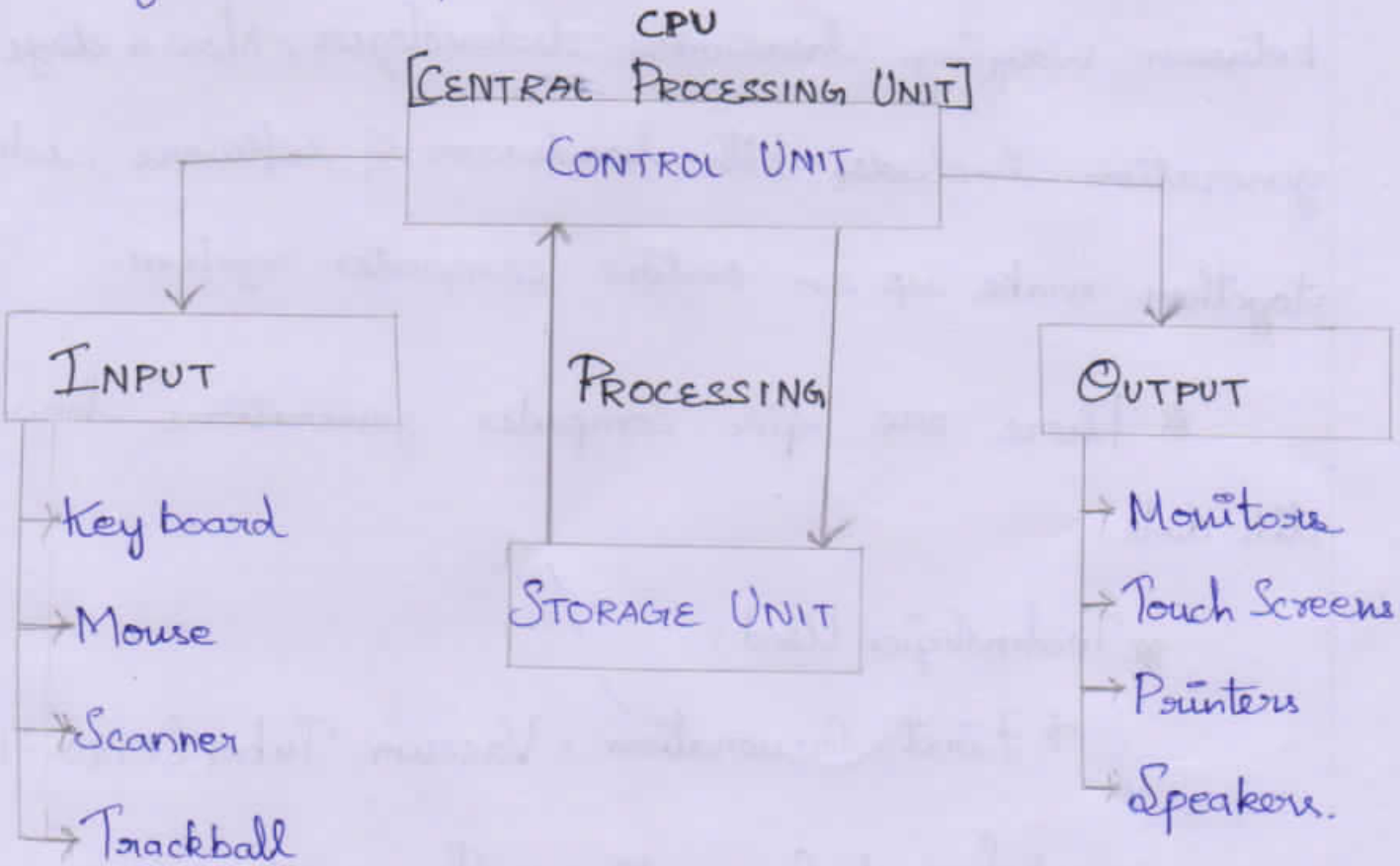
CCA-101 : FUNDAMENTALS OF IT & PROGRAMMING

ASSIGNMENT-1

1) Four fundamental parts of Computer:

A computer's four main components are Input Units, The Central Processing Unit (CPU), the Primary memory & the output units.



2). Classification of computers based on size & Capacity:

Based on size & Capacity Computers are classified into four groups. They are Microcomputers, Minicomputers, Mainframe Computers & Supercomputers.

3). Computer Generation:

※ 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. Now a days, generation includes both hardware & software, which together make up an entire computer system.

※ There are five computer generations known till date.

※ Technologies Used:

⇒ First Generation : Vaccum Tubes (1940 - 1956).

⇒ Second Generation : Transistors (1956 - 1963).

