CCA-101 FUNDAMENTAL OF IT AND PROGRAMMING

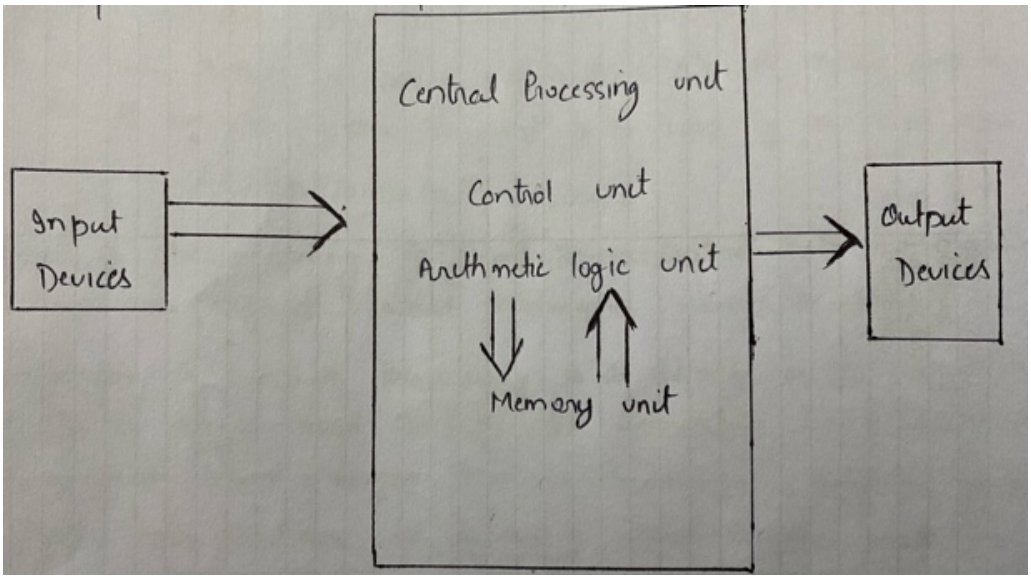
ASSIGNMENT-1

Question-1: What are the four fundamental parts of computer? Explain it with the help of diagram.

Answer: The four fundamental parts of computer are as follows.

- Central Processing Unit (CPU)
- Memory (RAM)
- Input (Keyboard,mouse,etc)
- Output (Monitor , printer, etc)

DIAGRAM REPRESENTATION



Question-2: Discuss about the classification of computers based on size and capacity.

Answer: ***Computer are classified as follows:-***

- **Super Computer-** They are the most powerful and physically the largest in size. These are system designed to process huge amount of data. They have thousands of processors.
  Example- JAGUAR, ROAD RUNNER
- **Main frame computer-** They are very large often feeling an entire room and can process thousands of millions of instruction per second. They are capable of supporting hundreds to thousands of users simultaneously. They are used in reservation and ticketing for an airline
  Example- IBM MAIN FRAMES Z13, IBM SYSTEM Z9 MAIN FRAME.
- **Mini Computer-** They are much smaller than main frames . These computer are less expensive. User connect to the server through a network by using a desktop computer.
  Example- Apple iPod , CDC160A
- **Micro Computer-** They are the most frequently used types of computer. It is also known aspersonal computer. A micro computer is a small computer system designed to be used by one person at a time.
  Example- Desktop computer , Laptops.

Question-3: What is the meaning of computer generation? How many Computer Generations are defined? What technologies were/are used?

Answer: 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 an entire computer system

There are five types of computer generation:

1	First Generation The period of first generation: 1946-1959. Vacuum tube based.
2	Second Generation The period of second generation: 1959-1965. Transistor based.
3	Third Generation The period of third generation: 1965-1971. Integrated Circuit based.
4	Fourth Generation The period of fourth generation: 1971-1980. VLSI microprocessor based.
5	Fifth Generation The period of fifth generation: 1980-onwards. ULSI microprocessor based.

Question-4: Differentiate between Volatile & Non- Volatile memories.

Answer: The important differences between Volatile and Non-Volatile Memory.

Sr. No.	Key	Volatile Memory	Non-Volatile Memory
1	Data Retention	Data is present till power supply is present.	Data remains even after power supply is not present.

Sr. No.	Key	Volatile Memory	Non-Volatile Memory
2	Persistence	Volatile memory data is not permanent.	Non-volatile memory data is permanent.
3	Speed	Volatile memory is faster than non-volatile memory.	Non-volatile memory access is slower.
4	Example	RAM is an example of Volatile Memory.	ROM is an example of Non-Volatile Memory.
5	Data Transfer	Data Transfer is easy in Volatile Memory.	Data Transfer is difficult in Non-Volatile Memory.
6	CPU Access	CPU can access data stored on Volatile memory.	Data to be copied from Non-Volatile memory to Volatile memory so that CPU can access its data.
7	Storage	Volatile memory less storage capacity.	Non-Volatile memory like HDD has very high storage capacity.
8	Impact	Volatile memory such as RAM is high impact on system's performance.	Non-volatile memory has no impact on system's performance.

