Insert a Header or Footer
 - Header:
 - In the Header & Footer group, click on Header. A dropdown menu will appear with several pre-designed header styles. You can also choose Edit Header to start with a blank header.
 - Footer:
 - In the **Header & Footer** group, click on **Footer**. Similar to headers, you'll see several footer styles, or you can choose **Edit Footer** to create your own.

3. Choose a Style or Start Editing

- After clicking **Header** or **Footer**, Word will insert a placeholder and open the header/footer area. The document's body text will move down (for headers) or up (for footers) to make space for the header or footer content.
- You can choose a predefined style or start typing or inserting elements like the page number, date, or text that you want.

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Using Date and Time:

In Microsoft Word, the **Date and Time** feature allows you to insert the current date or time into your document. This can be useful for adding a timestamp to your document, such as when it was created, modified, or printed. You can also choose from various date and time formats, and even make the date or time update automatically.

Here's how to use the **Date and Time** option in MS Word:

Inserting Date and Time in MS Word

1. Place the Cursor Where You Want the Date or Time

• Click your mouse to position the cursor where you want to insert the date or time. This can be anywhere in the body of the document, in the header or footer, or even in a text box.

2. Go to the "Insert" Tab

• On the Ribbon, go to the **Insert** tab.

3. Click "Date & Time"

• In the **Text** group on the **Insert** tab, you'll find the **Date & Time** button. Click it to open the **Date and Time** dialog box.

4. Choose a Date or Time Format

- The **Date and Time** dialog box displays a list of available date and time formats. The formats are based on your computer's regional settings, so you may see different styles (e.g., month-day-year, day-month-year, etc.).
- You can scroll through the list and select the format you prefer.
- Example Formats:
 - **12/1/2024** (MM/DD/YYYY)
 - 1 December 2024
 - Monday, December 1, 2024
 - 12/01/2024 12:00 AM (with time included)
 - December 2024

5. Update Automatically (Optional)

- If you want the date or time to **automatically update** whenever the document is opened, check the box labeled **Update automatically**. This ensures that the date or time will always reflect the current date and time, rather than remaining static.
- If you don't select this option, the date or time will be inserted as plain text and will not change unless manually updated.

6. Click "OK"

• Once you've chosen your desired format (and whether or not you want it to update automatically), click **OK** to insert the date and/or time into your document.

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Task 3: Creating project abstract Features to be covered: -Formatting Styles, inserting table, Bullets and Numbering, Changing Text Direction, Cell alignment, Footnote, Hyperlink, Symbols, Spell Check, Track Changes. Task 4: Creating a Newsletter: Features to be covered: - Table of Content, Newspaper columns, Images from files and clipart, Drawing toolbar and Word Art, Formatting Images, Textboxes, Paragraphs and Mail Merge.

Formatting Styles in word

In Microsoft Word, **Formatting Styles** allow you to apply a consistent look and feel across your document, making it easier to maintain uniformity in headings, subheadings, body text, and other elements. Styles are predefined sets of formatting options, such as font, size, color, alignment, and spacing, that you can apply to text in one click.

Here's how to use and customize Formatting Styles in MS Word:

1. Using Predefined Styles in MS Word

Step 1: Open the "Home" Tab

• Go to the **Home** tab on the Ribbon. In this tab, you'll find the **Styles** group, which contains predefined styles like **Heading 1**, **Heading 2**, **Normal**, and others.

Step 2: Apply a Style

- Select Text: Highlight the text you want to format (it could be a heading, subheading, or paragraph).
- Choose a Style: In the Styles group on the Home tab, click on the style you want to apply. For example, if you want to format a title as a main heading, click Heading 1. If it's a subheading, click Heading 2. For body text, you can use Normal.
- Style Examples:
 - Normal: Default text style for body text.
 - Heading 1: Used for main headings (typically large font, bold).
 - **Heading 2:** Used for subheadings (slightly smaller than Heading 1).

- **Title:** A style for document titles.
- **Quote:** For block quotes, usually indented and italicized.

Step 3: Modify the Style (Optional)

- If you want to customize a predefined style (e.g., change the font or size of **Heading** 1), right-click on the style in the **Styles** gallery and select **Modify**.
- In the **Modify Style** dialog box, you can change the font, size, color, alignment, and other settings. Any change you make will be reflected in all text where the style is applied.

