ASSIGNMENT

Course: Certificate in Computer Application

Course Code: CCA-101

Topic: Fundamentals of IT & Programming

Centre: Unify CSC Academy, Demthring, Shillong

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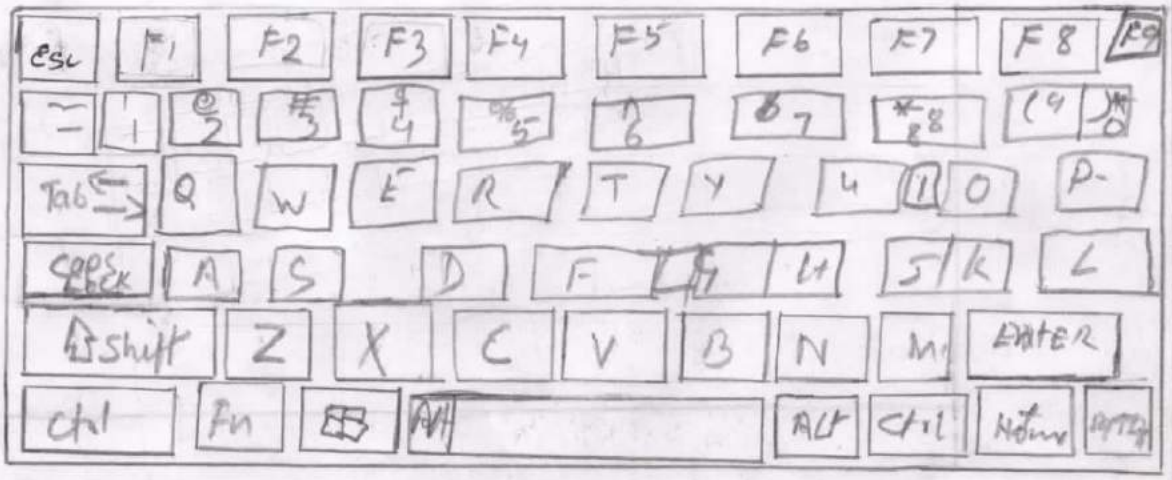
Assignment-I

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

Ans:- The four fundamental parts of computer are:-

1. Keyboard:- The keyboard helps in inputting the data to the computer. The layout of the keyboard is like that of traditional typewriter, although there are some additional keys provided for performing some additional functions.

Keyboard are of two sizes 84 keys or 101/102 keys, but, now 104 keys or 108 keys keyboard is also available for Windows and internet



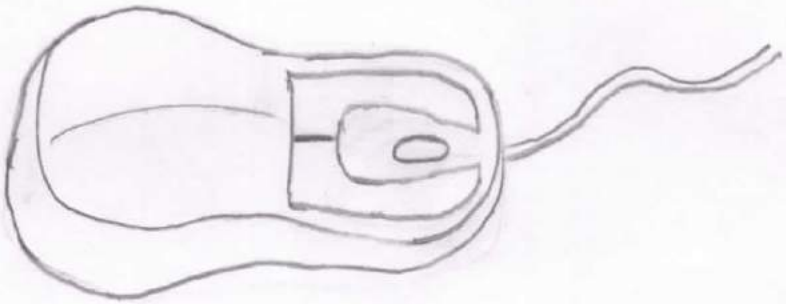
2. Mouse:- Mouse is most popular device. It is a very famous cursor-control device. It is a small palm size box with a round ball at its base which senses the movement of mouse and sends corresponding signals

to CPU on pressing the buttons.

Generally it has two buttons called left and right buttons and scroll bar is present at the mid. Mouse can be used to control the position of cursor on screen, but it cannot be used to enter text into the computer.

Advantages of Mouse :-

- Easy to use
- Not very expensive
- Move the cursor faster than the arrow keys of keyboard.