Sr. No.	Key	Volatile Memory	Non-Volatile Memory
9	Cost	Volatile memory is costly per unit size.	Non-volatile memory is cheap per unit size.

Question-5: Distinguish among system software, application software and open source software on the basis of their features.

Answer: **System Software:**

System Software is the type of software which is the interface between application software and system. Low level languages are used to write the system software. System Software maintain the system resources and give the path for application software to run. An important thing is that without system software, system can not run. It is a general purpose software.

Application Software:

Application Software is he type of software which runs as per user request. It runs on the platform which is provide by system software. High level languages are used to write the application software. Its a specific purpose software.

Open Source Software:

It is a type of computer software in which source code is released under a license in which the copy right holder grants user rights to study , change and distribute the software to any one for any purpose. The linux operating system is the best example of OSS.

Question-6: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.

Answer: To create a file in Ms-word

1. Open **Word**. Or, if **Word** is already open, select **File** > New.
2. In the Search for online templates box, enter a search **word** like letter, resume, or invoice. Or, select a category under the search box like Business, Personal, or Education.
3. Click a template to see a preview. ...
4. Select **Create**.

To save a file in Ms-word

1. Click **FILE** > **Save**, pick or browse to a folder, type a name(Yourself) for your document in the **File name** box, and click **Save**.
2. Save your work as you go - hit Ctrl+S often.
3. To print, click the **FILE** tab, and then click **Print**.

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

Answer: **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 and type of document**

Question-8: Create a file in MS-word for the following document and save it with file name 'equations'. Describe all steps involved in it.

Answer: Equations

$X_2+Y_5=30$

$Z^3+Q^4=50$

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

Steps involved in it are:

- Use strikethrough from front icon for ~~Equation~~
- Use subscript for x_2 etc

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.

Answer:

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

Steps involved it are

- Click inset icon
- Click table
- Select the Row and the column as per need

Question-10: Create a file in MS-Word to insert a table in the document. Describe all steps involved in it

Answer:

S NO	***MRP***	***DISCOUNT PRICE***
1	***5000***	***4250***
2	***6500***	***5200***
3	***2500***	***2250***
4	***4200***	***3500***
5	***1800***	***1500***

Steps involved it are

- Click inset icon
- Click table
- Select the Row and the column as per need

Question-11: Create a following worksheet in MS-excel and save it with name 'book1'.
Answer:

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

Question-12 . 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)*

Answer:

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
TOTAL		654
AVERAGE		118.9090909
HIGHEST MARKS		90
MINIMUM MARKS		40

Question-13 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*

Answer: To modify column width of a worksheet

1. Position the mouse over the **column** line in the **column** heading so the cursor becomes a double arrow.
2. Click and drag the mouse to **increase** or decrease the **column width**.
3. Release the mouse. The **column width** will be changed.

To modify the row height of a worksheet

1. Select the **row** or **rows** that you want to **change**.
2. On the Home tab, in the Cells group, click Format.
3. Under **Cell Size**, click **Row Height**.
4. In the **Row height** box, type the value that you want, and then click, ok

To delete rows and column of a worksheet

1. Select the **row**(s) or **column**(s) you want to **delete**.
2. Choose Home→**Cells**→**Delete**.

Question-13 b) Describe following terms in the worksheet

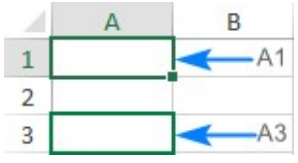
- *1-Absolute reference and relative reference in formula*
- *2-Cell address*

Answer:

- **1-Absolute Reference**-An **absolute reference** is designated in a **formula** by the addition of a dollar sign ($) before the column and row. If it precedes the column or row (but not both), it's known as a mixed **reference**. You will use the relative (A2) and **absolute** (A2) formats in most **formulas**.
- **Relative Reference-**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.

2-Cell Address-A **cell reference** or **cell address** is a combination of a column letter and a row number that identifies a cell on a worksheet.

For example, A1 refers to the cell at the intersection of column A and row 1; B2 refers to the second cell in column B, and so on.



Question-14: a) What tools are available to customize our PowerPoint presentation?