⇒ Third Generation : Integrated Circuits (1964 - 1971).

⇒ Fourth Generation : Microprocessors (1971 - Present)

⇒ Fifth Generation : Artificial Intelligence (Present & Beyond).

4). Difference between Volatile & Non - Volatile memories.

Volatile Memory	Non - Volatile Memory.
* The Volatile memory stores data & computer programs that the CPU may need in real time & it erases them once a user switches off the Computer	* Non - Volatile memory is static. It remains in a computer even after a user switches it off.
* Cache & RAM are types of Volatile memory.	* HDD & ROM are types of non - volatile memory.

5). Difference among System Software, Application Software & Open source software.

System Software	Application Software	Open Source Software
* The system software is used for operating computer hardware.	* Application Software are installed according to the user's requirements	* Open source software refers to the computer software in which source is open means the general public can access & use.

6).

a). 1). Open Microsoft Word.

2). Type out a paragraph about yourself

3). Click File in the top left corner of the window, the select Save As.

4). In the Save As Window, type in the file name "Yourself".

5). Select the location you want to save the file in.

6). Click Save button.

7). The file will now be saved with the title "yourself".

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b). * To Change font Style

⇒ Select the text for which you would like to change the font style.

⇒ Go to home tab on the ribbon. Click on the Font Style drop-down menu.

⇒ Select the desired font style from the list.

* To Change font size

⇒ Select the text for which you would like to change the font size.

→Go to home tab on the ribbon. Click on Font size drop down menu.

→Select the desired font size from the list.

* To Change font Colour.

→Select the text for which you would like to change the font color.

→Go to Home tab on the ribbon. Click on the Font color drop down menu.

→Select the desired font color from the list.

* To Highlight

→Select the text "need to get IMS's address".

→Click on the "Highlight" button located on the "Home" tab.

→Select the yellow color from the color palette.

→The line will be highlighted in Yellow.

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7) Create a File in Ms Word:

* Step 1 : Open Microsoft Word.

* Step 2 : Select the "Blank" document option.

* Step 3 : Type the title of the document in the top

left corner of the document "MS Word".

*Step 4: Select the font & size & font colour for your title, such as Times New Roman / 16 point / Black

*Step 5: Add additional information about the document, below the title.

*Step 6: Select a font, size & colour for the additional information, such as Times New Roman / 16 points / Red, Black, Blue.

*Setep 7: Save the document with the name "ms_word" & the file type "Word Document (.docx)".

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8). Create a File in Ms Word:

*Step 1: Open Microsoft Word.

*Step 2: Type "Equations" & Select the text. Go to Home ribbon & Select Underline & Press enter.

*Step 3: Type $X_2 + Y_5 = 30$ & Press enter

*Step 4: Type $Z^3 + Q^4 = 50$ & Press enter.

*Step 5: Type $A_2 + B^8 = X_2 + y^8$

*Step 6: Save the document as 'Equations'. To do this, click on the file tab, Select Save As & type

'equations' in the File Name box.

*Step 7 : Click Save.

9).

*Open a new MS word document.

*Type the text as given in the question.

*Create a 2x2 table by selecting insert table in the home ribbon. Select the table & press Enter.

*Now Copy the text you have to enter it in the table. Now paste the text in the suitable column.

*Likewise do the same for all the text that needs to be entered in the table.

*Save the document as 'text_to_table'. To do this, Click on the file tab, Select Save As & type 'text_to_table' in the File Name box.

10). Create a File in Ms-Word to insert a table:

* Open Microsoft Word & Create a New document

* Click on the insert table located at the top of the page.

* Select "Table" from the drop down menu.

* Choose the number of columns & rows you would like to create for your table.

* Click & drag your mouse in the grid to create the table size.

* Select the "Table" tab located in the ribbon.

* Click on "Table Properties" option.

* Choose the "Table" tab & Click on the "Borders & Shading" option.

* Select the type of border or shading you would like to apply to your table.

* Click "OK" to apply the changes.

* Enter the content into each cell of the table.

* To adjust the size of any column, hover your mouse over the edge of the column until it turns into a double.

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11) Ms-Excel:

* Open MS Excel.

* Create a table with different columns like RollNo, Name, & Marks.

* Enter the data in the respective columns.

* Save the workbook with the name 'book1' by clicking on the file tab, Select Save As & type 'book1' in the File Name box.

12).

* The sum of marks (C2 : C11) - 654
* Average of marks (C2 : C11) - 65.4
* Highest marks (C2 : C11) - 90
* Minimum marks (C2 : C11) - 44.

13).

a).