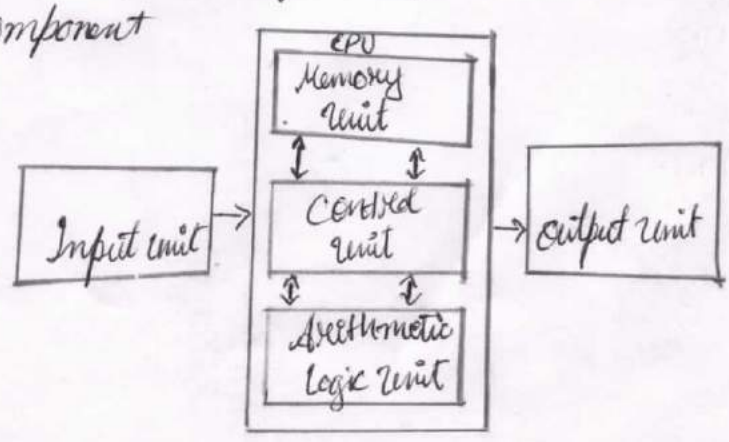


3. CPU :-

- CPU is considered as the brain of the computer.
- CPU performs all types of data processing operations.
- It stores data, intermediate results and instruction (program)
- It control the operation of all parts of computer

CPU itself has following three component

- Memory or Storage unit
- Control unit
- ALU (Arithmetic Logic unit)



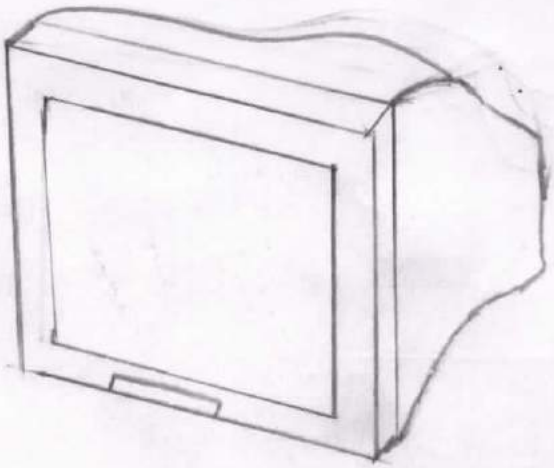
4. Monitors :- Monitor commonly called a Visual Display Unit (VDU) is the main output devices of a computer. It forms images from tiny dots, called pixels that are arranged in a rectangular form. The sharpness of the image depens upon the number of the pixels.

There are two kinds of viewing screen used for monitors.

(i). Cathode-Ray Tube (CRT) Monitor :- In the CRT display is made up of small picture elements called pixels for short. The smaller the pixels, the better the image clarity or Resolution. It takes more than one illuminated pixel to form whole character, such as the letter e in the word help.

The most screens are capable of displaying, 80 characters of data horizontally and 25 lines vertically. There are some disadvantage of CRT

- Large in size
- High Power Consumption.

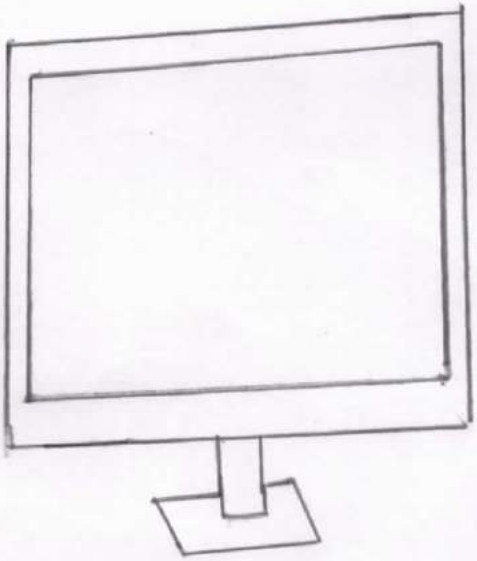


(ii) Flat-Panel Display Monitor :- The flat-panel displayed refers to a class of vedio devices that have reduced volume, weight and power requirement compare to the CRT. You

can hang them on walls or wear them on your wrists. current uses for flat-~~panel~~ panel displays includes calculators, vedio games, monitors, laptop computer, graphics display.

