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-1

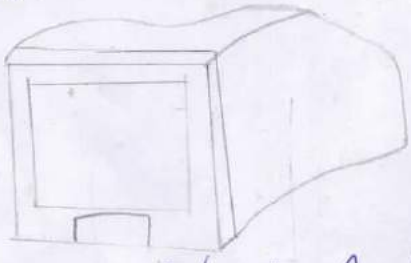
Q1. what are the four fundamental parts of computer? Explain it with the help of diagram.

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

1. Monitor:- A computer monitor is an output device that displays information in pictorial or text form. Monitors often look similar to televisions. The main difference between a monitor and a television is that a monitor does not have a television tuner to change channels. Monitor often have higher display resolution than televisions.

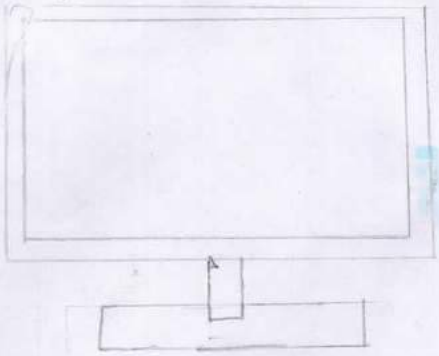
There are two kinds of viewing screen used for monitor.

i) Cathode-Ray Tube (CRT) monitor:- A cathode-ray tube (CRT) is a vacuum tube containing one or more electron guns, the beams of which are manipulated to display images on a phosphorescent screen. CRTs have also been used as memory devices, in which case the screen is not intended to be visible to an observer.

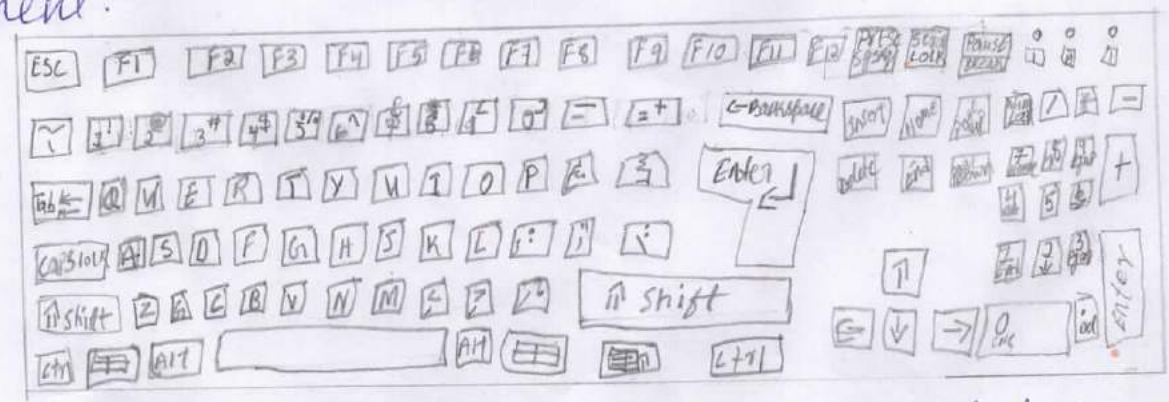


ii) Flat-Panel display monitor:- A flat-panel display is an electronic display device used to enable people to see content in a range of entertainment, consumer

electronics, personal computer, and mobile devices, and many types of medical, transportation and industrial equipment.

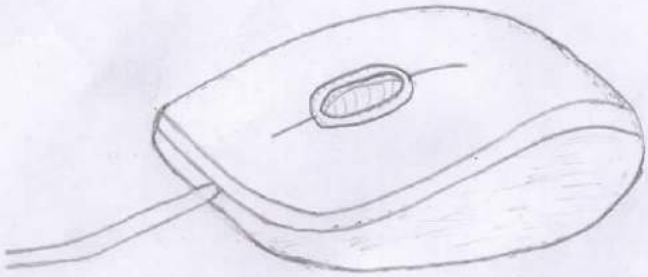


2. Keyboard :- A keyboard is a peripheral device that enables a user to input text into a computer or any other electronic machinery. A keyboard is an input device and is the most basic way for the user to communicate with a computer. keyboard are of two size 84 keys or 101/102 keys but now there are 104 keys or 108 keys available for window and internet.



