GOVT CO-ED POLYTECHNIC

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LAB MANUAL

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CONTENTS

Experiment No: 1

AIM: To identify different components of computer.

THEORY:

Computer: A computer is a programmable electronic device that accepts raw data as input and processes it with a set of instructions (a program) to produce the result as output. It renders output just after performing mathematical and logical operations and can save the output for future use. It can process numerical as well as non-numerical calculations. The term "computer" is derived from the Latin word "computer" which means to calculate.
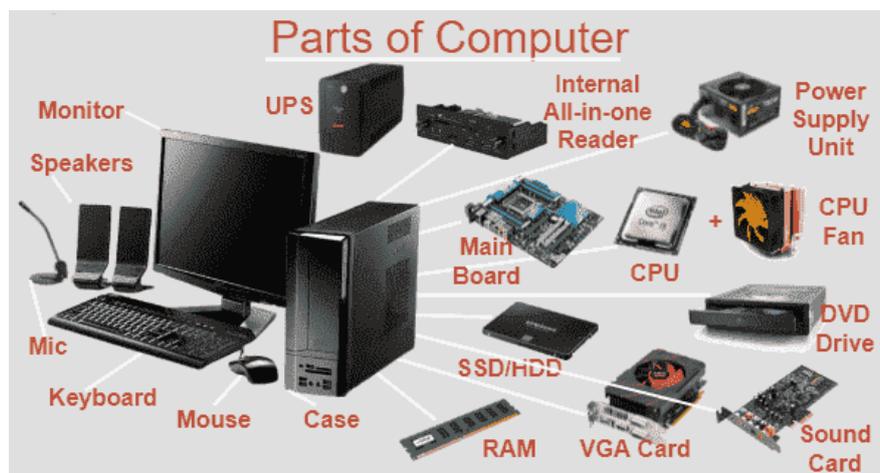
Fig. 1.1: Various components of computer.

Identification of Different Components of Computer

- ❖ **Keyboard :** A keyboard is one of the primary input devices used with a computer. Similar to an electric typewriter, a keyboard is composed of buttons used to create letters, numbers, and symbols, and perform additional functions.
- ❖ **Mouse :** It is a handheld hardware input device that controls a cursor in a GUI (graphical user interface) and can move and select text, icons, files, and folders on our computer.
- ❖ **Monitor :** A monitor is an electronic output device that is also known as a video display terminal (VDT). It is used to display images, text, video, and graphics information generated by a connected computer via a computer's video card. Although it is almost like a TV, its resolution is much higher than a TV.
- ❖ **Motherboard :** It is a computer's central communication backbone connectivity point, through which all components and external peripherals connect. It's an interface between CPU and hard-drive.
- ❖ **Speaker :** It is an output hardware device that connects to a computer to generate sound. The signal used to produce the sound that comes from a computer speaker is created by the computer's sound card.

Experiment No: 2

AIM: To understand elements of windows operating system.

THEORY:

Operating System: It is a type of system software that acts as an interface between the users of a computer and the computer hardware. It acts as the resource manager that use the computer resources like CPU, memory, files and I/O devices in an efficient manner. Example: MS DOS, MS Windows, Unix etc. There are various versions of MS Windows available like Windows XP, Vista, 7,8 or 10.

Basic Components of Windows

Window: A window is a area of desktop within which all widows based program run.

Desktop: Desktop refers to main background area. We can customize desktop in various ways such as editing background pictures, changing background colour and changing the icons on the desktop. There are small pictures which appear on the left side of the desktop called icon. We choose are of the icon by double clicking on it.

Taskbar: The taskbar is a simple row at the very bottom of the screen where all currently opened files or applications are listed. It helps you select what you want to keep opened and what you want to close.

Start Menu: By clicking the start menu, in the bottom left corner of the screen, a vertical window consisting of the recently opened applications and saved locations will pop-up.

My computer: It provides a quick access to our computer disk device. Control panel and internal devices.

My document: It provides a complete space to store our document.

Recycle bin: It stores all the information of all the deleted files and folder. It also allows us to recover them.

Network place: It allows us to view or display various network available and files and folders on our network.

Maximize/Minimize/Close Buttons:
These buttons are located at the top right corner of our opened documents, and the area used to close, minimize or maximize the document window. They help us jump from one task to another fast and let us decide either we want to close an application or resize it's area on the screen or just hide it for a few moments.