Creating a New Style

If you want a completely custom style for your document, follow these steps:

Step 1: Open the "Styles" Pane

• In the **Home** tab, click the small **expand icon** in the bottom right corner of the **Styles** group to open the **Styles Pane**.

Step 2: Create a New Style

- At the bottom of the Styles Pane, click New Style.
- In the **Create New Style from Formatting** dialog box, give the style a name.
- You can choose from the following options:
 - **Style Type:** Choose between paragraph or character style. Paragraph styles apply to entire paragraphs, while character styles apply to selected text.
 - Formatting: Set the desired font, size, color, alignment, etc.
 - **Style for Following Paragraph:** Select a style to apply to the paragraph following this one.

Step 3: Save the New Style

• Once you've configured your new style, click **OK** to save it. It will appear in the **Styles Pane** and be available for use in your document.

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inserting table:

Inserting a table in Microsoft Word is a simple process, and it allows you to organize data in a grid format. You can customize the table's size, style, and formatting to suit your needs.

Here's how you can insert and customize tables in MS Word:

1. Inserting a Table in MS Word

Step 1: Go to the "Insert" Tab

• Click on the **Insert** tab in the Ribbon at the top of the screen.

Step 2: Click on "Table"

• In the **Tables** group, click the **Table** button. This will display a dropdown menu with several options.

Step 3: Choose Table Size

• Quick Table Size (Grid):

• A grid will appear where you can drag your mouse over the squares to select the number of rows and columns for your table. For example, if you want a table with 4 rows and 5 columns, hover your mouse over 4 rows and 5 columns, and click to insert the table.

• Insert Table (Custom Size):

- If you need more control, click **Insert Table** from the dropdown menu. In the **Insert Table** dialog box, you can specify the number of **rows** and **columns**.
- Draw Table (Freehand Drawing):
 - If you want to create a table with more flexibility, click **Draw Table**. This allows you to draw your table manually using the mouse. You can draw the rows and columns as you wish.

• Quick Tables:

• If you want to insert a predefined table (e.g., calendar, invoice, etc.), you can select a **Quick Table** from the menu.

Step 4: Insert the Table

• After selecting the desired table size or option, click to insert the table into your document. You'll see a grid appear where you can start typing data.

Merge or Split Cells

- Merge Cells:
 - Select the cells you want to merge (for example, a header row) and click **Merge Cells** in the **Table Tools Layout** tab.
- Split Cells:
 - Select the cell you want to split and click **Split Cells** in the **Table Tools Layout** tab. You can specify how many rows and columns you want to split the cell into.

Navigation:



Bullets and Numbering

In Microsoft Word, **bullets** and **numbering** are useful tools for organizing lists, making them easy to read and follow. You can use bullets for unordered lists and numbers for ordered lists, and customize the appearance of both according to your preferences.

Here's how to use bullets and numbering in MS Word:

1. Using Bullets in MS Word

Step 1: Highlight the Text You Want to Format

• First, type out your list or select the text you want to turn into a bulleted list.

Step 2: Go to the "Home" Tab

• On the **Home** tab of the Ribbon, look for the **Paragraph** group.

Step 3: Click the "Bullets" Button

- In the **Paragraph** group, click on the **Bullets** button (it looks like three dots followed by lines). This will apply default bullet points to your selected text.
- Your text will automatically be converted into a bulleted list.

Step 4: Customize the Bullets (Optional)

- To change the style of the bullets, click the **drop-down arrow** next to the **Bullets** button in the **Paragraph** group.
- You can choose from various bullet styles (like dots, squares, or arrows), or click **Define New Bullet** to create a custom bullet:
 - **Symbol**: Choose a symbol (like a star or checkmark).
 - **Picture**: Select a picture from your computer to use as a bullet.
 - Font: Change the bullet font, size, and color.

2. Using Numbering in MS Word

Step 1: Highlight the Text You Want to Format

• Type out or select the text that you want to turn into a numbered list.

Step 2: Go to the "Home" Tab

• On the **Home** tab, in the **Paragraph** group, click the **Numbering** button (it looks like numbers followed by lines).

Step 3: Select Numbering Style

- By default, the numbering will begin from 1 and use the default numbering style. If you want a different style, click the **drop-down arrow** next to the **Numbering** button.
- You can choose different numbering formats, such as:
 - 1, 2, 3 (standard numbering).
 - **i, ii, iii** (Roman numerals).
 - A, B, C (letters).
 - **1.1, 1.2, 1.3** (multi-level numbering).