- *Answer*: **Visme**. **Visme** is a cloud-based presentation tool that allows you to create highly visual presentations to engage viewers and communicate your ideas
- Haiku Deck. Haiku Deck is a platform that prioritizes simplicity
- Pitcherific.
- **Canva**
- SlideCam.
- Microsoft Events
- Powtoon

Question-14 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*

- *Answer:* Steps for creation of open a blank presentation

1. Choose File→**New**. Backstage view opens, displaying tiles for various types of **presentations** you can **create**.
2. Click the **Blank Presentation** tile. A **new blank presentation** opens.
3. Choose File→Close to close the **new presentation**. ...
4. Press Ctrl+N. ...
5. Choose File→Close to close the **new presentation**.

- Steps to save the presentation as Lab1.pptx

- **Step** 1 − Click on the File tab to launch the Backstage view and select **Save**.
- **Step** 2 − In the **Save** As dialog, type in the file name and click "**Save**".
- **Step** 3 − The default file format is **pptx**.

- Steps to add to the first slide

- In the **slide** thumbnail pane on the left, click the **slide** that you want your new **slide** to follow.
- On the Home tab, click New **Slide**.
- In the New **Slide** dialog box, select the layout that you want for your new **slide**. Learn more about **slide** layouts.
- Select **Add Slide**.

- Steps to type your first and last name in a subtitle section

FIRST NAME-KAIF
LAST NAME-SIDDIQUI

- **Step to add a new slide which has a title and content**

1. Select the **slide** whose layout you will change so that it can **have a title**.
2. Click Home > Layout.
3. Select **Title Slide** for a standalone **title** page or select **Title and Content** for a **slide** that **contains a title** and a full **slide** text box. ...
4. Select the Click to **add title** text box

Question15. 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*

- *Answer :*Step for creation of title slide & bullet list

- Choose Insert > New **Slide**, click the New **Slide** button on the toolbar, or press the hotkey Ctrl+M.
- From the **Slide** Layout task pane, choose the **Bulleted List** layout
- Click the **title** placeholder and type the **title** of your **bulleted list**.

- Steps for inserting excel sheet

- **To insert** a new **worksheet** in front of an existing **worksheet**, select that **worksheet** and then, on the Home tab, in the Cells group, click **Insert**, and then click **Insert Sheet**. Tip: You can also right-click the tab of an existing **worksheet**, and then click **Insert**. On the General tab, click **Worksheet**, and then click OK.

- Steps for inserting of clip art and text

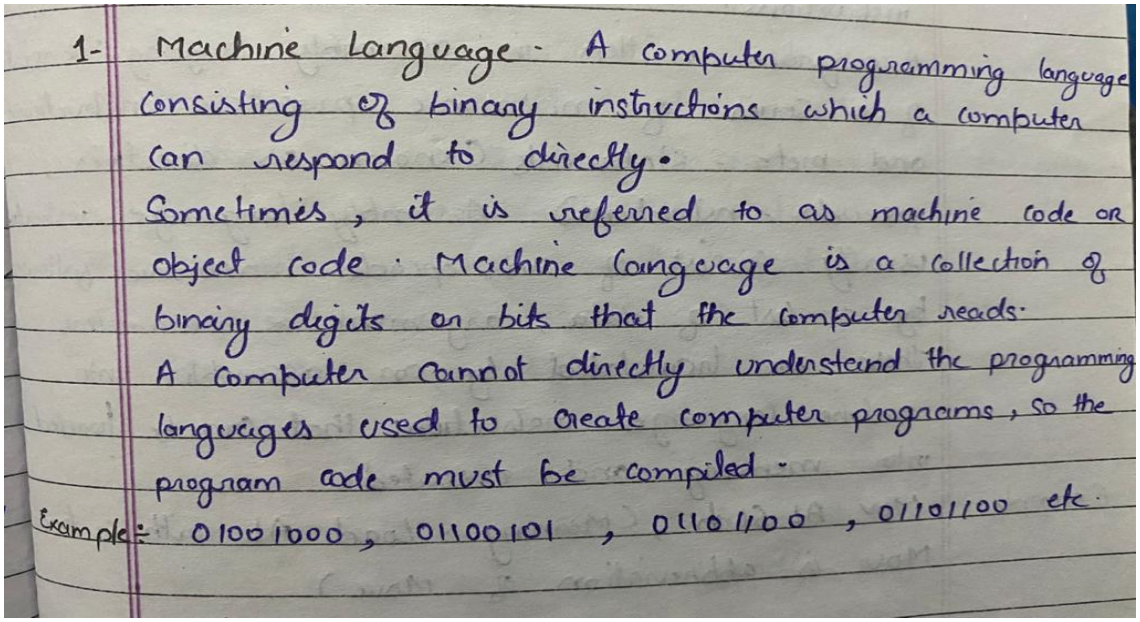
- Open the Word document where you would like **to insert** the **clip art**. Click the [**Insert**] tab > From the "Illustrations" group, click [**Clip Art**]. A **clip art** pane will open to the right of the document. In the "Search for" box, type a term or keyword for the **clip art** you would like to find