The flat-panel display are divided into two categories :-

- Emissive Display :- The emissive displays are devices that convert electrical energy into light. Example are plasma panel and LED (Light-Emitting Diodes).
- Non-Emissive Display :- The non-emissive displays use optical effects to convert sunlight or light from some other source into graphics patterns. Eg. is LCD (Liquid-Crystal Dirice.



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

Ans :- The classification of computers are as follows :-

(i) PC (Personal Computer) :- A PC can be define as a small, relatively inexpensive computer designed for an individual

user. PCs are based on the microprocessor technology that enables manufacturers to put an entire CPU on one chip. Businesses use personal computers for word processing, accounting, desktop publishing, and for running spreadsheet and database management applications. At home, the most popular use for personal computer is for playing games and ~~surfing~~ surfing the Internet.

(ii) Minicomputer :- It is a midsize computer. A minicomputer is a multi-processing system capable of supporting from up to 250 users simultaneously.

(iii) Mainframe :- Mainframe is a very large in size and is an expensive computer capable of supporting hundreds, or even thousands, of users simultaneously. Mainframe executes many programs concurrently. Mainframes support ~~may~~ many simultaneous programs execution.

(iv) Supercomputer :- Super computers are one of the fastest computer currently available. Supercomputer are very expensive and are employed for specialized applications that require immense amounts of mathematical calculations (number crunching). For eg., Weather forecasting, Scientific simulations. (animated) graphics, fluid dynamic calculations, nuclear energy research, electronic design, and analysis of geological data (e.g. in petrochemical prospecting).

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

Ans:- Generation in computers terminology is a change in technology a computer is/was beings used. Intially, the generations term was used to distinguish between varying hardware technologies. But nowadays, generations includes both hardware and software, which together make up an entire computer System.

Following are the main five generation of computers:-

(i) First generation :- The period of first generation : 1946-59
(ii) Second generation :- The period of second generation : 1959-65
(iii) Third generation :- The period of third generation : 1965 - 1971
(iv) Fourth generation :- The period of fourth generation : 1971 - 1980
(v) Fifth generation :- The period of fifth generation : 1980 - onwards.

The main features of first generations are:-

- Vacum tube technology.

The main features of second generations are:-

- Use of transistors

The main features of third generation are:-

- I C used

The main features of fourth generation are:-

- VLSI technology used.

In the fifth generation, the VLSI technology become ULSI (ultra large Scale Integration).

Q4 Differentiate between Volatile & Non-Volatile memories

Ans:- The different between volatile and Non-Volatile memories are as follows

	Volatile	Non-Volatile
(i)	Volatile memory is the type of memory in which data is lost as it is power-office	→ Non-Volatile memory in which data remains stored even if it is power-off.
(ii)	Contents of volatile memory is store temporarily.	→ Contents of non volatile memory is stored permanently.
(iii)	It is faster than non-volatile memory	→ It is slowers than volatile memory.
(iv)	RAM (Random Access memory) is an example of volatile memory.	→ ROM (Read Only Memory) is an example of Non-Volatile memory.
(v)	In volatile memory, data can be easely transfered in comparison to non-volatile memory.	→ In non-volatile memory, data can not be easily transfered in comparison to volatile memory.

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

Ans:- The different between ~~softe~~ System Softwar, Application

software and open source software are: ~~as follows~~.

(i) System Software :- The system software is collection of programs designed to operate, control and extend the processing capabilities of the computer itself. System software are generally prepared by computer manufacturer.
These softwares comprise of programs written in low level languages which interact with the hardware at a very basic level. System software serve as the interface between hardware and the end users.
Some eg; of system software are operating system, Compilers, Interpreter, Assemblers etc.