Step 4: Customize Numbering (Optional)

- You can change the style of the numbering by selecting **Define New Number Format** from the dropdown.
- You can adjust:
 - Number format: Choose from different number styles (1, 2, 3 or i, ii, iii).
 - Number position: Adjust the alignment of the numbers (right, left, center).
 - **Font**: Change the font, size, or color of the numbers.

Changing Text Direction

Changing text direction in Microsoft Word allows you to rotate text for different purposes, such as creating vertical text, rotating text in tables, or designing creative layouts. You can change the text direction within text boxes, tables, shapes, or text in columns. Here's how to do it:

Changing Text Direction in Tables

Step 1: Select the Cell(s)

• Click inside the table cell(s) where you want to change the text direction.

Step 2: Go to the "Layout" Tab (Table Tools)

• Once the table is selected, the **Table Tools** tab will appear in the Ribbon, showing the **Layout** tab.

Step 3: Change Text Direction

- In the Alignment group of the Layout tab, click Text Direction.
- This will rotate the text in the selected cell(s) in increments (e.g., vertical, 90°, or 270°).

Cell alignment:

In Microsoft Word, **cell alignment** refers to the positioning of text within a table cell. You can adjust the text alignment to control how the content appears within each cell, including vertical and horizontal alignment. Additionally, you can control indentation and spacing to fine-tune how the text looks inside the table.

Here's how to align text in table cells in MS Word:

1. Horizontal Alignment (Left, Center, Right)

Horizontal alignment determines whether the text is aligned to the left, centered, or right within a cell.

Step 1: Select the Cell(s)

- Click inside the cell where you want to adjust the alignment.
- If you want to apply the alignment to multiple cells, click and drag to select the cells, rows, or columns.

Step 2: Go to the "Layout" Tab (Table Tools)

- When you select a cell, the **Table Tools** tab will appear in the Ribbon.
- Click on the Layout tab (not to be confused with the Page Layout tab).

Step 3: Choose the Alignment

- In the **Alignment** group, you will see buttons for different types of horizontal alignment:
 - Align Left: Aligns the text to the left edge of the cell.
 - **Center**: Centers the text horizontally within the cell.
 - Align Right: Aligns the text to the right edge of the cell.

2. Vertical Alignment (Top, Center, Bottom)

Vertical alignment controls whether the text is aligned at the top, center, or bottom of a table cell.

Step 1: Select the Cell(s)

• Click the cell where you want to adjust vertical alignment. You can also select multiple cells or an entire row or column.

Step 2: Go to the "Layout" Tab (Table Tools)

• In the Table Tools tab, click the Layout tab.

Step 3: Choose Vertical Alignment

- In the Alignment group, you will see buttons for different vertical alignments:
 - Align Top: Aligns the text to the top of the cell.
 - Align Center: Centers the text vertically in the cell.
 - Align Bottom: Aligns the text to the bottom of the cell.

Footnote

A **footnote** in Microsoft Word is used to add extra information, references, or citations at the bottom of the page where the footnote is referenced in the text. It's commonly used in academic writing, reports, or documents where detailed explanations or sources need to be cited.

Here's how to insert and manage footnotes in MS Word:

1. Inserting a Footnote

Step 1: Place the Cursor

• Place your cursor where you want the footnote reference number to appear in the main text (usually after a word or sentence).

Step 2: Go to the "References" Tab

• Navigate to the **References** tab in the Ribbon.

Step 3: Insert Footnote

- In the **Footnotes** group, click the **Insert Footnote** button. This will insert a small superscript number (reference) where your cursor was placed in the text.
 - Word automatically inserts the corresponding footnote number at the bottom of the page and moves your cursor to the footnote area.

Step 4: Enter Footnote Text

• After inserting the footnote, Word will automatically take you to the footnote area at the bottom of the page. Type your footnote text here (e.g., citation, explanation, or reference).

Hyperlink

A **hyperlink** in Microsoft Word allows you to link to external websites, other sections within the same document, email addresses, or even other documents. Hyperlinks are commonly used in reports, research papers, manuals, and any document where you want to direct the reader to additional information.

Here's how to insert and manage hyperlinks in MS Word:

1. Inserting a Hyperlink

Step 1: Select the Text or Object

• Select the text, image, or object (like a shape or button) that you want to turn into a hyperlink.

