

CCA - 101 : Fundamentals of IT & Programming

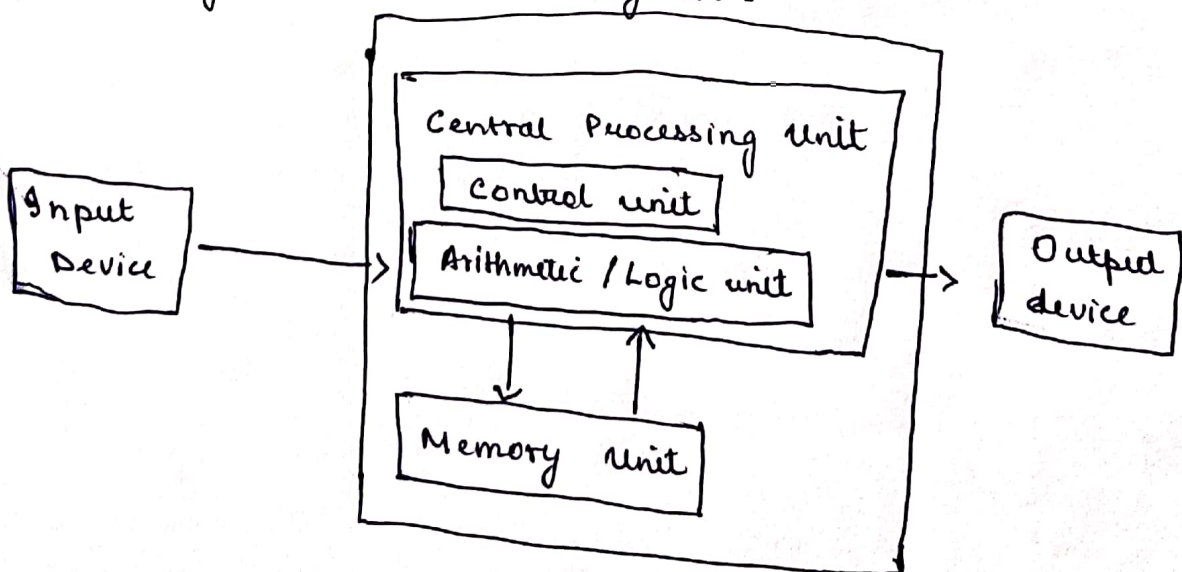
ASSIGNMENT - 1

Q1

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

Ans: The four fundamental parts of a computer are:

- 1) Input Devices: Computer system use many device for input purposes. Eg. mouse, input pen, touch screen and microphones.
- 2) Central Processing unit (CPU): It is the brain of the computer without this unit computer unable to process.
- 3) Output device: It is the device that used to show the results of the instructions. Eg. Monitor, printer etc.
- 4) Memory unit: A memory unit is the collection of the storage unit or devices together.



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

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

- 1) Super Computers: Superscomputers are the most powerful and physically the largest by size. These system designed to process huge amount of data and the ~~fasted~~ fastest superscomputers can perform over one billion calculations in seconds.
- 2) Mainframe Computer: Mainframe computers are very large often filling an entire room and can process thousands of millions per second.
- 3) Mini-computers: Minicomputers are much smaller than mainframes. These computers are also less expensive.
- 4) Micro computers: Microcomputers are the most ~~freq~~ frequently used type of computers. also known as Personal computer (PC),

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Q3. What is the meaning of computer generation? How many computer Generation 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.

There are five generations of computers:

- First generation
- Second generation.
- Third generation.
- Fourth generation.
- Fifth generation.

Fifth generation computing device, based on artificial intelligence, are still in development, though there are some application, such as voice recognition, that are being used today.

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Q4. ~~Difference~~ Differentiate between Volatile & Non - Volatile memories.

Ans: 1) Primary memory / Volatile memory: Volatile memory is a computer storage that only maintains its data while the device is powered.

For Example: RAM (Random Access Memory) is volatile.

2) Secondary memory / 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.

For Example: ROM (Read - only memory), Hard disk, floppy disk, etc.

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

Ans: System Software: It is a type of software that is designed to run a computer's hardware and application programs. Software like operating system, compilers, editors and drivers come under this category.

Application software: It is a 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, email client, media player etc.

Open Source Software (OSS) : It is a type of computer software in which source code is released under a license in which the copyright holder grants users 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.