WINDOWS UTILITIES & ACCESSORIES
          In Windows 10 we still have well-known Windows Accessories folder. Use
     Start Menu ---> All Apps ---> Windows Accessories.
1.Note pad: It is a simple text editor for Microsoft windows. It is a common text only editor which have no format tags or styles. The extension name is .TXT
2.Word pad: It is a basic word processor. It is more advanced then note pad but less efficient then Microsoft word. The extension name is .DOC.
3. Paint: It is a drawing tool. The extension name is .BMP
4. Calculator: It is commonly used icon calculating tools in window OS.
5. Sound recorder: It record sound and save it in the computer.
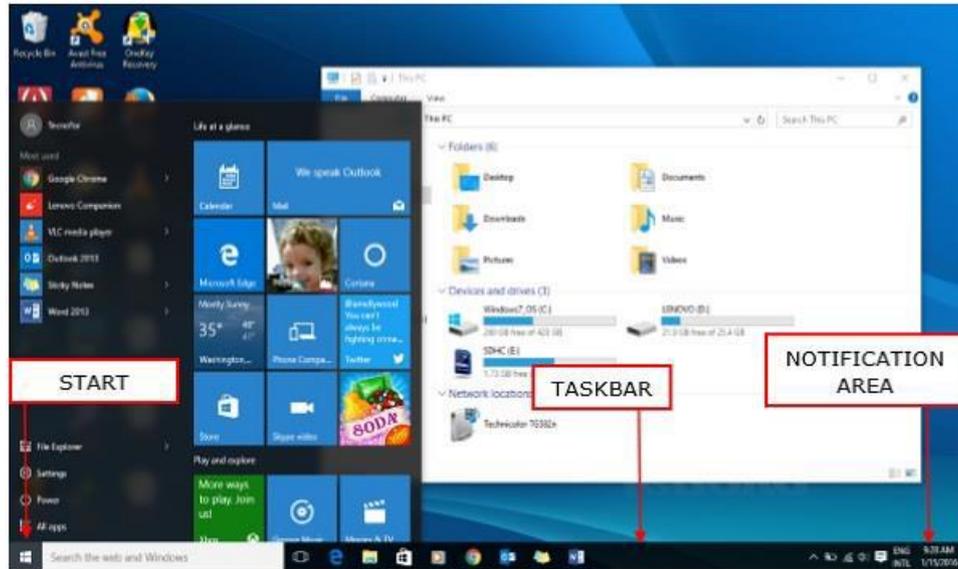
Fig. 2.1: Various components of Win 10 desktop screen.

WINDOWS KEYBOARD SHORTCUTS

Keyboard shortcuts are key commands that allow you to accomplish various tasks. Instead of using the mouse to go through menus and sub-menus, we can use keyboard shortcuts to do common tasks like saving, copying, or pasting. Listed below are some of the most common keyboard shortcuts.

Serial Number	Keyboard Shortcuts	Operations they perform
1.	CTRL+W	Close
2.	CTRL+C	Copy
3.	CTRL+X	Cut
4.	DEL	Delete
5.	ESC	Exit
6.	CTRL+ALT+DELETE	Reboot/Restart
7.	CTRL+S	Save
8.	F1	Help
9.	Windows Key* + M	Minimize Window
10.	CTRL+DEL	Move to Recycling
11.	CTRL+N	Create a New file
12.	CTRL+O	Open a file
13.	Windows Key*	Open Start Menu
14.	CTRL+V	Paste
15.	CTRL+Y	Redo an operation

Experiment No: 3

AIM: To draft a basic Curriculum Vitae (CV) for an interview using tables, footer and headings with following specifications:

- ❖ Table to show qualifications with heading.
- ❖ Left & Right margins
- ❖ Page numbers in the footer on the right side.
- ❖ Use watermark such as biodata.

ALGORITHM:

Step 1: Open a blank document.

Step 2: Type a Bio-data briefly then goto *Insert → Table →Insert →Table →Select number of rows & columns →Ok* for qualifications.

Step 3: Go to *Page Layout →Margins →Assign →Left & Right Margins*

Step 4: Go to *Insert →Page Numbers →Select footer on the right side →Ok*.

Step 5: Go to *Page Layout →Watermark →Customize text as Bio-data →Ok*.

Step 6: Save the Document.