Step 2: Open the Insert Hyperlink Dialog Box

- Right-click on the selected text or object and choose Link (or Hyperlink).
- Alternatively, go to the **Insert** tab in the Ribbon and click on **Link** (or **Hyperlink**) in the **Links** group.

Step 3: Enter the Link Address

• In the **Insert Hyperlink** dialog box that appears:

- For a Web Address (URL): In the Address field at the bottom, type or paste the URL of the website (e.g., https://www.example.com).
- For a Link to Another Location in the Same Document:
 - Click **Place in This Document** on the left.
 - Choose the heading or bookmark you want to link to.
- For an Email Address:
 - Click **E-mail Address** on the left.
 - Enter the email address you want to link to (e.g., someone@example.com), and an optional subject line.
- For Linking to Another Document:
 - Click Existing File or Web Page on the left.
 - Browse to the location of the document, and select it.

Step 4: Text to Display

• In the **Text to display** field, you can modify the text that will appear as a hyperlink if needed.

Step 5: Insert the Link

• Once you've entered the correct URL or selected the appropriate destination, click **OK** to insert the hyperlink.

Symbols

In Microsoft Word, **symbols** can be used to insert special characters, mathematical notations, arrows, currency signs, and other symbols that aren't typically available on the keyboard. You can insert symbols in your document to enhance the content, such as adding copyright signs, trademark symbols, or foreign language characters.

Here's how to insert and manage symbols in MS Word:

1. Inserting a Symbol

Step 1: Place the Cursor

• Click in the document where you want the symbol to appear.

Step 2: Go to the "Insert" Tab

• Navigate to the **Insert** tab on the Ribbon.

Step 3: Click on "Symbol"

- In the **Symbols** group, click on the **Symbol** button (located on the far right of the Ribbon).
- A drop-down menu will appear with a few common symbols. If the symbol you need is visible, you can click it directly.

Step 4: More Symbols

• If you don't see the symbol you want in the drop-down, click on **More Symbols**. This opens the **Symbol** dialog box with a larger selection of symbols, including special characters, mathematical symbols, and foreign characters.

Step 5: Select the Symbol

- In the **Symbol** dialog box, you can scroll through the available symbols.
- Use the **Font** drop-down list to choose a specific font if you're looking for symbols associated with that font (e.g., "Wingdings" or "Arial").
- In the **Character code** box, you can also type in the specific Unicode character code for the symbol you want.
- Once you find the symbol you need, click it, and then click **Insert**. The symbol will be placed where your cursor was.

Spell Check

Spell Check in Microsoft Word is a feature that helps you identify and correct spelling mistakes, grammar issues, and sometimes style problems as you type in your document. Word automatically checks your spelling as you type and offers suggestions for corrections, but you can also run a full spell check manually at any time.

Here's how to use **Spell Check** in MS Word:

1. Automatic Spell Check

Word automatically checks the spelling and grammar of the text as you type. Here's how it works:

- **Red Squiggly Line**: Word highlights misspelled words with a **red squiggly line**. These are words that it doesn't recognize or are typed incorrectly.
- **Blue Squiggly Line**: Word checks for **grammar** and highlights possible grammatical errors with a **blue squiggly line** (in newer versions of Word).

To Correct Misspelled Words:

- **Right-click** on the word with a red squiggly line.
- A list of suggestions will appear. You can choose one of the suggested corrections to replace the misspelled word.
- If the word is correct but Word is flagging it, you can choose **Add to Dictionary** to prevent Word from flagging it in the future.

2. Running a Manual Spell Check

If you want to check the entire document for spelling and grammar issues, you can run a **manual spell check**.

Step 1: Open the "Review" Tab

- Go to the **Review** tab on the Ribbon.
- Step 2: Click on "Spelling & Grammar"
 - In the **Proofing** group, click **Spelling & Grammar**. Alternatively, you can press **F7** on your keyboard to start the spell check.

Step 3: Review and Correct Errors

- The **Spelling and Grammar** dialog box will open. Word will scan your document for spelling and grammar issues.
 - For each issue, Word will provide suggestions and options:
 - Change: Correct the error.
 - **Ignore**: Skip the error.
 - **Ignore All**: Skip all instances of the error.
 - Add to Dictionary: Add the word to the custom dictionary if it's a correct, but unrecognized word (like a name or technical term).