Features of System software are following :-

- Close to system
- Fast in speed
- Difficult to understand.
- Less interactive
- Smaller in size.
- Difficult to manipulate
- Generally written in low level language.

(ii) Application Software:- Application software are the software that are designed to satisfy a particular need of a particular environment. All software prepared by us in the computer lab can come under the category of Application software.
It may consists of a single program, such as a Microsoft's

Notepad for writting and editing simple text. It may also consists of a collection of programs, often called a software package which work together to accomplish a task, such as a spreadsheet package. Example of Application software are following.

- Payroll software
- Student Record software.

(iii) Open Source Software:- The open source initiative launched as a steward organization for ~~1998~~, the open software movemen in 1998, established and published the Open Source Definition terms must comply en order to be classified as open Source Software.

Feature of open Source Software are:-

- Free Redistribution
- Source Code.
- Derived Works.
- Integrity of the Author's Source code.
- No Discrimination Against Persons or group
- Distribution of Licende.

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:- To create a file in Ms. Word;

- Click on start icon and click All Apps.
- Click Ms. Word.
- Then Keep the cursor on the insertion line.
- The type yourself in the work area
- Click the file tab to create file.
- Click save as and type file text box as file name 'Yourself'
- Click Save.

Q6(b) Write steps regarding following:

1. To change the font style

Ans:- - Select the text
- Go to home tab
- Click font and choose the style

2. To change the font size

Ans:- - Select the text
- Go to home tab
- Click on the font number and choose the size.

3. To change the font colour

Ans:- - Select the text
- Go to home tab
- Check font Colour from A There colours.

4. To Highlight (in yellow) the line that reads "need to get IMS's address."

Ans:- - Select the text
- Go to Home tab
- Check the small highlight box and select the highlight yellow colours.

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.

Ans:- - Type the document in the work area
- Select the MS Word text and go to home tab and click Bold.
- Select the ~~text~~ paragraph and choose the font size and font style by clicking from the font tab.
- We click ~~the~~ on the bullets tab and we ~~click~~ choose the bullet font.
- Click on the file tab and select save as then save the file name as MS-Word.

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

Ans:- Step 1 - We open the MS-Word Document.
Step 2 - We click with the cursor on the insertion line
Step 3 - We type the name of the file equation
Step 4 - We select the text (equations)
Step 5 - We change the font into a sentence case
Step 6 - We choose the text equations and choose underline font.
Step 7 - We click insert tab and choose equation option and choose insert new equation click on script option and write down the required variables $x_2 - Y_5 = 30$.
Step 8 - (choose) open file tab choose save as a dialog box appeared and file name equations by default appears
Step 9 - We click save.

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.

Ans:- Step 1 - We open a MS office Word document.
Step 2 - We insert the cursor on the insertion line and we type the following text (select the text....)
Step 3 - Select the text we want to convert.

Step 4 - Select the insert tab. click on the table command a dailog box appears

Step 5 - Click on the convert text on table a new dailog box appear then set a number of columns we required

Step 6 - Click on OK and finally it is convert into a table.

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

Ans:- Step 1 - We open an MS Office Word document

Step 2 - We insert the cursor in the insertion line and we type the following text (Select the required text. On MS-Word definition.

Step 3 - Select the text we want to convert.

Step 4 - Select the insert tab click on the table command a dailog box appears

Step 5 - Click on the convert text on table a new dailog box appear then set a number of column we required.

Step 6 - Click on OK and finally it is convert into a table.

Step 7 - Check on file tab, Choose save as a dailog box appear, With the file name MS-Word definition by default and click save.

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

Ans:- Step 1- Click on Start botton, choose All Program click on MS-office and choose MS-excel.

Step 2- A spread sheet appeared, and we click on the cell where we want to start assignment.

Step 3- We click on the cell address A1 and type Roll number.