OUTPUT:
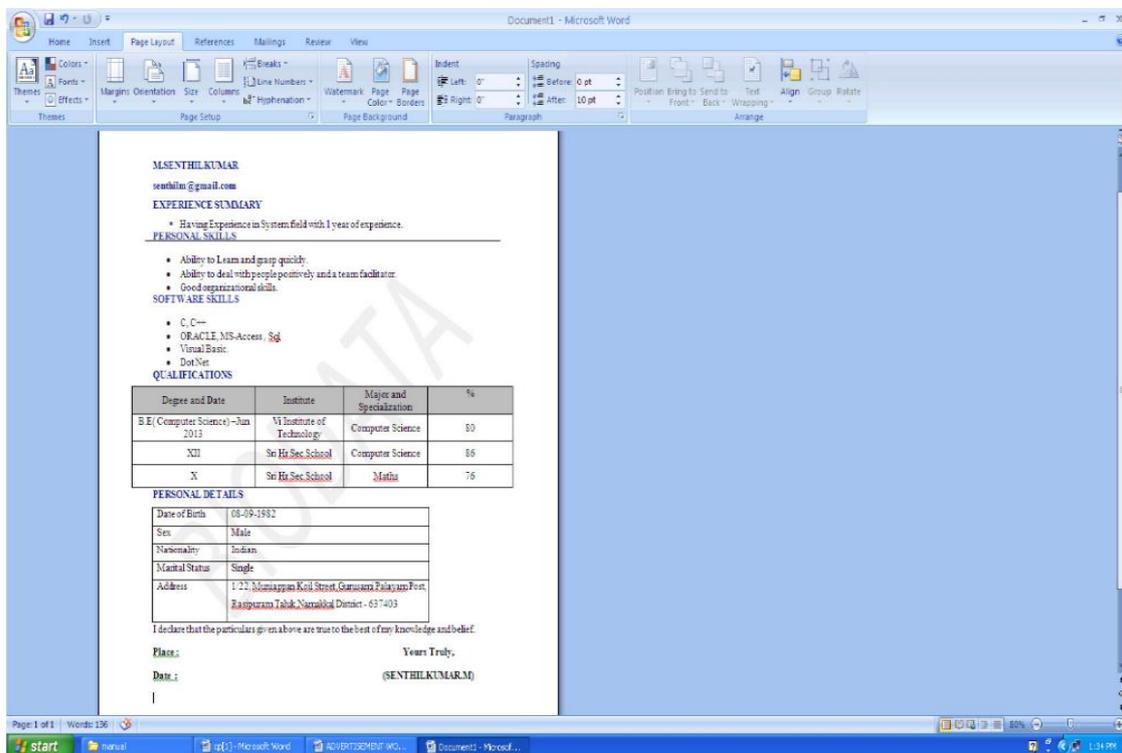
Fig. 3.1: The CV format on MS Word.

RESULT:

Thus, the curriculum vitae (CV) has been created with some specifications in Microsoft word successfully.

Experiment No: 4

AIM: To create a WORD document to call letters for an interview using mail merge.

ALGORITHM:

> **Step 1:** Open a blank document
>
> **Step 2**: Goto *Mailings in Menu* → *Start Mail merge* → *Letters*
>
> **Step 3**: Type a interview call letter with FROM address and leave some
>
> > Space for TO address
>
> **Step 4**: Goto → *Select recipients* → *Type a new list* → *Customize the*
>
> > *Columns* → *Ok*
>
> **Step 5**: Type a 10 address new some fields → Ok → save it
>
> **Step 6**: Goto → *Select recipients* → *Use Existing list* → *open a file* → *Ok*
>
> **Step 7**: Under the TO Address insert the Merge fields & preview the results
>
> **Step 8**: Goto *Finish Merge* → *Edit individual Documents* → *All* → *Ok*
>
> **Step 9**: Save the document.

OUTPUT:
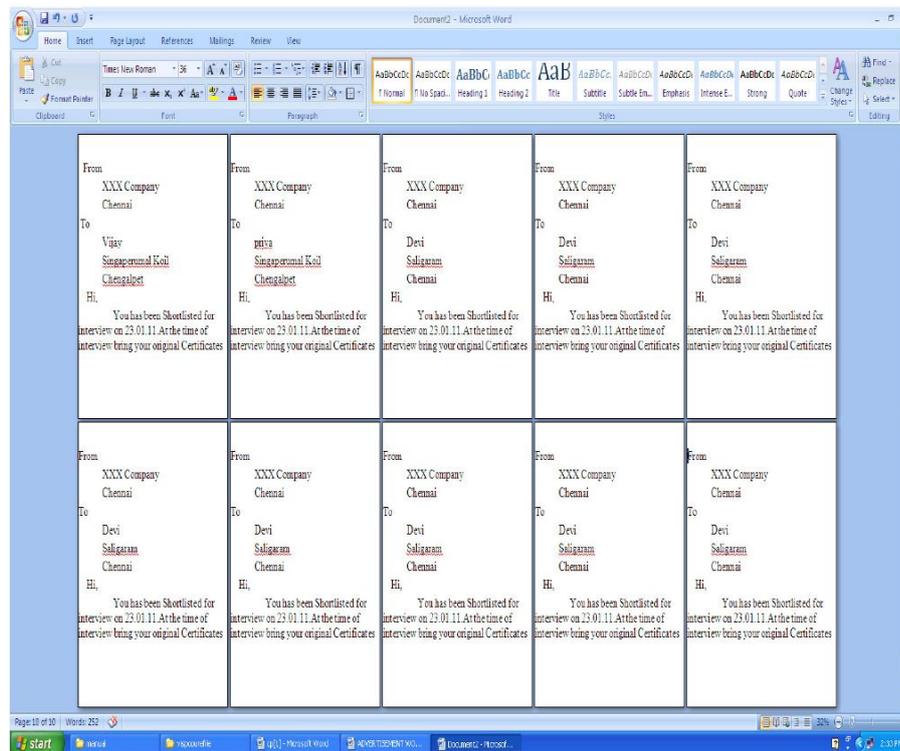
Fig. 4.1: The Mail Merge for 10 candidates on MS Word.