Step 4: Finish the Spell Check

- Once Word finishes scanning the document, it will notify you with a message saying, "The spelling and grammar check is complete."
- Click **OK** to exit the dialog box.

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Track Changes

In Microsoft Word, the **Track Changes** feature allows you to keep a record of edits and revisions made to a document. This is particularly useful for collaborative work, where multiple users need to review, edit, and provide feedback on a document. Here's how you can use **Track Changes** in Word:

1. Turn on Track Changes

- Open your Word document.
- Go to the **Review** tab on the Ribbon.
- In the Tracking group, click on Track Changes to turn it on.
- Once turned on, any changes you make to the document will be highlighted and tracked.

2. Editing with Track Changes

- Inserting Text: Any new text you add will appear in a different color and underlined.
- **Deleting Text**: Any text you delete will be crossed out, and Word will show the deletion in a **balloon** on the side.
- Formatting Changes: Any changes to font style, size, or color will appear in the margin and the text itself will be highlighted.
- Comments: You can add comments by selecting text and clicking New Comment in the Comments group under the Review tab.

3. Reviewing Changes

- To review the changes made, go to the **Review** tab.
- In the **Changes** group, you can use the **Previous** and **Next** buttons to move between revisions.
- You can choose to Accept or Reject each change:
 - Accept: Accepts the change and removes it from the tracked changes list.
 - **Reject**: Reverts the change, restoring the original text.

4. Modify the Track Changes Settings

- You can adjust the settings to specify how changes are displayed.
- Click the small **arrow** in the bottom-right corner of the **Tracking** group to open **Track Changes Options**.
- Here you can adjust options like:
 - How changes appear (e.g., color and markup).
 - Whether to display the changes in balloons or inline.
 - Showing revisions by specific authors with different colors.

5. Finalizing the Document

- When the document is ready for final approval, you can choose to Accept All Changes or Reject All Changes.
- To remove all tracked changes, you can Accept All and finalize the document as a clean copy.

6. View the Document Without Tracked Changes

- If you want to view the document without the tracked changes:
 - In the Tracking group, change the Display for Review option to No Markup.
 - This will hide the revisions, but they are still present in the document and can be viewed again if needed.

7. Turning Off Track Changes

- To stop tracking changes, simply click **Track Changes** again in the **Review** tab.
- All changes made after this point will not be tracked.

By using Track Changes, Word keeps a complete record of every modification made, making it easier to collaborate, review, and finalize documents.

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Task 4: Creating a Newsletter: Features to be covered: - Table of Content, Newspaper columns, Images from files and clipart, Drawing toolbar and Word Art, Formatting Images, Textboxes, Paragraphs and Mail Merge.

Table of Content

Creating a **Table of Contents (TOC)** in Microsoft Word is a great way to automatically generate an organized list of headings and subheadings in your document. Here's how you can add and customize a Table of Contents in MS Word:

1. Prepare Your Document

- Before inserting a Table of Contents, ensure that you've applied **Heading styles** to the sections of your document. These styles are used to identify the headings that will appear in the Table of Contents.
- To apply Heading styles:
 - Select the text you want to use as a heading.
 - Go to the **Home** tab.
 - In the **Styles** group, choose a heading style (e.g., **Heading 1** for main headings, **Heading 2** for subheadings, etc.).
 - Repeat this for all the headings and subheadings in your document.

2. Insert a Table of Contents

- Once your headings are styled, place the cursor where you want the Table of Contents to appear (typically at the beginning of the document).
- Go to the **References** tab.
- In the Table of Contents group, click Table of Contents.
- Word will display a list of automatic styles to choose from. Select a style (e.g., Automatic Table 1 or Automatic Table 2).
- The Table of Contents will be inserted, displaying the headings you've applied.

3. Update the Table of Contents

- If you add or remove content, change heading styles, or rearrange the document, the Table of Contents will not update automatically.
- To update it:
 - Right-click on the Table of Contents.
 - Select Update Field.
 - Choose to either:
 - Update page numbers only (if the content hasn't changed).
 - Update entire table (if you've added or changed headings).