Step 4- With the help of tab key / Arrow key from the keyboard we move to the next all B1 and C1 then we type name, mark representively.

Step 5- We then fill the following names and marks required.

Step 6- From the ocroll bar we select the sheet1 and right click a dailog box appeared and we choose 'Rename' and then type the sheet name 'student'

Step 7- Go to file tab choose save as a dialog box appears with a file name Book1 by default and click save.

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

(i) The sum of the marks using Auto Sum in a rage of cells (C2:C11)

Ans:- Step 1- Click on start botton, choose All Program click on MS-office and choose MS-Excel.

Step 2- A spreadsheet appeared, and we click on the cell where

We want to start assignment.

Step 3 - From cell address (C2 - C11) We filled the require marks of the students.

Step 4 - So on C12 we will be calculating the sum of the marks of the student using auto sum.

Step 5 - Choose C12 and type an input = sign go on to the formula tab and choose / click auto sum then automatically choose the required range (C2 - C11) just press enter then result will be shown.

(ii) Average of the mark:

Ans: Step 1 - Click on cell C13

Step 2 - Type and input = sign and type Average

Step 3 - Open the bracket and select the range of the cells C2 / C11 and close the bracket.

Step 4 - Press enter. Then result will be shown.

(iii) Highest marks in a range of cell (C2 : C11)

Ans: Step 1 - Click on cell C14

Step 2 - Type and input = sign and type maximum

Step 3 - Open the bracked and select the range of the cells C2 : C11 and close the bracked.

Step 4 - Press enter. Then result will be shown.

(iv) Minimum mark in the cells.

Ans: Step 1 - Click on cell C15

Step2- Type and input = Sign and type minimum
Step3 - Open the bracket and select the range of the cells C9 : C11 and close the bracket.
Step4 - Press enter. Then result will be shown.

Q13(A) Describe various step involved in the following.

(i) To modify column width of a Work sheet.

Ans:- Step1 - Select the text we want to format.
Step2 - Go/Click to Home tab. We choose font format,
Step3 - Select on column Width
Step4 - Write the number size we want to format
Step5 - Then a cell will be formatted.

(ii) To modify the row height of a Worksheet.

Ans:- Step1 - Select the text we want to format.
Step2 - Click the home tab. and choose font format.
Step3 - ~~Write the numbers size we want to format~~. Select on row height and
Step4 - Write the numbers size we want to format.
Step5 - Then a cell will be formatted.

(iii) To delete rows and columns of a Worksheet.

Ans:- Step1 - Select the sheet we want to delete.
Step2 - Click the Home tab
Step3 - Choose the delete tab
Step4 - Then click on delete the delete sheet rows and column.

Step 5 - Then the delete sheet rows and columns will be deleted.

Q3 (B) Describe following terms in the Worksheet.

(i) Absolute reference and relative reference in formula?

Ans: An Absolute Reference is excel refers to a reference that is locked so that rows and column. remain constant no matters where they are copied.

Relative Reference: An address or pointer that changes when the target ~~them~~ items is moved in the relationship to it has ~~are~~ changed, a cell with a relative reference changes its formula when copied elsewhere.

(ii) Cell Address :-

Ans: Cell Address is a combination of a column letter and a row number that identifies a cell on a worksheet. For eg:, A1 refers to the cell at the insertion of column A and row 1; B_2 refers to the 2nd cell in column B and so on.

Q14 (a) What tools are available to customize our Power Point Presentation?

Ans:- The tools are available to customize our power Point Presentation are:- Table, chart, Smard Art Graphic, Pictures from file, Clip Art, Media Clip.

Q14 (b) Write the steps for the following action for Creation of power point presentation.

1. Open a blank Presentation

Ans:- Step 1- Click on start button / All App.
Step 2 - Then click on Ms. Powerpoint.
Step 3 - Click new slide and a new blank Presentation will open.