RESULT:

> Thus, the Mail Merge has been created in Microsoft word successfully.

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Experiment No: 5

AIM: To create an EXCEL spreadsheet to analyse the marks of the students of a class using various chart (Line, XY, Bar and Pie).

ALGORITHM:

Step 1:. Open a Microsoft Excel Worksheet.

Step 2: Place the Cursor on the desired cell and start entering the required Student details

Step 3: To find the Total and Average using formula (Total = m1+m2+m3) Average = (Total / 3)

Step 4: Select the table and goto *Insert → Chart → Choose one type of chart*

Step 5: Reselect the table again and *Insert →Chart → Choose another* type of Chart. Repeat these steps for all types of charts.

OUTPUT:
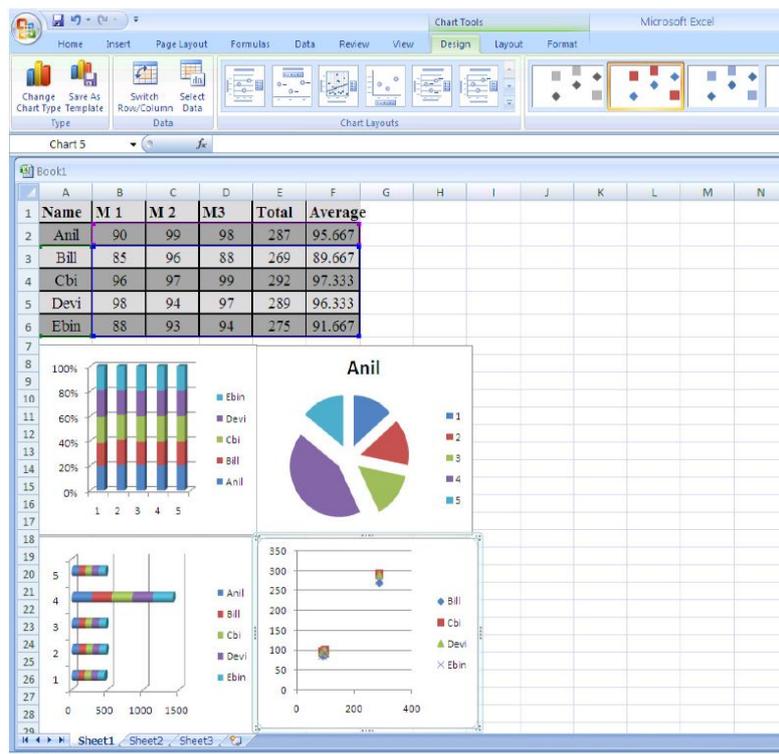
Fig. 5.1: The use of chart in MS Excel.

RESULT:

Thus, the spreadsheet charts (Line, XY, Bar and Pie) for students' marks have been created successfully.

Experiment No: 6

AIM: To create a spreadsheet to calculate HRA, DA, TA, PF, LIC. Gross salary, Net Salary from the given data.

HRA=18% of basic Pay, TA=12% of Basic Pay, DA=15% of Basic Pay

PF =10% of Basic Pay, LIC =7% of Basic Pay, Deduction= PF + LIC

Gross Salary = Basic Pay + HRA + DA + TA, Net Salary = Gross Salary – Deduction

ALGORITHM:

Step 1. Open a Microsoft Excel Worksheet

Step 2. Type the details about the employees and Basic Salary.