4. Customize the Table of Contents

You can modify the look of your Table of Contents to suit your preferences:

• Change Formatting:

- Click on the Table of Contents.
- Go to the **References** tab and click on **Custom Table of Contents**.
- In the dialog box, you can customize how the TOC appears, such as showing or hiding specific levels of headings.
- You can also modify the formatting (e.g., font, indentation, or tab leader).
- Change Heading Levels:
 - If you want to include additional heading levels (for example, **Heading 3**), go to **Custom Table of Contents** and adjust the **Show levels** setting.

5. Remove the Table of Contents

- To remove a Table of Contents, right-click on the TOC.
- Select Remove Table of Contents from the context menu.

6. Navigate Using the Table of Contents

• In the digital version of your document, the Table of Contents is interactive. You can **click on a heading** in the TOC, and Word will take you directly to that section of the document.

Navigation:



Newspaper columns

Creating **newspaper-style columns** in Microsoft Word can make your document look more like a traditional newspaper or magazine layout. You can easily format text into multiple columns, adjusting the layout for a more professional look. Here's how to create newspaper-style columns in MS Word:

1. Create a Multi-Column Layout

To set up newspaper-style columns, follow these steps:

- 1. **Open your document** in Microsoft Word.
- 2. Select the Layout tab on the Ribbon (in some versions, this might be under the Page Layout tab).
- 3. In the **Page Setup** group, click on **Columns**.
- 4. From the dropdown menu, you can select one of the preset options, such as:
 - **One** (default, single column).
 - **Two** (for a basic two-column layout).
 - Three (for a more traditional newspaper layout).
 - Left or Right (for more advanced layouts with an uneven number of columns).
 - More Columns for additional customization (explained below).

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Images from files and clipart

Inserting images from files and clipart into a Microsoft Word document is a simple process, and it can significantly enhance the appearance of your document. Here's how you can add both types of images:

1. Inserting Images from Files (Pictures)

To insert an image that you already have saved on your computer, follow these steps:

- 1. Place the Cursor: Click where you want the image to appear in your document.
- 2. Go to the Insert Tab: On the Ribbon, click the Insert tab.
- 3. Click on Pictures:
 - In the Illustrations group, click on Pictures.
 - You'll see options like:
 - This Device: To insert an image from your computer.
 - **Stock Images** (for some versions of Word): To insert images from an online library of stock photos.

4. Select the Image:

- After clicking **This Device**, a file dialog will appear.
- Browse to the location on your computer where the image is stored, select it, and click **Insert**.

5. Adjust the Image:

- After the image is inserted, you can resize, crop, or move it around by clicking on the image.
- Use the **Picture Tools Format** tab that appears when you select the image to access options like resizing, adding borders, or applying artistic effects.

Navigation:



2. Inserting Clipart

Clipart is a collection of simple images or illustrations that are typically used for decorative or visual purposes. While Microsoft Word no longer offers traditional "Clipart" in the same way it once did, there are still options to insert images from online sources or Microsoft's own library:

Option 1: Using Online Pictures in Word (Office 365)

Microsoft Word provides a way to search for images directly from an online source (such as Bing or licensed stock photos) and insert them directly into your document.

- 1. Go to the Insert Tab: Click the Insert tab on the Ribbon.
- 2. Click Online Pictures:
 - In the **Illustrations** group, click **Online Pictures** (this will search online images or clipart).

3. Search for Clipart or Images:

- A dialog box will open, allowing you to search for images from sources like Bing Image Search.
- Type in the keyword for the type of image or clipart you're looking for (e.g., "flower clipart," "business clipart").

4. Insert the Image:

- Browse the results, select an image, and click **Insert** to add it to your document.
- You can resize and adjust the image using the **Picture Tools Format** tab.

Drawing toolbar and Word Art

The **Drawing Toolbar** and **WordArt** are powerful tools in Microsoft Word for creating visually appealing documents. The **Drawing Toolbar** allows you to create and edit shapes, lines, and other graphics, while **WordArt** helps you create stylized text. Here's how you can use both in Word:

1. Drawing Toolbar in Microsoft Word

In earlier versions of Microsoft Word, there was a **Drawing Toolbar** for inserting and editing shapes. Although the **Drawing Toolbar** itself is no longer available as a separate toolbar in modern versions of Word, many of its features are now integrated into the **Insert** and **Shapes** tools.

