

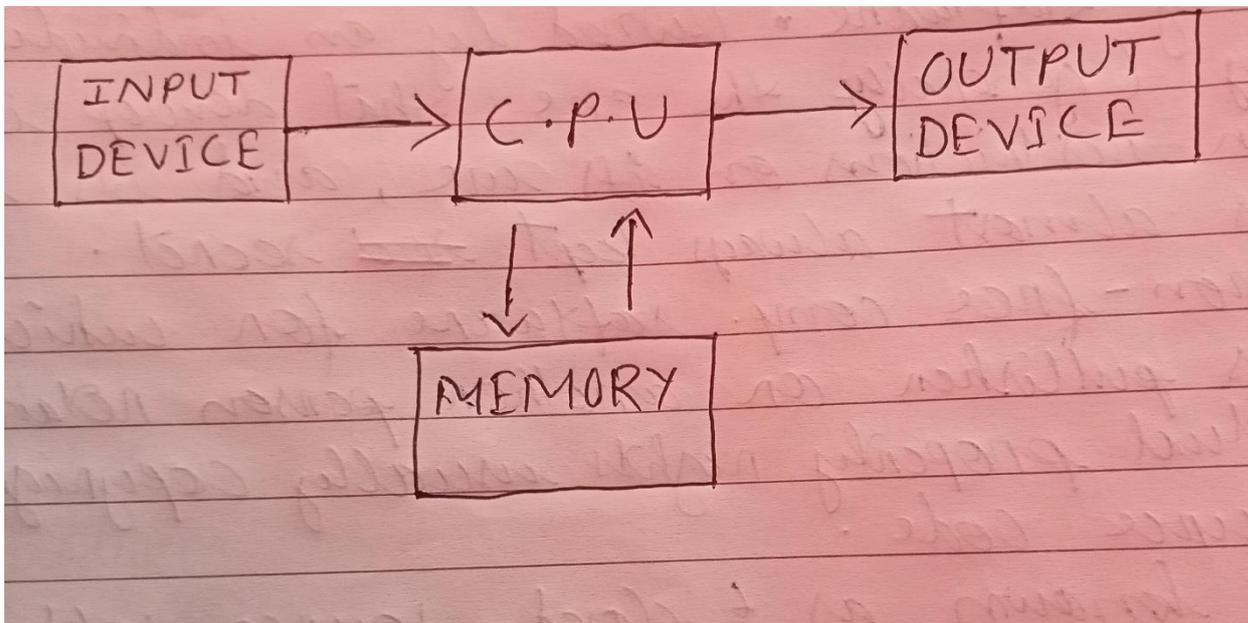
# CCA-101: Fundamentals of IT & Programming

## Assignment -1

**Q1: What are the four fundamental parts of computer? Explain it with the help of diagram.**

Ans:Four fundamental parts of compute are follow-

- Central processing units(CPU)
- Memory(ROM)
- Input devices(keyboard,mouse)
- Output devices(monitor,printer).



**Q2: Discuss about the classification of computers based on size and capacity.**

Ans:Based on size and capacity, computers are classified as follows:

- Super Computers
  - Mainframe Computer
  - Mini Computers
  - Micro Computers
- **Super Computers:** Supercomputers are the most powerful and physically the largest by size. These are systems designed to process huge amounts of data and the fastest supercomputers.
- **Mainframe Computers:** Mainframe computers are very large often filling an entire room and can process thousands of millions of instructions per second.

- **Mini Computers:** These computers are less expensive. Sometimes referred to as Midrange Server or Midrange Computer, they are typically larger, more powerful and more expensive than desktop computers.
- **Microcomputers:** Most frequently used type of computer. Also, known as Personal Computer (PC), a microcomputer is a small computer system designed to be used by one Person at a time.

**Q3: What is the meaning of computer generation? How many Computer Generations are Defined? What technologies were/are used?**

Ans: The evolution of digital computing is often divided into generations. Each generation is characterized by dramatic improvements over the previous generation in the technology used to build computers, in terms of the internal organization of computer and programming languages.

5 computer generations were defined.

Technologies used are-

- Vacuum Tubes .
- Transistors.
- Integrated Circuits.
- Microprocessors.
- Artificial Intelligence.

**Q4: Differentiate between Volatile & Non- Volatile memories.**

Ans:

Volatile memory	Non volatile memory
They are the computer storage that only maintain its data while the device is powered.	They are the computer memory that has the capacity to hold saved data even if power turned off.