3. Mouse :- A Mouse is a small hardware input device used by hand. It controls the movement of the cursor on the computer screen and allows users to move and select folders, text, files, and icons on a

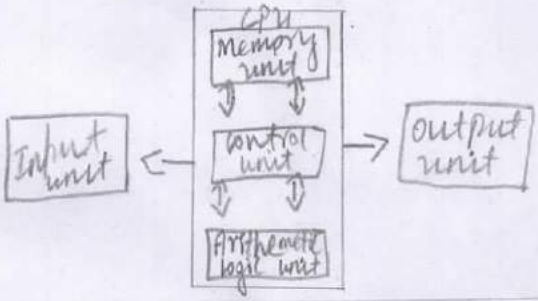
computer. It is an object, which needs to put on a hard-flat surface to use. Mouse has two buttons called left and right buttons and scroll bars is present at the mid.



4. CPU :- CPU is considered as the brain of the computer. The computer's central processing unit (CPU) is the portion of a computer that retrieves and executes instructions and it control all part of computer.

The central processing unit (CPU) consists of six main components:

i) control unit (CU) (ii) arithmetic logic unit (ALU)
iii) registers. (iv) cache. (v) buses. (vi) clock.



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

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

i) Personal computers (PC): A Personal computers (PC) is a multi-purpose computer whose size, capabilities, and

price make it feasible for individual use. Personal computers are intended to be operated directly by an end user, rather than by a computer expert or technician.

ii) Mini computer: It a mid sized computer. But in generally, a minicomputer is a multiprocessing system capable of supporting from 4 to about 200 users simultaneously.

iii) mainframe computer: mainframe computer is a very large and expensive computer capable of supporting hundreds, or even thousands, of users simultaneously. mainframes are more powerful than supercomputers because they support more simultaneous programs. But supercomputers can execute a single program faster than a mainframe.

iv) Super computer: Super computer is the fastest and most powerful type of computer. Supercomputers are very expensive and are employed for specialized applications that require immense amounts of mathematical calculations. For example, weather forecasting requires a supercomputer.

v) Digital computer: Digital computer is a computer that performs calculations and logical operations with quantities represented as digits, usually in the binary number system.

vi) Analog computer: An analog computer is a form of computer that uses continous physical phenomena such as electrical, mechanical or hydraulic quantities to model the problem being solved.

Q3. what is the meaning of computer generation? How many computer Generations are defined? what technologies were (are used?)

Ans:- Generation in computer terminology is a change in technology a computer is 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 generation of comfiuters they are:-

i) First generation: The period of the first generation is in 1946-59

ii) Second generation: The period of the second generation is in 1959-1965

iii) Third generation: The period of the third generation is in 1965-1971

iv) Fouth generation: The period of the ~~fourth~~ generation is in 1971-1980

v) Fifth generation: The period of the fifth generation is in 1980-Onwards.

* The main features of first generations are:-
  - Valum tube technology.

⇒ The main features of second generations are:-
  - use of transistors

⇒ The main features of third generations are:-
  - I C used

⇒ The main features of fouth generation are:-
  - VLSI technology used.

⇒ So in the fifth generation the VLSI technology beiome ULSI (ultra large scale Integration).

Q4. Difference between volatile and non-volatile memories.

Ans The difference 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 powered off.	⇒ Non-volatile memory is the type of memory in which data remain stored even if it is powered off.
ii) Contents of volatile memory is stored temporarily.	⇒ Contents of Non-volatile memory is stored permanently.
iii) It is faster than non-volatile memory.	⇒ It is slower than volatile memory.
iv) RAM (Random Access memory) is an example of volatile memory.	⇒ ROM (Read Only memory) is an examples of non-volatile memory.
v) In volatile memory, Process can read and write.	⇒ In Non-volatile memory, Process can only read.
vi) volatile memory is more costly per unit size.	⇒ Non-volatile memory is less costly per unit size.
vii) In volatile memory, processor has direct access to data.	⇒ In non-volatile memory, Processor has no direct access to data.