2. Save the Presentation as Lab1.pptx

Ans:- Go to the ~~title~~ file tab and click.
Save as a dialog box appear with the file name labl, by default and click save.

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

Ans:- Step 1 - We go to Home tab.
Step 2 - Click on New slide and choose title Slide.
Step 3 - We type the title of college UNIF-~~YES~~ CSC.

4. Type your first name and last name in the subtitle section.

Ans:- We type in the ~~title~~ subtitle section Sudarma on first

Q16 What is the difference between Machine Language and High level language?

Ans:- The difference between Machine Language and High level language are:-

Machine-level language	High-level language
1. The machine-level language comes at the lowest level in the hierarchy, so it has zero abstraction level from the hardware.	→ It is a user-friendly language as this language is written in simple English words, which can be easily understood by humans.
2. It cannot be easily understood by humans.	→ It executes as a faster pace
3- The machine-level language is written in binary digits, i.e., 0 and 1	→ It requires the compiler to convert the high level language instruction into machine code.
4. It does not require any translator as the machine code is directly executed by the computer.	→ the high-level code can run all the platforms, so it is a portable language.
5. It is a first-generation programming language.	→ It is less memory efficient → Debugging and maintenance are easier in a high level language.

Q17. Discuss about the different data types of C Programming languages

Ans:- The types in C can be classified as follows:-

i Basic Types:- They are arithmetic types and are further classified into (a) integer types and (b) floating points types.

(ii) Enumerated types :- They are again arithematic types and they are used to define variables that can only assign certain discrete integer values throughout the program.

(iii) The type void :- The type specifier void indicates that no value is available.

(iv) Derived Types :- They include (a) Pointer types, (b) Array types, (c) Structure types, (d) Union types, and (e) Function types.

Q 18 Find the output of the following expressions

Ans :-

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

$X = \frac{20}{5} \times 2 + 30 - 5$

$X = 4 \times 2 + 30 - 5$

$X = 8 + 30 - 5$

$X = 38 - 5$

$X = 33$

(b) $Y = 30 - \left(\frac{40}{10} + 6\right) + 10$

$Y = 30 - \left(\frac{40}{10} + 6\right) + 10$

$Y = 30 - 4 + 6 + 10$

$Y = 30 - 4 + 16$

$Y = 30 - 20$

$Y = 10$

c. $z = 40 \times \frac{z}{10} - 2 + 10$

According to BODMAS

$z = 40 \times 0.2 - 2 + 10$

$= 8 - 2 + 10$

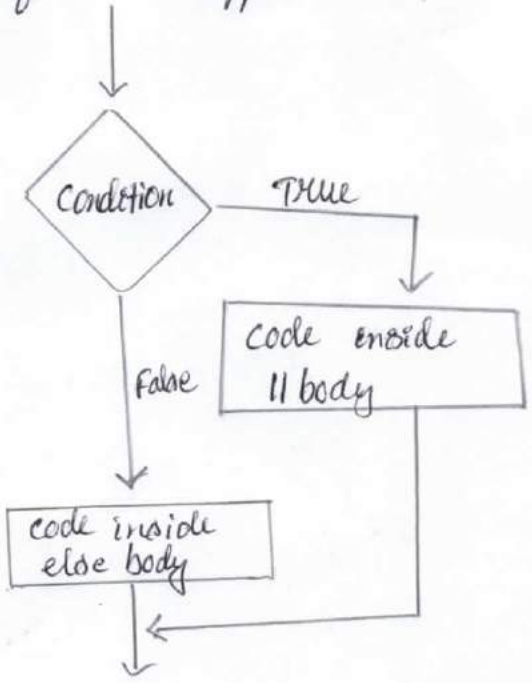
$= 8 - 12$

$= -4$

Q19. Describe the Syntax of the following statements.