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Q6.

Write 3 steps regarding following.

Ans: 1) To change the font style:

- Select the text then click on font style box on the Home tab. The font style drop down menu appears.
- Move your cursor over the various font styles, left click the font style you want to use then font style will change in the document.

2) To change the font size:

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

3) To change the font colour:

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

4) To highlight (in yellow) the line that read "need to get IM's address".

- Select the text 'need to get IM's address'.
- Click on the text highlight colour in the font group on the home tab.
- Move your cursor over the yellow colours.
- Then text highlight colour will change in the document.

—X—

Q17.

Create a file in MS word for the following documents and save it with file name 'ms word'.

Ans: To create new document:

- Click the microsoft office button / File tab.
- select new then select blank page
- A new blank page will appear in the word
- Now we can create document by insert text
- Now select Control + S then enter the file name as 'ms word' then ~~press~~ click save.

—X—

Q18

Create a file in MS word for the following documents and save it with file name 'equations'.

- Click the microsoft office button / File tab.
- select blank page then ~~enter~~ we create document by insert text the above text equation.
- Now ~~to~~ click ~~Ctrl~~ Ctrl + S then enter the file name as 'equations' and then click save.

—X—

Q9. Create a file in MS word that convert existing highlight text to table as shown below and save it as file name 'test - to - table'.

- Ans:
- 1) Click on the MS-Word on the blank page.
 - 2) Insert the above ~~test~~ text.
 - 3) Then select the text by ~~left click~~ holding left click of mouse and then go to 'Insert' ..
 - 4) Then ~~click~~ click on table and select on insert table.
 - 5) Click Ctrl+S and then enter the file name as 'test - to - table', then ~~click~~ click on save.

—v—

Q10. Create a file in MS word to insert a table in the document.

- Ans:
- 1) Click on the MS word and then on the blank page
 - 2) Click on Insert in the above
 - 3) Click on the table and then we ~~also~~ can choose the rows and columns we want to create
 - 4) Then the table will appear in the documents as per rows and columns we selected.

—v—

Q11 Create the following worksheet in MS excel and save it with name 'book 1'.

Ans: ~~choose~~ 1) Select the above worksheet to use as a template.

- 2) Click on the file tab
- 3) Under info, save as.
- 4) In the file name box, type 'book 1'.
- 5) Then click save.

—x—

Q12, Calculate the following things of range (C2:C11) of data in the worksheet created in question 10.

Ans:

- 1) The sum of the marks using Autosum in a range of cells (C2:C11)
 - Select the formula tab
 - Locate the function library group.
 - Select the cell (C2:C11).
 - Select the drop down arrow next to the ~~Auto~~ Autosum command.
 - Select Sum, a formula will appear in the selected cell (C2:C11)

This formula = sum (C2:C11) is called a function.

- 2) Average of the marks in a range of cell (C2:C11).

- Select the above numbers
- then go to Home tab and select on the ~~Auto~~ auto sum ~~show~~ show below on average and then ~~press~~ click on average.

3) Highest number in a range of cell.

- Select a cell below of the numbers .
- On the home tab , click the arrow next to ~~the~~ autosum
- Click on Max and then press Enter .

4) Minimum marks in a range of cells:

- Select a cell ~~below~~ below of the number
- on the home tab , click the arrow to the auto sum
- click on Min and then press Enter .

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Q13.
(a)

To modify column width of a worksheet:

- 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:

- Position the cursor over the row line , and a double arrow will appear .
- Left click the mouse , then drag the cursor upwards to decrease the row height or downwards to increase the row height .
- Release the mouse button .

To delete rows and columns of a worksheet:

- Select the row or column that would like to delete
- Click the delete command in the cell group on the Home tab.

—x—

Absolute reference and relative reference in formula:

Absolute reference is a method of writing formula in a spreadsheet documents so copying that formula to another cell does not change the cell its formula references.

Relative reference: Relative references are basic cell references that adjust and change when copied or when using auto fill.

Example = Sum(B5 : B8) as shown below change to
= Sum(C5 : C8) when copy to the next cell.

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. Eg. A1 refers to the cell at the intersection of column A and row 1.

—v—

Q14
(a)

What tools are available to customize our Power Point Presentation.

