CCA-101: Fundamentals of IT & Programming
Assignment -1

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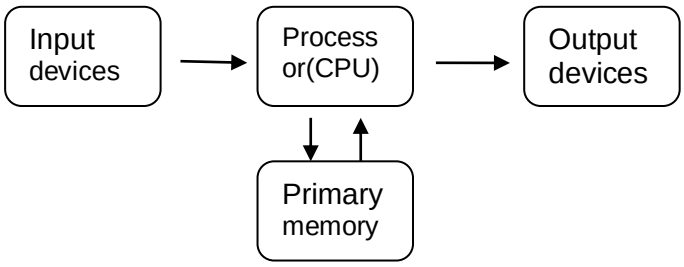
Q1: What are the four fundamental parts of computer? Explain it with the help of diagram.

Ans: A four fundamental parts of computer are the central processing unit or CPU, The primary memory,input units and output units.



Q2: **Discuss about the classification of computers based on size and capacity.**
Ans: The classification of computers are 1.super computers 2.mainframe computers 3.mini computers 4.micro computers .

1. **Super computer**: > super computers are the most powerful and physically the largest by sized.

>The fastest super computers can perform over one trillion calculation in a second .
Example: JAGURE.

2. **Mainframe computers**: >Mainframe computers are very large often feeling on entire room.
   >Mainframe are capable of supporting hundreds to thousands of users simultaneously.
   Example: IBM mainframe Z13

   3.MINI computer: >Mini computers are much smaller then mainframes .
   > They are typically larger, more powerful and more expensive then desktop computers.
   Example: Apple ipod.

   4.Micro computer: > A micro computer is a small computer system designed to be used by me personal at a time .
   Example: Laptops

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

Ans: The meaning of generation in computer terminology is a change in technology a computer is/was being used. Initially, the generation term was used to distinguish between varying hardware technologies. Nowadays, generation includes both hardware and software, which together make up and entire computer system.
>The evolution of computer technology is often divided into five generation.

1. First generation. 2. Second generation. 3. Third generation. 4. Fourth generation. 5. Fifth generation.
>Technology are used that > Artificial intelligence(AI) and Machine learning…. > Robotic process Automation (RPA). … > Edge computing … > Quantum computing. … > Virtual reality and Augmented reality. … > Blockchain. …> Internet of things (IoT). … > 5G.

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

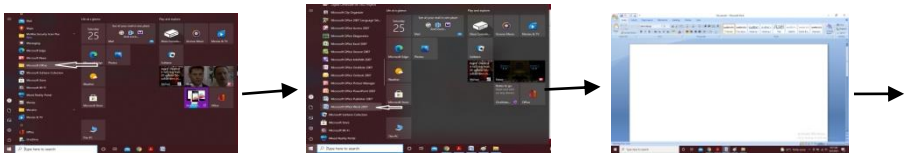
Ans: Volatile memory: volatile memory is a computer storage that only maintains its data while the device is powered. Example: RAM is volatile. When we are working on a document, it is kept in RAM, and if the computer loses power, your work will be lost.

Non-volatile memory: Non-volatile memory is a type of computer memory that has the capability to hold saved data even if the power is turned off. Example: Read-only memory (ROM), Hard disk, floppy disk, etc.

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

Ans: **System software**: > It is a type of software that is designed to run a computers hardware and application programs.
>Software like operating system, compillers, editors and drives and etc, come under this category.
>A computer cannot funetion without the presence of system software.
If we think of the computer system as a layered model, the system software is the interface between the hardware and user application.
Application software: > It is software created for a specific purpose, used by end users. It can be called an application or simply an app.
Example: Word processor, accounting application, a web browser, an email eilent, media player etc.
Open source software: >It is a type of computer software in which source code is released under a licence in which the copyright holder grants users rights to study, change and distribute the software

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.**



1st Step 2nd Step 3rd Step

4th Step 5th Step 6th Step

>**Create and Save Document:**

> Click the Microsoft Office button/file tab

>Select New. The new Document dialog box appears.

>Select blank document. It will be highlighted by default.

>A new blank document appears in the Word windo.

>Now you can create document by inserting text.

>Finally save document.

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 change the font size:** Using increase font size and decrease font size comment.

- Select the text you want to modify.
- Click on increase/decrease font size comments in the font group in the home tab.
- Then font size will change (increase/decrease) in the document.

>To change the font style: Select the text you want to modify.

- Click on font style box on the home tab. The font style drop down menu appears.
- Move your cursor over the various font style.
- Left click the font style you want to use.
- Then font style will change in the document.