➢ Steps for inserting slide show effect

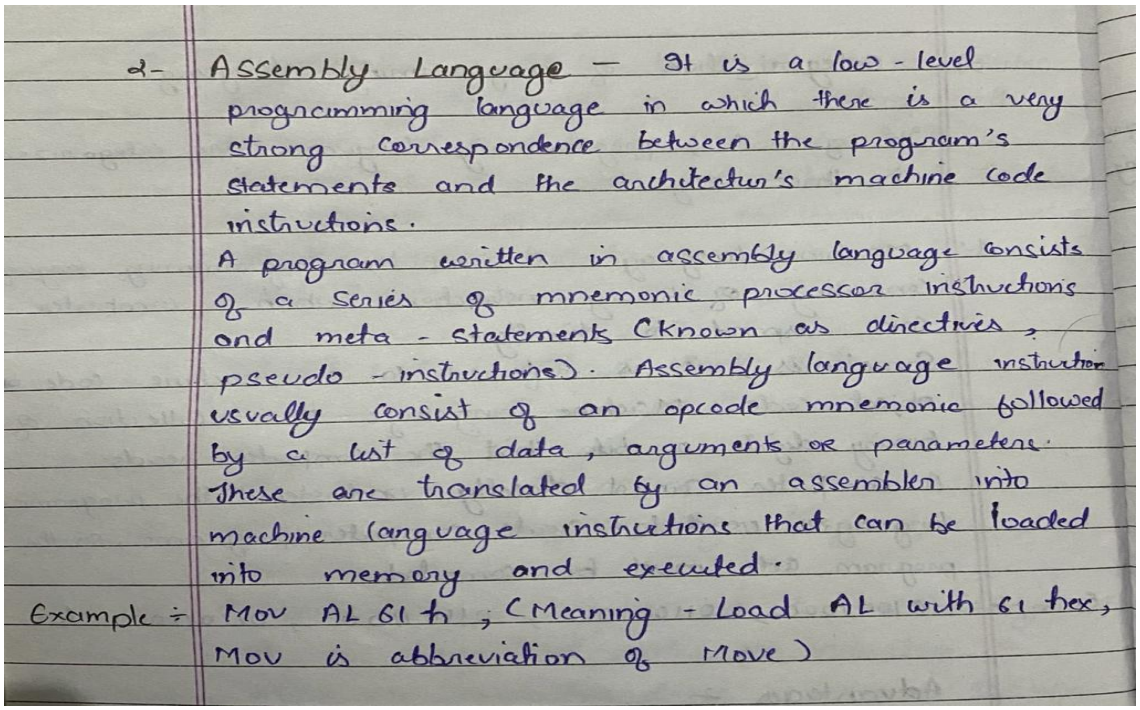
- Select the **slide** you want to **add** a transition to.
- Select the Transitions tab and choose a transition. ...
- Select **Effect** Options to choose the direction and nature of the transition.
- Select Preview to see what the transition looks like.

Question16-What is the difference between Machine Language and High Level Language?

Answer: Machine Language



High level language



Question17- Discuss about different data types of C programming Language.

Answer: C language supports 2 different type of data types:

1. **Primary data types**:

   These are fundamental data types in C namely integer(int), floating point(float),

   character(char) and void.

2. **Derived data types**:

   Derived data types are nothing but primary datatypes but a little twisted or grouped together

   like **array**, **stucture**, **union** and **pointer**. These are discussed in details later.

Data type determines the type of data a variable will hold. If a variable x is declared as int. it means x can hold only integer values. Every variable which is used in the program must be declared as what data-type it is.

Question18- 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

Answer:

a) X=33

b) Y=30

c) Z=16

Question-19 Describe the syntax of the following statements

a) If – else statement

b) for loop

c) while loop

d) do-while loop

Answer:

- Syntax for (If –else statement)

```
If (expression)
{
True block of statement,
}
Else
}
Else block of statement
```

- Syntax for (for loop)

```
For (expression 1, expression 2, expression 3)
{
Block of statement
}
```

- Syntax for (while loop)

```
While (condition)
Single statement,
 OR
While (condition)
{
Block of statement,
}
```

- Syntax for (do while loop)

```
do
(
Single statement,
OR
Block of statement,
}
While (condition),
```

Question-20 Find the output of the following program segments

Answer:

a) IMS Ghaziabad

b) IMS Ghaziabad
IMS Ghaziabad

c) Largest number is 100