* To Modify Column Width.
  * Select the Column or columns you want to modify.
  * Right Click & Select "Column width".
  * Enter the desired width in the Column Width box. Click OK.
* To Modify the Row Height.
  * Select the Row or Rows you want to modify.
  * Right Click & Select 'Row Height'

* Enter the desired height in the Row Height box click OK.

* To Delete Rows & Columns

* Select the row or Column that needs to be deleted.

* Right Click & Select "Delete".

* Select either "Entire Row" or "Entire Column", depending on what you want to delete. Click OK.

b). * Absolute reference

Absolute reference in formula is a fixed reference to a cell or range of cells that remains constant no matter where the formula is copied or moved

* Relative reference

Relative reference in formula is a reference to a cell or range of cells that changes when the formula is copied or moved.

* Cell address.

A cell address is a unique reference to a cell or range of cells in a worksheet that is used to identify the location of the cell or range

Cell addresses can be absolute or relative depending on the formula used.

14).

a). Tools available to customize our Power Point Presentation

There are several tools available to customize Power Point Presentation, such as:

* Power Point templates - Pre-made designs with professional layouts & themes, allowing users to quickly create a polished presentation.

* Animation & Transitions - Visual effects that make it possible to add motion to text & objects, making presentations more dynamic & engaging.

* Video & Audio: Incorporating video & audio into presentations can help capture the audience's attention & make the message more effective.

* Digital Ink: With a digital ink, users can write, draw & highlight directly on slides during a presentation, making it easier to emphasize points & explain ideas.

* Hyperlinking: Links can be added to slides to take viewers to websites, documents, or other slides in the presentation.

* Custom slides: Custom slides can be created to fit unique presentation needs, such as a timeline, a map or a data visualization.

14)

b). Continuation...

* Add a new Slide which has a Title & Content layout.

* Type your college's mission statement as the Title.

* Type a description of the mission statement as the content.

* Add a New Slide which has a Title & two Content layout.

* Type "Campus Resources" as the Title.

* Type a description of the available campus resources as the content

* Add a New slide which has a title & two content layout.

* Type "Student Organizations" as the Title.

* Type the description of the available student organizations as the Content.

* Add a New Slide which has a Title & two content layout.

* Type "Conclusion" as the Title.

* Type a conclusion which sums up the presentation as the Content.

* Preview the presentation.

* Save the presentation.

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15). Steps for Creation of a Set of Power Point Slides:

* Open PowerPoint & create a new presentation.

* Add a title slide with a few bullet points to introduce your topic.

* Insert an Excel Sheet into the presentation by Clicking "Insert" & then "Object".

* Use the "Clip Art" toolbar to insert relevant images & add text to them.

* Add some slide show effects by Clicking "Slide Show" & then "Transitions".

* Preview your presentation by clicking "Slide Show" & then 'View Show'.

* Save the presentation when you are satisfied with the results.

PART-2

16) Difference between Machine Language & High level Language :

* Machine Language is a low-level programming language made up of binary digits (1s & 0s) that is natively understood by computers & and is the only langugae a computer can directly execute.

* High level language is a programming language that is more human-readable & provides a higher level of abstraction from the underlying hardware. High level languages are easier to read, write, & maintain than machine language & are generally used to develop more complex applications.

17). Different data types of C-Programming Language

C is a statically typed language, meaning that all the variables must be declared with a specific data type before they can be used. The C programming language supports a variety of data types, including integers, floating-point numbers, characters & strings.

* Integer: An integer is a whole number, positive or negative, without a fractional part. Integer types in C include short, int, long & long long.

* Floating-Point: A floating point number is a real number that can have a fractional part. Floating point types in C include float & double.

* Character: A character is a single character, such as a letter, number, or symbol. The char data type is used to store characters in C.

* String: A string is a sequence of characters. A string in C is represented by a one-dimensional array of characters, terminated by a null character ('\0')

* Void: The void data type is used to indicate that no value is being returned from a function.

* Enumerated: An enumerated type is a user-defined data type that can take on one of a set of named values.

* Struct: A struct is a user-defined data type.

18).

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

$X = 40$

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

$Y = 10$

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

$Z = 28$

19).

a). If-else statement:

```
if (condition) {
  // Code to be executed if condition is true
} else {
  // Code to be executed if condition is false
}
```

b). For Loop

```
for (initialization ; condition ; increment/decrement) {
    // code to be executed.
}
```

c). While Loop

```
while (condition) {
    // code to be executed
}
```

d). Do-while Loop:

```
do {
    //code to be executed
} while (condition);
```

20).

a) Output - IMS Ghaziabad

b). Output - IMS Ghaziabad
IMS Ghaziabad

c). Output - Largest number is 100.