**Q5: Distinguish among system software, application software and open source software on the basis of their feature.**

Ans: **System Software:** It is a type of software that is designed to run a computer's hardware and application programs. Software like operating systems, compilers,

editors and drivers etc., come under this category. A computer cannot function without the presence of these.

**Application software:** It is software created for a specific purpose, used by end users. It can be called an application or simply an app. Examples: word processor, accounting application, a web browser, an email client, media player etc.

**Open-source software:** is a type of computer software in which source code is released under a license in which the copyright holder grants users the rights to study, change, and distribute the software to anyone and for any purpose. The Linux operating system(OS) is the best-known examples of open source software technology.

**Q6. A) Create a file in MS-word to insert a paragraph about yourself and save it with file name “yourself”. Describe all steps involved in it.**

Ans:Steps to make a files in MS word given below -

- I. Open the computer.
- II. Press the start icon and go to all application.
- III. After that go to MS word a new window with a blank page appear. Move the mouse to the location where want text in the document.
- IV. Left-click the mouse. The insertion point appears.
- V. Type the text about myself .Click the Microsoft Office button.
- VI. Select Save As Word Document. The Save As dialog box appears. Select the location where want to save the document using the drop-down .
- VII. Enter a name for the document as yourself.
- VIII. Click the Save button.

**Q6 b) Write steps regarding followings**

- To change the font style
- To change the font size
- To change the font color
- To highlight (in yellow) the line that reads “need to get IMS’s address”

Ans: To format font style:

- Select the text you want to modify.
- Left-click the drop-down arrow next to the font style box on the Home tab. The font style drop-down menu appears.

- Move your cursor over the various font styles. A live preview of the font will appear in the document.
- Left click on the desired design.

#### To format font size:

- Select the text you want to modify.
- Left-click the drop-down arrow next to the font size box on the Home tab. The Font size drop-down menu appears.
- Move your cursor over the various font sizes. A live preview of the font size will appear in the document.
- Left-click the font size you want to use. The font size will change in the document.

#### To format font color:

- Select the text you want to modify.
- Left-click the drop-down arrow next to the font color box on the Home tab. The Font color menu appears.
- Move your cursor over the various font colors. A live preview of the color will appear in the document.
- Left-click the font color you want to use. The font color will change in the document.

#### To highlight a specific line:

- Select the text “need to get IMS’s address”.
- Left click the drop down arrow next to the highlight box. The highlight colours box appear.
- Move the cursor over the yellow color.
- Left click on it to highlight the desired line with yellow color.

**Q7. Create a file in MS-Word for the following document and save it with file name ‘ms\_word’. Describe all steps involved in it.**

# MS Word

**MS Word** is a widely used commercial word processor developed by Microsoft.

*MS word* is application software, which is capable of

- **creating,**
- **editing,**
- **saving, and**
- **printing any type of document**

Ans:Steps to make a files in MS word given below -

- Open the computer.
- Press the start icon and go to all application.
- After that go to MS word a new window with a blank page appear. Move the mouse to the location where want text in the document.
- Left-click the mouse. The insertion point appears.
- Type the text .
- Highlight , underline , bold , italic and cut some words as shown above.
- Click the Microsoft Office button.
- Select Save As Word Document. The Save As dialog box appears. Select the location where want to save the document using the drop-down.
- Enter a name for the document as ms\_word.
- Click the Save button.

**Q8. Create a file in MS-word for the following document and save it with file name 'equations'. Describe all steps involved in it.**

## Equations

$$X_2 + Y_5 = 30$$

$$Z^3 + Q^4 = 50$$

$$A_2 + B^8 = X_2 + Y^8$$

Ans:

- Open the computer.
- Press the start icon and go to all application.
- After that go to MS word a new window with a blank page appear. Move the mouse to the location where want text in the document.
- Left-click the mouse. The insertion point appears.
- Type the text .
- Use superscript and subscript from the home tab.
- Click the Microsoft Office button.
- Select Save As Word Document. The Save As dialog box appears. Select the location where want to save the document using the drop-down.
- Enter a name for the document as equations .
- Click the Save button.

**Q9. Create a file in MS-word that convert existing highlight text to table as shown below and save it as file name 'text\_to\_table'. Describe all steps involved in it.**

Select the text you want to convert.  
Select the **Insert** tab.  
Click on **Table** command. A dialog box appears.  
Click on **Convert Text to Table**, a new dialog box appears  
here set number of columns.  
Click on OK Finally Selected text convert in a table



Select the text you want to convert.	Select the <b>Insert</b> tab.
Click on <b>Table</b> command. A dialog box appears.	Click on <b>Convert Text to Table</b> , a new dialog box appears
here set number of columns.	Click on OK Finally Selected text convert in a table

Ans:

- Open the computer.