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

Ans The different between system software, application software and open source software are:-

i) 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 maintains the system resources and gives the path for application software to run. A important thing is that without system software, system can not run. It is a general purpose software. System software runs when system is turned on and stop when system is turned off. Examples are operating system.

Features of system software are:-

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

ii) Application software: Application Software is the type of software that runs as per user request. It runs on the platform which is provided by system software. High level languages are used to write the application software. It's a specific purpose software. Application software runs as per the user's request. Example are Photoshop, VLC player etc.

Features of system software are:

- student record software.
- payroll software.

iii) Open source software: Open source software refers to the computer software which source is open means the general public can access and use. In short it is referred as OSS. Example are Firefox, Android, Zimbra etc.

Features of open source software are:-

- Free redistribution.
- Source code.
- Integrity of the Author's source code.
- No Discrimination Against Person or group.
- Distribution of License.

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 the office button.
=> click on all apps.
=> click on MS-office.
=> click on MS-word.
=> click on Insertion line by using a mouse.
=> write down the sentence "yourself."
=> click on the file button.
=> click save as, a window box appear, we type the file name in the file box and click save.

Q6. b) write steps regarding followings.

1. To change the font style.

Ans
- select the relevant text.
- Find the font field on the home ribbon
- select the font and choose the style.

2. To change the font size.

Ans - Select the relevant text

- Find the Point Size field on the Home ribbon.
- Select the font size and choose the size.

3. To change the font color.

Ans
- Select the relevant text.
- Go to Home ribbon.
- Choose the colour and fill in the text.

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

Ans
- Select the text
- Go to Home ribbon
- Check the Small highlight box and select the highlight yellow colours.

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07. Create a file in MS-word for the following document and save it with file nam 'ms-word". Describe all steps involved in it.

Ans i) Type the document in the work area
ii) Select the MS-word text and go to home tab and click Bold.
iii) Select the paragraph and choose the font size and font style by clicking from the font tab.
iv) click on the Bullets tab and (or) choose the bullet font.
v) Click on the file tab and select save as then save the file name as MS-word.

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08. create a file in MS-word for the following document and save it with file name 'equations'. Describe all steps involved it.

Ans (i) open the MS-word Document.

ii) click with the insertion line
iii) Type the name of the file equation.
iv) select the text (equations)
v) change the font (~~into~~) into a sentence case.
vi) choose the text equations and choose underline font.
vii) click insert tab and choose equation option and choose insert new equations click on script option and write down the required variables $x_2 - \frac{1}{5} = 30$.
viii) choose and open file tab. choose save as and the box appeared and file name equation by difault appears.
ix) Then 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 i) open a MS-office.
ii) Insert the insertion line and type the following text (select the text..)
iii) Select the text we want to convert.
iv) select the Insert tab.
v) click on table command. A dialog box appears.
vi) Click on convert text to table, a new dialog box appears and then we set a number of column.
vii) 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 i) Open an MS-office document.
ii) Insert the insertion line and type the following text on ms-word defination.
iii) Select the text we want to convert.
iv) Select the insert tab click on the table command a dailog box appears.
v) click on the convert text on table a new dailog box appear then set a number of column that we required.
vi) click on ok and finally it is convert into a table.
vii) check on file tab, choose save as a dialog box appear, write the file name ms-word defination by dfault and click save.

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

Ans (i) click on the start button and choose All apps, click on MS-office and choose ms-excel.
(ii) Then a spreadsheet appeared, and click on the cell where we want to start assignment.
(iii) click on the cell address A, and type Roll number.
(iv) with the help of tab key and arrow key from the keyboard we move to the next cell B and C then we type name.
(v) Then Double-click the sheet tab to which we want to give a new name.
(vi) Rename a dialog box where the new name can be specified.
(vii) or we could go to the sheet tab and click on the

the right mouse button and select Rename.
(viii) Once the dialog box is displayed, give the new name 'book1' and click on the ok button and we save.