Step 3. For HRA & DA, move to corresponding row & column and assign the
formula =18/100* BS (row & column)

For DA , move to corresponding row & column and assign the formula
=15/100* BS (row & column)

. **Step 4.** For TA & PF, move to corresponding row & column and assign the formula
=12/100* BS (row & column)

For PF , move to corresponding row & column and assign the formula
=10/100* BS (row & column)

Step 5. For LIC & GS, move to corresponding row & column and assign the formula
=7/100* BS,

For GS, move to corresponding row & column and assign the formula
= Basic Pay + HRA + DA + TA

Step 6. Likewise for Deduction and Net Salary

Step 7. Save the Excel spreadsheet.

OUTPUT:

Fig. 6.1: The use of formula in MS Excel.

RESULT:

Thus, the spreadsheet to calculate HRA, DA, TA, PF, LIC. Gross Salary, Net salary from the given data has been created successfully.

Experiment No: 7

AIM: To create an introductory presentation with one slide about climate change.

ALGORITHM:

Step 1. Open a blank slide on Microsoft PowerPoint.

Step 2. Download prerequisite images and save it in pictures folder.

Step 3. Go to *Home tab* → *New slide* to add blank slide.

Step 4. Go to *Insert tab* → *Click on Text Box* and place it at heading of slide.

Step 5. Left-click once inside the text box and start entering your text.

Step 6. Select text inside text box. Use the Font Group on the Home tab or right-click on the selected text and choose formatting options from the Mini Toolbar.

Step 7. For inserting images, go *to Insert tab* → *Click Pictures* → *This device* → *add the required image*.

Step 8. Adjust the image size and align it with margin of page.

Step 9. Save the MS Presentation document with suitable file name.

OUTPUT :
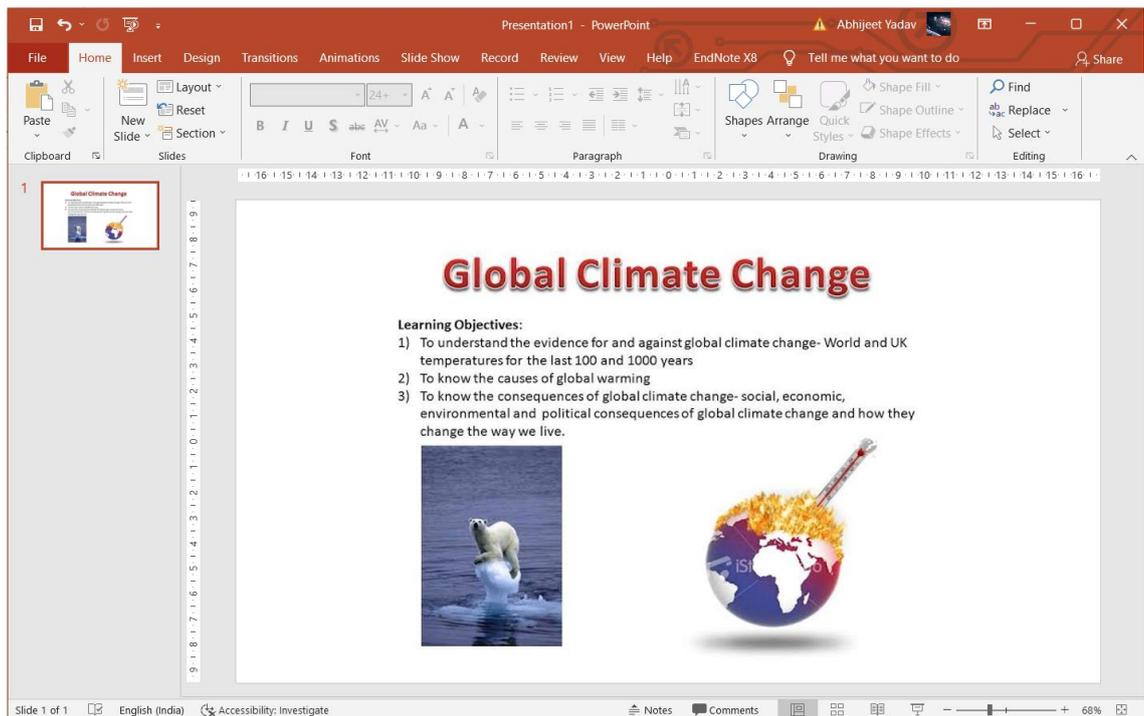
Fig. 7.1: A slide on climate change in MS PowerPoint.

RESULT:

Thus, a Presentation on climate change has been created successfully.

Experiment No: 8

AIM: To insert animation on a sample presentation on renewable energy types.