- Press the start icon and go to all application.
- After that go to MS word a new window with a blank page appear. Move the mouse to the location where want text in the document.
- Left-click the mouse. The insertion point appears.
- Type the text .
- Select the text that you want to convert in to table.
- Click insert, table, text convert into table then click on it.
- Now the lines automatically change in to table .
- Click the Microsoft Office button.
- Select Save As Word Document. The Save As dialog box appears. Select the location where want to save the document using the drop-down.
- Enter a name for the document as text\_to\_table .
- Click the Save button.

**Q10. Create a file in MS-Word to insert a table in the document. Describe all steps involved in it.**

Ans:

- Open the computer.
- Press the start icon and go to all application.
- After that go to MS word a new window with a blank page appear. Move the mouse to the location where want text in the document.
- Left-click the mouse. The insertion point appears.
- Type the text .Select the text that you want to convert in to table.
- Click insert,table.Choose a table from it than click on it.
- Click the Microsoft Office button.
- Select Save As Word Document. The Save As dialog box appears. Select the location where want to save the document using the drop-down.
- Enter a name for the document .
- Click the Save button.

**Q11. Create a following worksheet in MS-excel and save it with name 'book1'.**

	A	B	C
1	Roll No	Name	Marks
2	1	n1	60
3	2	n2	70
4	3	n3	80
5	4	n4	90
6	5	n5	40
7	6	n6	50
8	7	n7	77
9	8	n8	44
10	9	n9	88
11	10	n10	55
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			

Ans:

- Open the computer.
- Press the start icon and go to all application.
- After that go to MS- excel and a blank spreadsheet appear.
- Move the cursor to he column where you want to put your data.
- Enter your data.
- Go to file tab.
- Select save as a dialogue appear. Select the location where you want to save the file.
- Enter the name as book1.
- Click on save.

**Q12. Calculate the following things of a range (C2:C11) of data in the worksheet created in question no 10.**

- I. The sum of the marks using AutoSum in a range of cells (C2:C11)
- II. Average of the marks in a range of cells (C2:C11)
- III. Highest marks in a range of cells (C2:C11)
- IV. Minimum marks in a range of cells (C2:C11)

Ans:

- I. 654
- II. 65.4
- III. 90
- IV. 55

**Q13 a) Describe various steps involved in the following**

- **To modify column width of a worksheet**
- **To modify the row height of a worksheet**
- **To delete rows and columns of a worksheet**

Ans: **To modify column width:**

- Position the cursor over the column line in the column heading, and a double arrow will appear.
- Left-click the mouse, then drag the cursor to the right to increase the column width or to the left to decrease the column width.
- Release the mouse button.

**To modify the row height:**

- Position the cursor over the row line you want to modify, and a double arrow will appear.
- Left-click the mouse, then drag the cursor upward to decrease the row height or downward to increase the row height.
- Release the mouse button.

**To delete rows and columns:**

- Select the row or column you'd like to delete.
- Click the Delete command in the Cells group on the Home tab.

**Q13 b) Describe following terms in the worksheet**

- **Absolute reference and relative reference in formula.**
- **Cell address**

Ans: **Relative reference:** All cell references are relative references; when copied across multiple cells, they change based on the relative position of rows and columns. For example, if you copy the formula =A1+B1 from row 1 to row 2, the formula will become =A2+B2. Relative references are especially convenient whenever you need to repeat the same calculation across multiple rows or columns.

**Absolute reference:** Absolute references do not change when copied or filled. You can use an absolute reference to keep a row and/or column constant. An absolute reference is designated in a formula by the addition of a dollar sign (\$) before the column and row.

**Cell address:** Its cell has a specific name based on the row or cell where it located is known as cell address.

**Q14. A) What tools are available to customize our PowerPoint presentation?**

Ans: Tools to customize PowerPoint presentation are-

- Template
- Front style
- Colour
- Pictures etc.

**Q14 b) Write the steps for the following action for creation of power point presentation**

- **Open a Blank presentation.**
- **Save the presentation as Lab1.pptx**
- **Add a Title to the first slide: the name of your college**
- **Type your first name and last name in the Subtitle section**
- **Add a New Slide which has a Title and Content**

Ans: [To open a blank presentation](#)

- Click on start
- Select MS PowerPoint
- Double click on it
- A blank sheet appear

[To save a presentation](#)

- Locate and select the Save command on the Quick Access Toolbar.
- The Save As pane will appear in backstage view.
- Then need to choose where to save the file and give it a file name as Lab1.pptx.
- The Save As dialog box will appear.
- Click on it .