Ans: The tools available are called Templates

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Q15

Q14

(b)

Open a blank presentation:

- Select Office button → New. The new presentation window appears.
- In the left side of the New - presentation window, click installed Templates.
- Click a template to select it.
- Click create.

Save the presentation as Lab 1 PPTx

- 1 - Locate and ~~save~~ select the save command on the Quick Access Toolbar.
- The save As pane will appear in backstage view
- Select the location to save the file and type Lab 1 as file name.
- The save As dialog box will appear.

—x—

14(b)

Add a title to the first slide : the name of your college :

1) ~~select office button~~

1) Select on the New presentation window , .

2) Click a template to select it

3) Click on the first slide template then enter text 'the name of your college'.

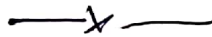
Type your first name and last name in the subtitle section :

1) Click on the second template in the ~~subtitl~~ subtitle section

2) The ~~write~~ ^{enter text} my first name ~~a~~ and last name.

Add a New slide which has a title and content :

To add a new slide with a 'title and content' ~~sto~~ slide layout in Power Point, click the 'Home tab' in the Ribbon, Then click the 'New slide' button in the 'slides' button group.



Q15.

The slide and bullet list :

- Go to the slide to add list formatting to .
- On the slide , select the lines of text in a text placeholder or table ~~that~~ to add bullets or numbering to .
- On the Hometab , in the paragraph group , clicks bullets or numbering .

Inserting Excel sheet:

- Select the slide to add a table no.
- On the insert ^{tab} ~~tab~~, select ~~table~~ table
- In the insert table, use the mouse to select the number of rows and column as per requirement.
- To add text to the table cell, click a cell and then enter the ~~req~~ required text.

Clip art and Text:

- Click in the slide to place the object
- On the insert tab, in the Text group, click object
- Click Create from file.
- Click Browse to select from a list.
- Select the link check box.
- Press Ok.

Slide Show effects:

- Select the slide 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.

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.

Sometimes it is referred to as machine code or object code.

Example: 01001000, 01100101, 01101100 etc.

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

Example: C, C++ ; Java.

—v—

Discuss about different data types of C programming Language.

Ans: The different data types of C programming language are:

Char: The most basic data type in C. It stores a single character and requires a single byte of memory in almost all compilers.

Int: It is used to store an integer.

Float: It is used to store decimal numbers

double: It is used to store decimal numbers (number with floating point value but its range of values is high in comparison to float).

—v—

Find out the output of the following expression .

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

Soln: $\Rightarrow 20 / 5 * 2 + 25$

~~$4 / 2 + 25$~~

$4 * 2 + 25$

$8 + 25$

The final output is ~~33~~ $x = 33$

(b)

$y = 30 - (40 / 10 + 6) + 10$

Soln:

$\Rightarrow 30 - (40 / 16) + 10$

$\Rightarrow 30 - \frac{20}{8} + 10$

$\Rightarrow \frac{240}{8} - \frac{20}{8} + 10$

$\Rightarrow 240 - 20 + 10$

$= 230$

∅ The final output $y = 230$

(c) $z = 40 * 2 / 10 - 2 + 10$

Soln: $\Rightarrow 40 * 2 / 8 + 10$

$\Rightarrow 80 / 8 + 10$

$= 10 + 10$

$\Rightarrow 20$

The final output $z = 20$ //

—————✓—————

Q19.

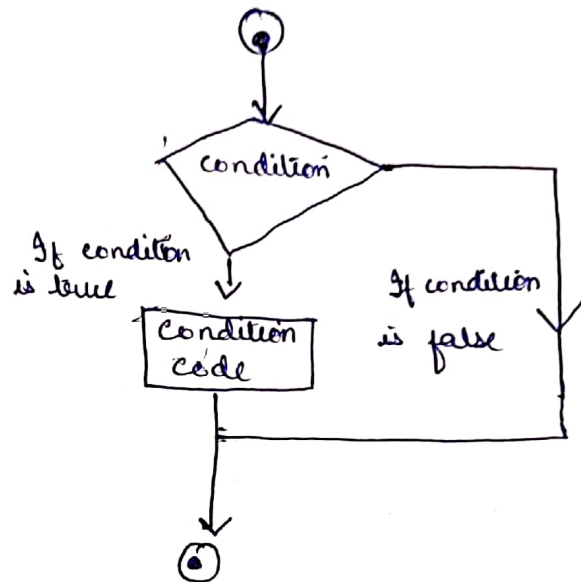
Describe the syntax of the following statement :

a) if - else statements :

if (expression)
statement;

or

if (expression)
{
Block of statements;
}



(b) for loop:

for (expression 1 ; expression 2 ; expression 3)

{
Block of Statement ;
}

expression 1: Initializes variables.

expression 2: Conditional expression, as long as this condition is true, loop will keep executing.