ALGORITHM:

>**Step 1.** Open a blank slide on Microsoft PowerPoint.
>
>**Step 2.** Download prerequisite images and save it in pictures folder.
>
>**Step 3.** Go to *Home tab* → *New slide* to add blank slide.
>
>**Step 4.** Go to *Insert tab* → *Click on Text Box* and place it at heading of slide.
>
>**Step 5.** Left-click once inside the text box and start entering your text.
>
>**Step 6.** Select text inside text box. Use the Font Group on the Home tab or right-click on the selected text and choose formatting options from the Mini Toolbar.
>
>**Step 7.** For inserting images, go *to Insert tab* → *Click Pictures* → *This device* → *add the required image*.
>
>**Step 8.** Adjust the image size and align it with margin of page.
>
>**Step 9.** Click on one image at a time for adding animation to it.
>
>**Step 10.** Go to *Animation tab* → *Add animation* → *Click on Effects*.
>
>**Step 11.** Repeat step 10 for all the text and images.
>
>**Step 12.** Save the MS Presentation document with suitable file name.

OUTPUT :
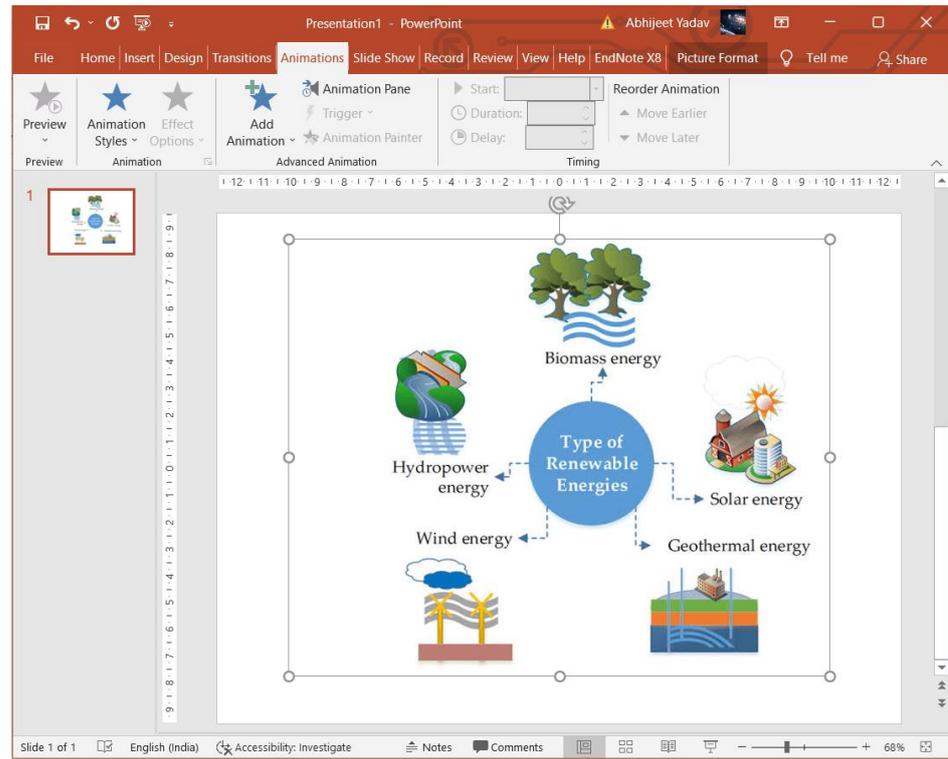
Fig. 8.1: A slide on renewable energy types in MS PowerPoint.

RESULT:

Thus, a Presentation on types of renewable energy has been created successfully.

Experiment No: 9

AIM: To use E-mail for sending and receiving messages along with attaching a file.

ALGORITHM:

Step 1. Open any web browser like Chrome or Mozilla.

Step 2. Enter URL → www.gmail.com to use Google's free email service.

Step 3. Login to your account using valid e-mail & password. (Fig. 9.1)

Step 4. In order to draft new message, click on compose button. (Fig. 9.2)

Step 5. Fill the **To** and **From** section which tells about receiver & sender of e-mail respectively. (Fig. 9.3)

Step 6. Write about the subject of the e-mail (Fig. 9.3 in the region no.3).

Step 7. Write main body of the e-mail (Fig. 9.3 in the region no.4).

Step 8. In order to attach any file use label no. 6 option (Fig. 9.3).

Step 9. Properly check the format of the e-mail → click **Send** (See Fig. 9.3).