[Add a title to the slide](#)

- Click on the title placeholder.
- Add the title name as the name of your college.
- Click on enter.

Type your first name and last name in the Subtitle section

- Click on the subtitle place holder .
- Type your first and the last name on it.
- Click on enter.

Add a New Slide which has a Title and Content

- Click in the slide where you want to place the object.
- On the Insert tab, in the Text group, click Object.
- Click Create from File.
- In the File box, type the name of the file, or click Browse to select from a list. Select the Link check box
- Press OK.

**Q15. Write steps for creation of a set of PowerPoint slides that demonstrates your skill to use the tools of PowerPoint. It should include the following things.**

- **Title slide &bullet list**
- **Inserting Excel Sheet**
- **Clip art and Text**
- **Slide show effects**

Ans:

1. Open Microsoft PowerPoint.
2. Go to File at the top of the screen and click New.
3. In the “New Presentation” dialog box, click on “From Design Template.”  
(When we start a new presentation PowerPoint, we have the opportunity to choose a theme or Template. A theme is a slide design that contains matching colors, fonts, and special effects etc.)
4. Do Slide Design.(As per requirement) ...
5. Adding Text. (As per requirement)
6. Adding Pictures. . (As per requirement)..

7. Save the presentation

*Inserting excel sheet:*

- I. Select the slide that you want to add a table to.
- II. On the Insert tab, select Table.

## **PART-2**

**Q16. What is the difference between Machine Language and High Level Language?**

Ans: *Machine Language:* A computer programming language consisting of binary instructions which a computer can respond to directly.

All memory addresses have to be remembered.

All operation codes have to be remembered.

*High-level language:* A high-level language is any programming language that enables development of a program in a much more user-friendly programming context.

Memory Efficient.

It is not required to keep track of memory locations.

**Q17. Discuss about different data types of C programming Language.**

Ans:

<b>Type</b>	<b>Keyword</b>	<b>Value range which can be represented by this data type</b>
Character	char	-128 to 127 or 0 to 255
Number	int	-32,768 to 32,767 or -2,147,483,648 to 2,147,483,647
Small number	short	-32,768 to 32,767
Long number	long	-2,147,483,648 to 2,147,483,647
Decimal number	float	1.2E-38 to 3.4E+38 till 6 decimal places

**Q18. Find the output of the following expressions**

a)  $X=20/5*2+30-5$

b)  $Y=30 - (40/10+6) +10$

c)  $Z= 40*2/10-2+10$

Ans: a)  $X=20/5*2+30-5$

$$=4*2+30-5$$

$$=8+30-5$$

$$=38-5$$

$$=33$$

b)  $Y=30-(40/10+6)+10$

$$=30-(4+6)+10$$

$$=30-10+10$$

$$=20+10$$

$$=30$$

c)  $Z=40*2/10-2+10$

$$=80/10-2+10$$

$$=8-2+10$$

$$=6+10$$

$$=16$$

**Q19. Describe the syntax of the following statements**

**a) If – else statement**

**b) for loop**

**c) while loop**

**d) do-while loop**

Ans:

a) *Basic syntax of If-else statement:*

If (expression)

{

Block of statements;

}

else

{

Block of statements

}

*b) Basic syntax of for loop is as follows:*

for( expression1; expression2; expression3)

{

Single statement

or

Block of statements;

}

In the above syntax:

expression1 - Initializes variables.

expression2 - Conditional expression, as long as this condition is true, loop will keep executing.

expression3 - expression3 is the modifier which may be simple increment of a variable.

*c) Basic syntax of while loop is as follows:*

While ( expression )

{

Single statement

Or

Block of statements;

}

*d) Basic syntax of do...while loop is as follows:*

Do

{

Single statement

Or

Block of statements;

```
}while(expression);
```

**Q20. Find the output of the following program segments**

a)	b)	c)
<pre>#include &lt;stdio.h&gt; int main() {   int i;   for (i=1; i&lt;2; i++)   {     printf( "IMS Ghaziabad\n");   } }</pre>	<pre>#include &lt;stdio.h&gt; int main() {   int i = 1;   while ( i &lt;= 2 )   {     printf( "IMS Ghaziabad\n");     i = i + 1;   } }</pre>	<pre>#include &lt;stdio.h&gt; void main() {   int a = 10, b=100;   if( a &gt; b )     printf( "Largest number is %d\n", a);   else     printf( "Largest number is %d\n", b); }</pre>

Ans:

a)IMS Ghaziabad

b)IMS Ghaziabad

IMS Ghaziabad

c) Largest number is 100