Ans (a) If-else statement

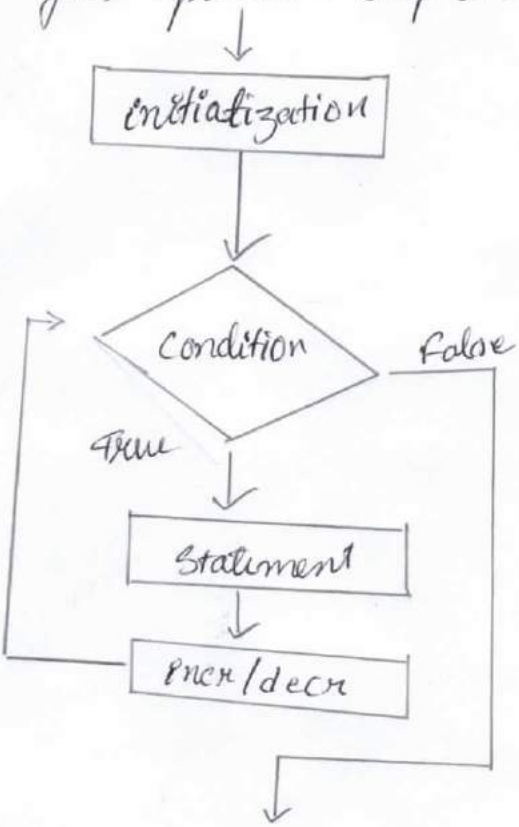
→ If condition returns true then the statements inside the body of "if" are executed and the statement inside body of "else" are skipped. If condition returns false then the statements inside the body of "if" are skipped and the statement in "else" are executed.



(b) for loop

→ In for loop, a loop variable is used to control the loop. First initialize this loop variable to some value, then check

Whether this variable is less than or greather than counter value. If statement is true, then loop body is executed and loop variable gets updated. Step are repeated till exit condition comes.

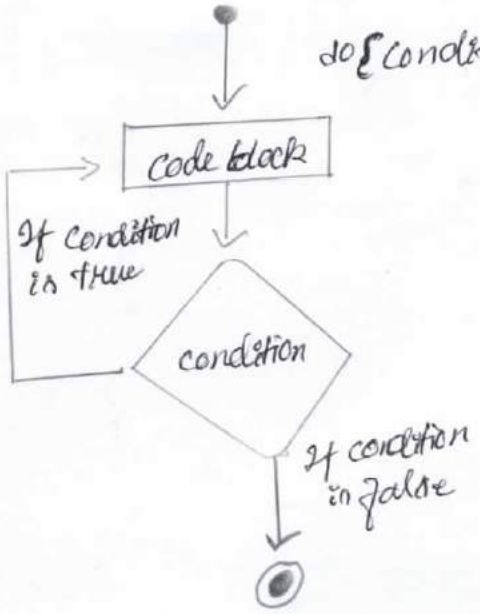


c. <u>While loop</u>

→ While (condition) ; Notice that the conditional expression appears at the end of the loop, so the statement(s) in the loop executes once before the condition is tested. If the condition is true, the flow of control jumps back up to do, and the statement(s) in the loop executes again.

d. <u>DO-While loop.</u>

→ The C do while statement creates a structured loop that executes as long as a specified conditions is true at the end of each pass through the loop. The syntax for a do while statement is:... If the value of the expression is "false" (i.e., compares equal to zero) the loop is exited.



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 numberis %d \n", a); else
		Print ("Largest number is %d \n", b); }

Ans

Output.

a)	b)	c)
[Running] cd "g:\C_Programs" && gcc aa.c -o aa && "g:\C_program \" aa IMS Ghaziabad. [Done] existed with code=0 in 1992 second.	[Running] cd "g:\C_Program\" && gcc az.c -o az && "g:\C_Program \" az IMS Ghaziabad IMS Ghaziabad [Done] exited with code=0 in 0.287 seconds	[Running] cd "g:\" && gcc an.c -o an && "g:\" an Largest number is 100 [Done] exited with code = 22 in 0.228 seconds.