Step 10. In order to read newly received message, click on the **Primary** tab (See Fig. 9.2).
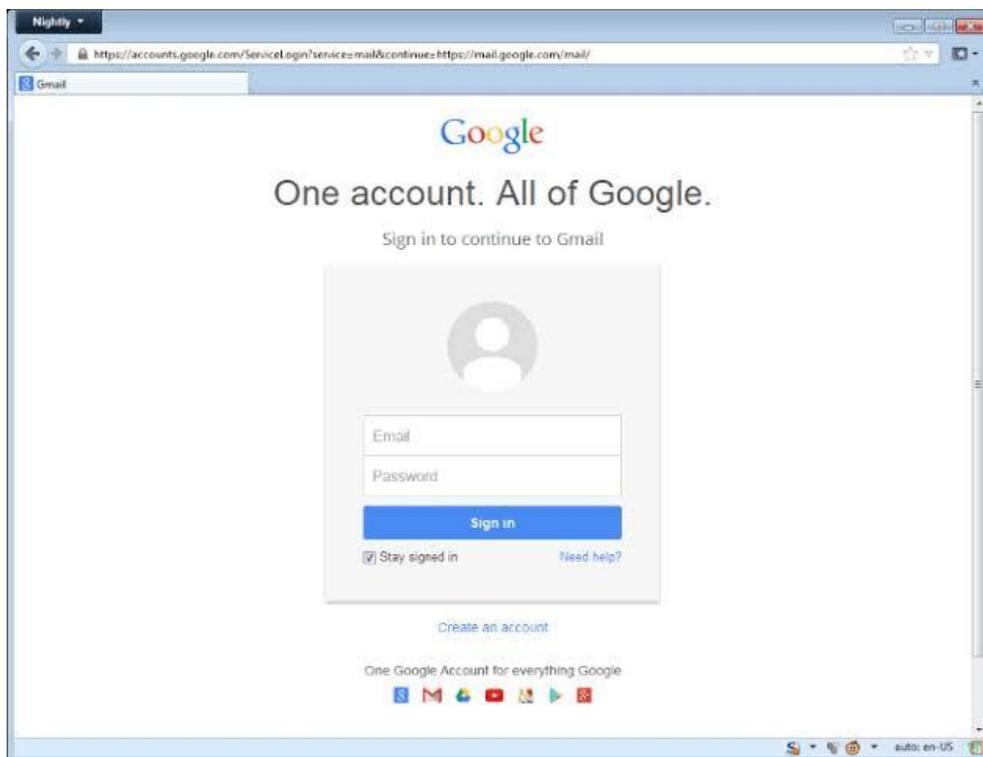
Fig. 9.1: Login page of G-mail account.
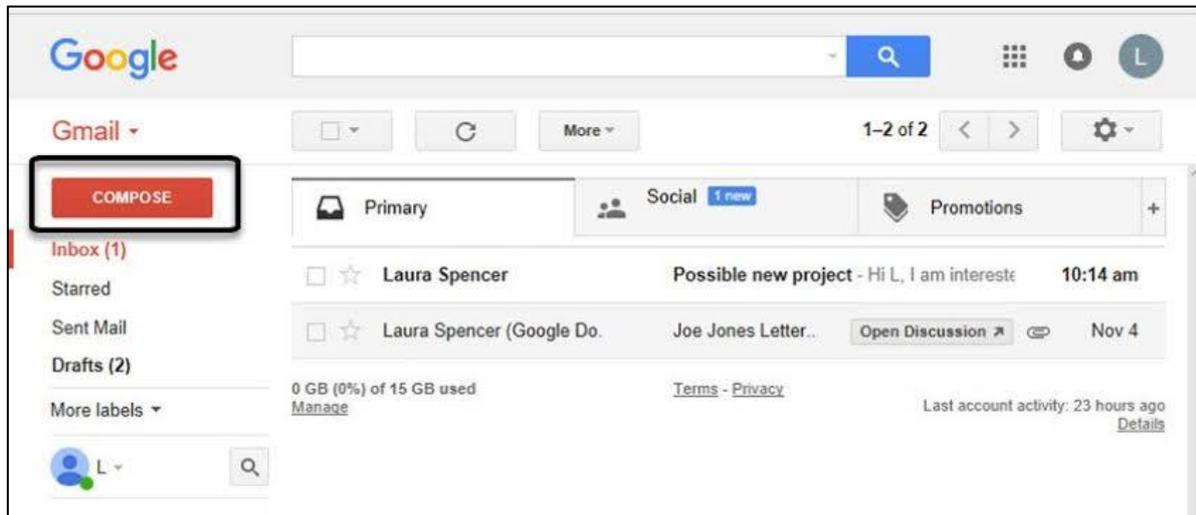
Fig. 9.2: After login, various tabs and compose options are accessible.
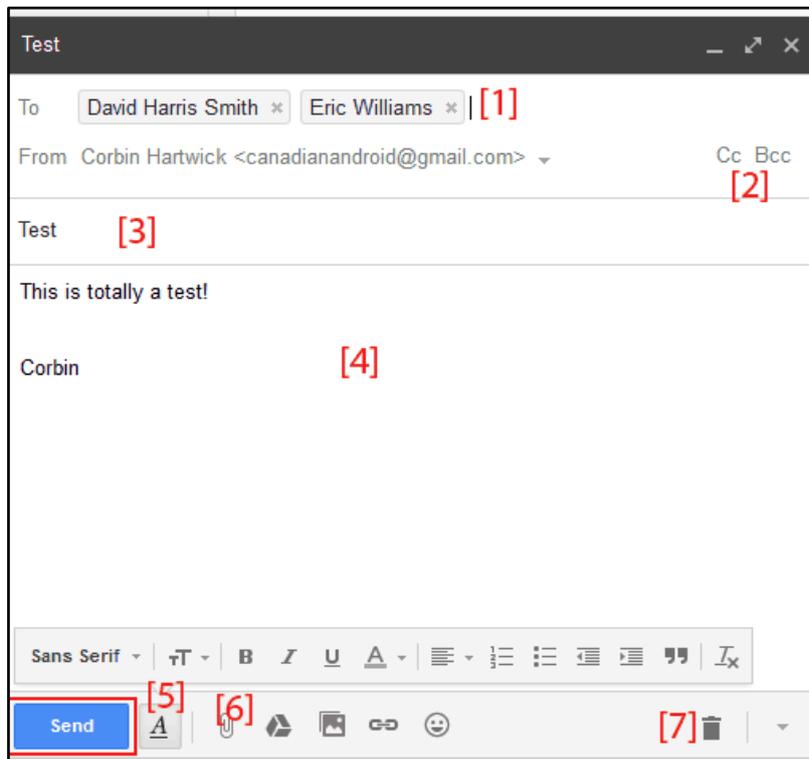
Fig. 9.3: E-mail writing space showing space for sender, receiver, subject and main body.