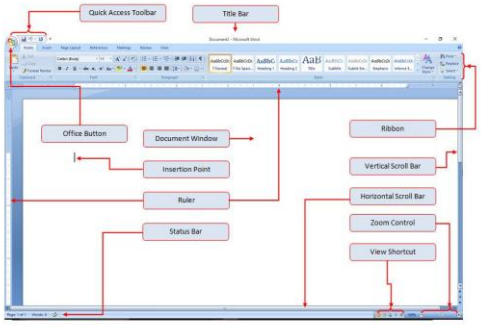
>**To change the font color:**

- Select the text you want to modify.
- Click on font color box on the home tab. The font color menu appears.
- Move your cursor over the various font color.
- Left click the font color your want to use.
- Then font color will change in the document.

>To highlight (in yellow) the line that reads "need to get IMS's address:

- Select the text
- Click on the text highlight color in the font group on the home tab.
- Various colors will appears.
- Move your cursor over the various colors.
- Click on color you want to use.
- Then text highlight color will change in the document.

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

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**

1.Creating a New Document

Each time when you open Word, a new blank document appears; however, you will also need to know how to create new documents while an existing document is open. In this section, you will learn how to create new documents.

To create a new blank document:

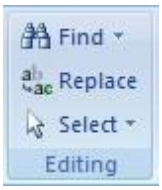
· Click the **Microsoft Office button**.

· Select **New**. The New Document dialog box appears.

· Select **Blank document** under the **Blank and recent** section. It will be highlighted by default.

· Click **Create**. A new blank document appears in the Word window.

2 Editing



The Type equation here.Editing section of the toolbar allows you to find, replace and select items. The select option gives you the ability to select all, select objects or select text with similar formatting. This last option gives you the ability to quickly change everything in your document with one style to another style without having to manually find all of that text and change each area separately.

3. · **Saving Documents**

In this section, you will learn how to use the Save and Save As commands, how to save as a Word 97-2003 compatible document, and how to save as a PDF.

To use the Save As command:

· Click the **Microsoft Office button**.

· Select **Save As Word Document**. The **Save As** dialog box appears.

· Select the **location** where you want to save the document using the drop-down menu.

· Enter a **name** for the document.

· Click the **Save** button.

4. **Print Documents**

To print your MS Word document:

Click ►**File** ►**Print** from the Menu Bar and a **Print** window will pop up on the screen. Click ►**OK** for your document to start printing.

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

$X_2 + Y_5 = 30$

$Z^3 + Q^4 = 50$

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

8. ANS. **“Equations”**

Equations

$X_2 + Y_5 = 30$

$Z^3 + Q^4 = 50$

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

$$X_2 + Y_5 = 30$$

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

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

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

⇩

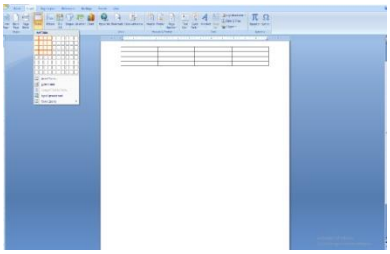
Select the text you want to convert.	Select the **Insert** tab.
Click on **Table** command. A dialog box appears.	Click on **Convert Text to Table, a new** dialog box appears
here set number of columns.	Click on OK Finally Selected text convert in a table

ANS.

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′

"TEXT TO TABLE'"

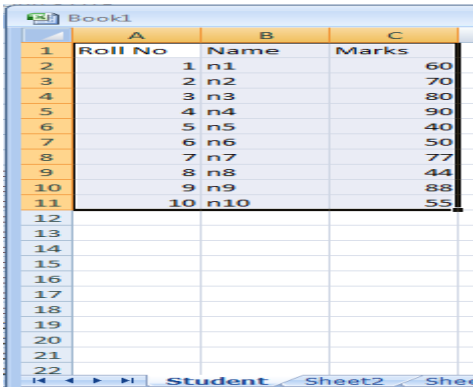
Q10. **Create a file in MS-Word to insert a table in the document. Describe all steps involved in it.**

Ans : 

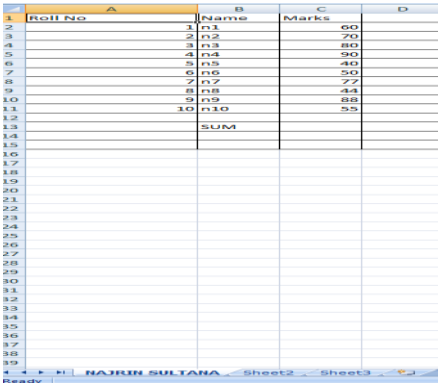
- To insert a blank table:
- Place your insertion point in the document where you want to′ insert table
- Select the Insert tab.′
- Click the Table command.′
- Drag your mouse over the diagram squares to select the′ number of columns and rows in the table.
- Left-click your mouse, and the table appears in the document.′
- Enter text into the table.′