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

(i) the sum of the marks using AutoSum in a range of cells (C2:C11)

Ans 1) click on start botton, choose All program click on MS-office and choose MS-excel.
2) A spreadsheet appeared, and click on the cell where we want to start assignment.
3) From cell address (C2-C11) we filled the require marks of the student.
4) on C12 we will be calculating the sum of the marks of the student using auto sum.
5) we choose C12 and type an input = sign go on the formula tab and choose, click auto sum and then automatically choose the required range. (C2-C11) and press enter then the result will be shown.

(ii) Average of the mark in a range cells(C2:C11)

Ans (1) click on cell C13
(2) Type and input = sign and type Average
(3) Open the bracket and select the range of the cells C2/C11 and close the bracket.

(4) Press enter and the result will be shown.

(iii) Highest marks in a range of cells (C_2:C_{11}):

Ans (1). Click on cell C_{14}

(2). Type and input = sign and type maximum

(3). Open the bracket and select the range of the cells C_2:C_{11} and close the bracket.

(4). Press enter and the result will be shown.

(iv) Minimum mark in the cells(C2:C11)

Ans (1) Click on cell C_{15}

(2) Type and input = sign and type minimum.

(3) Open the bracket and select the range of the cells C_2:C_{11} and close the bracket.

(4) Press enter and the result will be shown.

Q13 (a) Describe various steps involved in the following.

⇒ To Modify column width of a worksheet:

Ans (i) Select the text we want to format.

(ii) Click to Home tab. Choose font format.

(iii) Select on column width.

(iv) write the number size we want to format.

(v) Then a cell will be formatted.

⇒ To modify the row height of a worksheet:

Ans (i) Select the text we want to format.

(ii) Click the home tab, and choose font format.

(iii) Select on row height

(iv) write the numbers size we want to format.
(v) Then a cell will be formatted.

⇒ To delete rows and columns of a worksheet.

Ans (i) Select the sheet we want to delete.
(ii) click the Home tab.
(iii) choose the delete tab.
(iv) Then click on delete the delete sheet Rows and Column.
(v) The delete sheet or rows and column will be deleted.

Q13.(b) Describe following terms in the worksheet.

⇒ Absolute reference and relative reference in formula:

Ans Absolute reference is an address or pointer that does not change, in a spreadsheet, a cell with an absolute reference does not change even if copied elsewhere.

Relative reference, by default, all cell references are relative reference. when copied across multiple cells, they change based on the relative position of rows and columns.

⇒ Cell address: Cell address is an alphanumeric value used to identify a specific cell in a spreadsheet. Each cell reference contains one or more letters followed by a number. The letter or letters identify the column and the number represents the row.

Q14. (a) what tools are available to customize our PowerPoint presentation?

Ans The tools available to customize our powerpoint presentation are: Table, Chart, Smart Art Graphic, Pictures from file, clip art, media clip.

Q14. (b) write the steps for the following action for creation of power point presentation

⇒ Open a Blank presentation:

Ans - click on start button and click on all Apps.
- Then click on MS-office and choose MS-Power Point.
- Click new slide and a new blank presentation will open.

⇒ Save the presentation as Lab1.pptx:

Ans Go to the file tab and click save as and a dialog box appear with the file name lab1, by default click save.

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

Ans - Go to Home tab.
- Click on New slide and choose title slide.
- Type the title of college UNIT ESC.

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

Ans - we type the subtitle section Shemsphalin on first name and Lyngdoh Marbaniang on last name.

⇒ Add a New Slide which has a title Content:

Ans - First we go to new slide and click on title and content.

- Secondly, in title and content the tools which have on it are. (i) Table, (ii) Chart, (iii) Smart Art (iv) Pictures (v) Clip art (vi) media clip.