How to Access Drawing Tools in Modern Versions of Word (Word 2016 and Later):

1. Insert Shapes:

- \circ $\,$ Go to the Insert tab on the Ribbon.
- In the Illustrations group, click Shapes.
- A dropdown menu will appear, offering a variety of shapes like lines, rectangles, circles, arrows, callouts, and more. Select the shape you want to insert.
- After selecting a shape, click and drag on the document to draw it.

2. Editing Shapes:

- Once a shape is inserted, it will be selected, and the **Shape Format** tab will appear in the Ribbon.
- Here, you can:
 - Change Shape: Select a different shape.
 - Shape Fill: Change the fill color of the shape.
 - Shape Outline: Adjust the outline color, weight, and style.
 - Shape Effects: Apply 3D effects, shadows, reflections, etc.
 - Arrange: Align, rotate, or position the shape.
 - **Group**: Group multiple shapes together or ungroup them.
- 3. Drawing Lines:

- In the **Shapes** dropdown, you can also choose **Lines** (like straight lines, curved lines, and arrows).
- To draw a line, click on the desired line type and then click and drag in the document to create it.
- Once inserted, you can adjust its thickness, color, and style from the Shape Format tab.

4. Drawing Freeform Shapes (Freehand):

- In the **Shapes** dropdown, select **Scribble** (usually found at the bottom).
- This option lets you draw freeform shapes by dragging your mouse, which is useful for creating custom shapes or signatures.

2. WordArt in Microsoft Word

WordArt allows you to create text with special effects, such as shadows, outlines, and 3D effects. It's useful for adding decorative text, titles, or headings in your document.

How to Insert WordArt:

- 1. Go to the Insert Tab:
 - On the **Insert** tab in the Ribbon, find the **Text** group.
 - Click WordArt. This will open a gallery of different styles of WordArt.
- 2. Select a Style:
 - Choose a style that best fits your document. You can select from options like **Simple, Gradient, 3D**, etc.

3. Enter Text:

• After choosing a style, a text box will appear in your document where you can type your desired text. This text will automatically be formatted with the chosen WordArt style.

4. Edit WordArt:

- Once the WordArt is inserted, you can:
 - Change the Text: Click inside the WordArt text box to edit the text.
 - **Resize**: Drag the handles of the WordArt to resize it.
 - **Change Style**: Use the **WordArt Styles** group (in the **Format** tab that appears when the WordArt is selected) to change the color, outline, and effect of the text.
 - Apply Text Effects: You can apply effects like Shadow, Reflection, Glow, 3D Rotation, and more from the Text Effects button in the WordArt Styles group.
 - **Change Font**: If you want to change the font of the WordArt text, go to the **Home** tab and choose a different font, size, or color.

5. Positioning WordArt:

- WordArt is a floating object, which means it can be positioned anywhere in the document.
- \circ $\,$ To move it, click and drag the WordArt text box to the desired location.
- You can also use the **Wrap Text** option (found in the **Format** tab) to adjust how text wraps around your WordArt.
IT Workshop Lab Manual

Formatting Images

Formatting images in **Microsoft Word** helps you enhance the visual appeal of your document and control how images interact with text. After inserting an image, you can adjust its size, position, style, and text wrapping to fit your needs. Here's a comprehensive guide to formatting images in Microsoft Word:

Key Formatting Options:

- 1. **Resize**: Drag handles or use the Size group in the Ribbon.
- 2. Crop: Adjust the image's visible area using the Crop tool.
- 3. **Text Wrapping**: Control how text interacts with the image (Square, Tight, Behind Text, etc.).
- 4. Picture Styles: Apply predefined image styles, borders, and effects.
- 5. Corrections and Effects: Adjust brightness, contrast, color, and artistic effects.
- 6. Position: Align and place the image exactly where you want it.
- 7. Grouping: Combine multiple images into a single object for easier management.

Textboxes

Textboxes in Microsoft Word are useful for placing text outside the regular flow of paragraphs, allowing for more flexible document layout. You can use textboxes to create sidebars, captions, callouts, or any other design elements where text needs to be isolated and positioned independently.

Inserting a Textbox

To insert a textbox in your Word document:

- 1. Go to the Insert Tab:
 - Click on the Insert tab in the Ribbon at the top of the screen.

2. Click on Textbox:

- In the **Text** group, click **Textbox**. You'll see several options:
 - Simple Textbox: Pre-designed basic textboxes.
 - **Draw Textbox**: Create a custom-sized textbox by clicking and dragging.
 - Create a Textbox from Scratch: Choose this option to insert a basic, empty textbox.