RESULT:

Thus, an e-mail has been drafted successfully along with attaching a file.

Experiment No: 10

AIM: To install and configure antivirus / firewall on computer system.

ALGORITHM:

Step 1. Open the antivirus software .exe file (from CD drive or Internet).

Step 2. Windows OS will automatically detect new software launch.

Step 3. Select a preferred location for file, preferably C drive in *My Computer*.

Step 4. Select suitable configuration and press next and install.

Step 5. In order to configure firewall for connection authorization, open server manager, select Configuration\Windows Firewall With advanced Security\Inbound Rules or Configuration\Windows Firewall with Advanced Security\Outbound Rules.

Step 6. In the details pane, right click the rule you want to configure.

Step 7. Click the *General* tab. Select *Allow Only Secure Connections*.

Step 8. Click the *Users and Computers* tab for an inbound rule.

Step 9. Click *Add* and select the groups containing the users or computer you want to authorize. (See Fig 10.1)

Step 10. Click OK to finish the modifications in firewall settings.
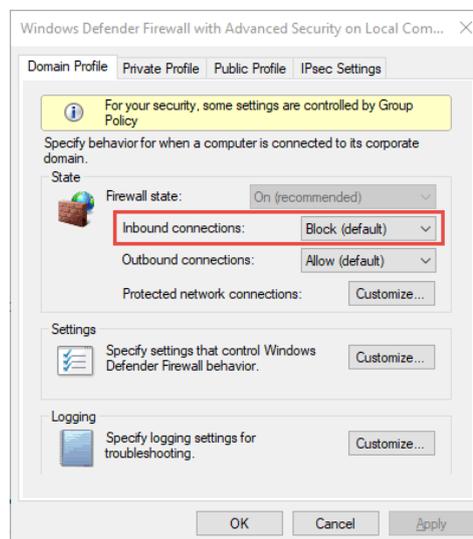
Fig. 10.1: Windows defender / firewall dialog box.

RESULT:

Thus, windows firewall has been configured successfully along with installing a antivirus software.

Dos & Don'ts in Computer Lab

Dos	Don'ts
- Enter/exit lab quietly. - Raise your hand before asking any doubt. - Always have a clean & dry hand. - Touch keyboard & mouse gently. - Keep your work space clean. - Search only approved websites	- No food or drinks in the lab. - Do not mark on any part of computer. - Do not change any key settings of computer. - No magnets allowed in computer lab - Do not pull any cable/cord of any system. - Ask teacher before taking any printout.