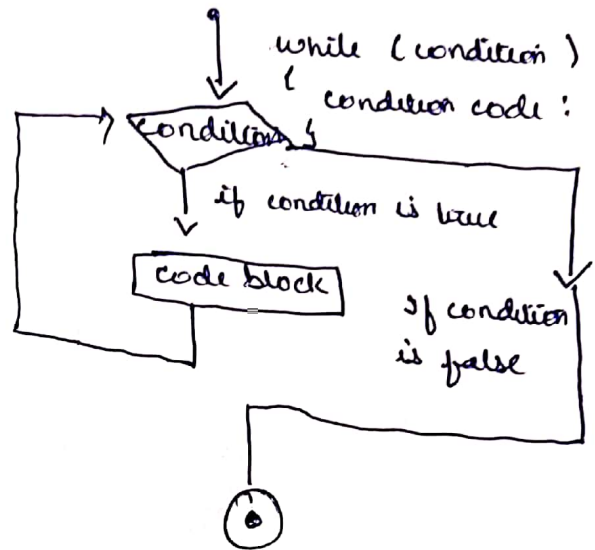
expression 3: is the modifier which will increase or decrease the value of variables.

Q.10.

(c) while loop:

while (condition)
single statement

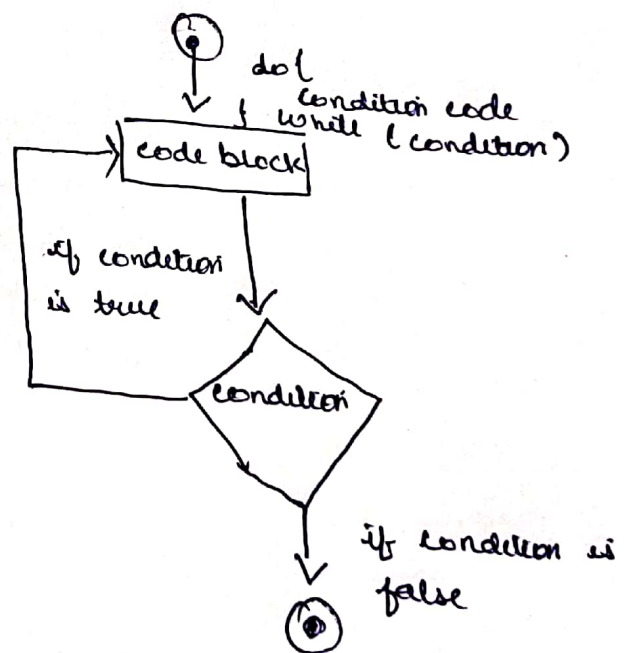
or
while (condition)
{
block of statements
}



(d) do while loop:

do
{
single statement
or

Block of statement
} while (condition);



—*—

Q20. Find out the output of the following program segment :

(a)

```
#include <stdio.h>

int main ()
{
    int i;

    for (i = 1; i < 2; i++)
    {
        printf ("I Ms Ghaziabad \n");
    }
}
```

Output

~~This is my first program~~ Ghaziabad
~~This is my first program~~ Ghaziabad
 Ghaziabad
 Ghaziabad
 Ghaziabad

(b)

```
#include <stdio.h>

int main ()
{
    int i = 1
    while (i < 2)
    {
        printf ("I Ms Ghaziabad \n");
        i = i + 1
    }
}
```

Output

~~This is my first program~~ Ghaziabad 0
~~This is my first program~~ Ghaziabad 1

(c)

```
#include <stdio.h>

void main()
{
    int a = 10, b = 100
    if (a > b)
```

```
    Print ("Largest number is %d\n", a);
    else
```

```
    Print ("Smallest number is %d\n", b);
}
```

Output :

Largest number is 100
Smallest number is 10,

→