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

ans



Roll No	Name	Marks
1	n1	60
2	n2	70
3	n3	80
4	n4	90
5	n5	40
6	n6	50
7	n7	77
8	n8	44
9	n9	88
10	n10	55

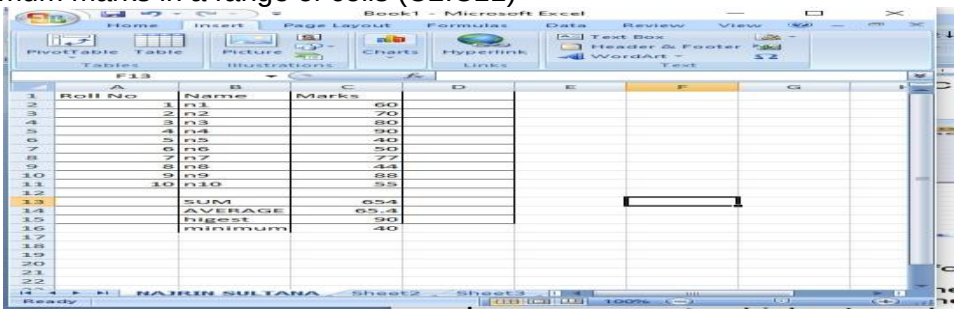


Roll No	Name	Marks
1	n1	60
2	n2	70
3	n3	80
4	n4	90
5	n5	40
6	n6	50
7	n7	77
8	n8	44
9	n9	88
10	n10	55
	SUM	

Q1**2. Calculate the following things of a range (C2:C11) of data in the worksheet created in question no 10.**

- the sum of the marks using AutoSum in a range of cells (C2:C11)
- average of the marks in a range of cells (C2:C11)
- highest marks in a range of cells (C2:C11)
- minimum marks in a range of cells (C2:C11)

ans.



Roll No	Name	Marks
1	n1	60
2	n2	70
3	n3	80
4	n4	90
5	n5	40
6	n6	50
7	n7	77
8	n8	44
9	n9	88
10	n10	55
	SUM	654
	AVERAGE	65.4
	higest	90
	minimum	40

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 of a worksheet: 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 of a worksheet: 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**

- Absolute reference and relative reference Relative reference: Cell references in formula automatically′ adjust to new locations when the formula is pasted into different cells. This is called a relative reference. Sometimes when you copy and paste a formula, you don't want′ one or more cell references to change. An absolute reference solves this problem.′ Absolute Reference; cell references in a′ formula always refer to the same cell or cell range . If a formula is copied to a different location, the absolute reference remains the same.

  - Cell address

    Cell address′ Each rectangle in the worksheet is called a cell.′ Each cell has a name, or a cell address, based on the column and row where it is located. In below diagram name of selected cell is C3 because column head is C and row head is 3.

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

• Click on start • Select MS office PowerPoint option • Double click on it

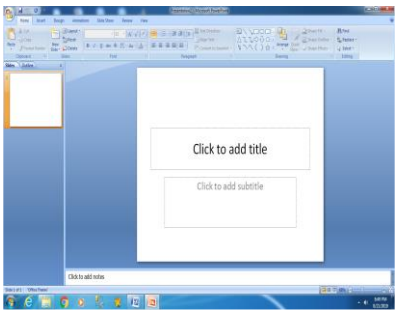
Q14 b) **Write the steps for the following action for creation of power point presentation**

- **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**

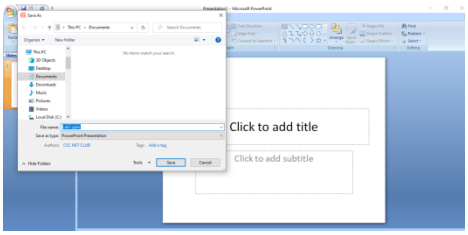
Ans:

- Open a Blank presentation:

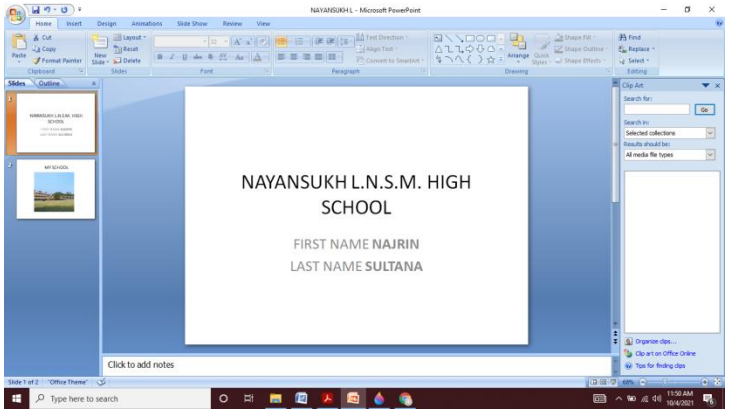
• Click on start • Select MS office PowerPoint option • Double click on it



- **Save the presentation as Lab1.pptx:**


Click to add title
Click to add subtitle

- 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



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:

- **Title slide &bullet list:**

Microsoft PowerPoint is an interesting and useful program that is widely used to prepare slideshows for Public Seminars and Presentations. From an Artistic Perspective, individuals cannot easily understand theories alone for hours but can obtain much more within minutes or even seconds, with the use of Visual Presentations backing Theory. PowerPoint can solve the Problem in terms of communication technology for everyone. There are complicated and sophisticated methods for such; however the simplest and most commonly used method which has being used almost everywhere and anywhere in the world during Publi Presentations & Seminars was the use of PowerPoint applications for seminars. 1. Open Microsoft PowerPoint. 2. Go to File at the top of the screen and click New.

- **Inserting Excel Sheet:**

The great thing about the Microsoft Office Suite is the fluid interaction of each application type. By embedding the Excel document into your presentation or document you can use it to make a point more effectively with numbers or even graphs. 1. In PowerPoint, select the Insert tab & Click the Insert tab. 2. Click the Object command in the Text group. ... 3. A dialog box will appear. ... 4. Locate and select the desired Excel file, then click Insert. ...
It is shown in the following slide view

- **Clip art and Text:**

- Select Insert > Picture > From Online. In the Online Pictures dialog box, type words describing the kind of picture you want (such as roses), and then press Enter. and then select Clipart under the Type category. Select the image you want to insert, then click the Insert button.

- Slide show effects:

1. Select the slide you want to add a transition to.
2. Select the Transitions tab and choose a transition. ...
3. Select Effect Options to choose the direction and nature of the transition. ...
4. Select Preview to see what the transition looks like.

Part -2

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

Ans:

Machine Language	High Level Language
Machine language, or machine code, consists of binary code and is the only language that is directly understood by the computer. ... Both machine code and **assembly languages** are hardware specific	A high-level language is a programming language that uses English and mathematical symbols in its instructions.

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

Ans:

Data types	Bytes	Range
signed char	1	-128 to 127
unsigned char	1	0 to 255
float	4	1.2E-38 to 3.4E+38
double	8	2.3E-308 to 1.7E+308

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
X=4*2+30-5
=8+30-5
=38-5
=33

b) Y=30 – (40/10+6) +1
Y=30-(4+6)+1
=30-10+1
=30-11
=41

c) Z= 40*2/10-2+10
Z=40*5-2+10

=200-2+10
=200-12
=188

Q19. D**escribe the syntax of the following statements**

a) If – else statement b) for loop c) while loop d) do-while loop

a**) If – else statement** : If condition returns true then the statements inside the body of "if" are executed and the statements inside body of "else" are skipped. If condition returns false then the statements inside the body of "if" are skipped and the statements in "else" are executed.

b**) for loop:** The initialization statement describes the starting point of the loop, where the loop variable is initialized with a starting value. ... The test expression is the condition until when the loop is repeated. Update statement is usually the number by which the loop variable is incremented.

c**)while loop:** do { statements } while (expression); As we saw in a while loop, **the body is executed** if and only if the condition is true. In some cases, we have to execute a body of the loop at least once even if the condition is false. ... After the body is executed, then it checks the condition.

d)do-while loop: In most computer programming languages, a do while loop is a control flow statement that executes a block of code at least once, and then either repeatedly executes the block, or stops executing it, depending on a given boolean condition at the end of the block.

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

a)	**b)**	**c)**

```
#include
<stdio.h> int
main()
{
  int i;
   for (i=1; i<2; i++)
   {
     printf( "IMS
     Ghaziabad\n");
    }
 }
```

```
#include
 <stdio.h> int
 main()
{
   int i = 1;
   while ( i <= 2
   )
    {
      printf( "IMS
     Ghaziabad\n"); i = i + 1;
     }
 }
```

```
#include
<stdio.h> void
main()
{
   int a = 10,
    b=100; if( a > b
    )
    printf( "Largest number is 10%d\n",
   a); else
     printf( "Largest number is100
     %d\n", b);
   }
```