3. Select a Textbox Style:

- You can choose from predefined textbox styles or click **Draw Textbox** to manually draw one.
- If you choose **Simple Textbox**, it will automatically be inserted into the document at the cursor position.

4. Type in the Textbox:

• Once the textbox is inserted, you can click inside it and start typing the desired text.

Key Textbox Features:

- 1. **Inserting**: Go to **Insert > Textbox** to add a predefined or custom-sized textbox.
- 2. **Resizing**: Drag the handles to resize the textbox or enter specific dimensions in the **Size** group.

- 3. Moving: Drag the textbox to a new location in the document.
- 4. Formatting:
 - Use the **Drawing Tools Format** tab to adjust the fill, outline, and effects.
 - Format the text inside the textbox with typical text formatting tools.
- 5. Text Wrapping: Adjust how text interacts with the textbox using the Wrap Text options.
- 6. Linking Textboxes: Create a flow of text between multiple textboxes for advanced layouts.
- 7. **Deleting**: Select the textbox and press **Delete** to remove it.

Paragraphs

In **Microsoft Word**, paragraphs are the building blocks of your document. Formatting and customizing paragraphs can significantly improve the structure and readability of your content. Here's a detailed guide on how to work with paragraphs in Word, including how to adjust alignment, indentation, line spacing, and more. In Microsoft Word, paragraphs are blocks of text separated by a paragraph mark (\P) and they can be formatted and manipulated in various ways. Below are some key features and functions related to paragraphs in MS Word:

Creating Paragraphs:

- New Paragraph: Press Enter at the end of a line to start a new paragraph.
- Paragraph Marks: You can display paragraph marks by clicking on the "¶" symbol in the "Home" tab in the "Paragraph" group. This shows where each paragraph ends.

Mail Merge

Mail Merge in Microsoft Word is a powerful tool that allows you to create multiple documents (like letters, labels, or envelopes) with personalized content for each recipient. This process combines a template (the main document) with a data source (like a list of names and addresses) to generate customized copies for each individual.

Here's a step-by-step guide on how to perform a Mail Merge in MS Word:

1. Prepare Your Data Source

The first step is to prepare the data that will be merged into the main document. Typically, this is done using **Microsoft Excel**, but it can also be done in other formats like CSV or Access databases.

- Create an Excel Spreadsheet with columns for each type of information you want to merge. For example, if you're sending personalized letters, you might have columns for First Name, Last Name, Address, City, State, and Zip Code.
- Make sure the first row in the spreadsheet contains the headers (e.g., First Name, Last Name, etc.).

2. Open Word and Start a Mail Merge

- Open a **new document** in Microsoft Word.
- Navigate to the **Mailings** tab on the ribbon.
- In the **Start Mail Merge** group, click on **Start Mail Merge** and choose the type of document you want to create:
 - Letters (for personalized letters)

- Envelopes
- Labels
- Email Messages
- Directories

3. Select Recipients

- After selecting the type of document, click on Select Recipients and choose Use an Existing List.
- Find and select the Excel file (or another data source) you prepared earlier.
- Word will show a dialog box where you can select the specific sheet in the workbook that contains your data.

4. Insert Merge Fields

- In the Word document, place your cursor where you want to insert personalized information.
- Click on **Insert Merge Field** in the **Mailings** tab and choose the field you want to insert (e.g., First Name, Last Name, etc.).
- For example, you can write a letter template like:

vbnet

Copy code

Dear <<<First Name>> <<Last Name>>,

We are pleased to invite you to our event in <<City>> on <<Event Date>>.

Word will replace the merge fields with the data from your Excel sheet during the merge process.

5. Preview the Document

- Click on **Preview Results** in the **Mailings** tab to see how your document will look with the actual data filled in.
- You can navigate through the records using the **Next Record** button to see different entries from your data source.

6. Complete the Merge

- Once you're satisfied with the preview, click Finish & Merge in the Mailings tab.
- You have several options:
 - **Print Documents**: This option will send the merged documents directly to the printer.
 - **Create a New Document**: This creates a new document containing all the merged copies, allowing you to save or further edit them.
 - Send Email Messages: If you're doing an email merge, you can send the documents directly via email.

7. Review and Save

- If you chose to create a new document, review it to ensure that everything is correct.
- Save the document with a different name if necessary.sss