Q15. write steps for creation of a set of Powerpoint slides that demonstrates your skill to use the tools of Powerpoint. It should the following things.

⇒ Title slide and bullet list.

Ans - Go to home tab click on the new slides and choose title slide option.
- Type the required title name.
- Type a list of tools available in the MS-Powerpoint, to input bullet we select the text and click on bullet font and click the desire bullet font.

⇒ Inserting Excel Sheet:

Ans - Select the table of excel sheet with the used of tools and table.
- click on the table, an insert dialog box appear and we file the required number of column and rows.

⇒ Clip and text:

Ans - Select the Clip Art used tool of Clip Art.
- click a clip the clipboard appear.
- If we want to type on the text box the required Pictures we want to paste.
- The variety of pictures appears and we select the desire picture from the organizing clip.

⇒ Slide show effects:

Ans . Select the slide show tabs consist of option (A) Start slide show - From begining - From current

slide - custom slide show.
(B) set up slide show
(a) set up slide show
(b) Hide slide
(c) Record Narration
(d) Rehearse timing
(e) use rehearsed timing set up.

PART - 2.

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) It is considered as low-level friendly language.	⇒ It can be considered as a programmer-friendly language.
2) It requires an assembler that would translate instructions.	⇒ It requires a compiler/interpreter to be translated into machine code.
3) It is not portable.	⇒ It can be ported from one location to another.
4) It is difficult to understand	⇒ It is easy to understand.
5) It is deffiult to debug.	⇒ It is easy to debug.
6) It is less memory efficient.	⇒ It consumes less memory.
7) It is not used widely in today's times	⇒ It is used widely in today's times.

Q17. Distuss about different data types of C programming Language.

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 point 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 specifie void indicates that no value is available.

iv) Derived types:- They include (a) Panter types, (b) Array types, (c) structure types, (d) union types and (e) Funtion types.

Q18. Find the output of the following ~~(stat)~~ 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) $Y = 30 - (\frac{40}{10} + 6) + 10$

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

$Y = 30 - 4 + 6 + 10$

$Y = 30 - 4 + 16$

$Y = 30 - 20$

$Y = 10$

(c) $Z = 40 \times \frac{2}{10} - 2 + 10$

According to BODMA >

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

$Z = 8 - 2 + 10$

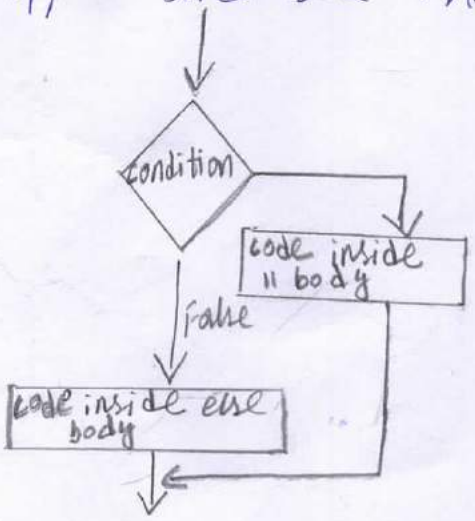
$Z = 8 - 12$

$Z = -4$

Q19. Describe the Syntax of the following statements.

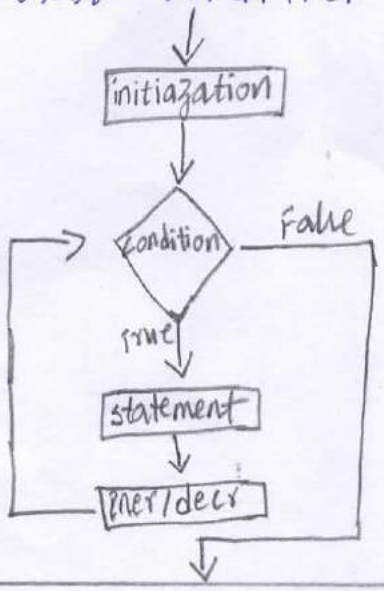
Ans (a) If - else statement.

=> 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:

Ans 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 exist condition comes.

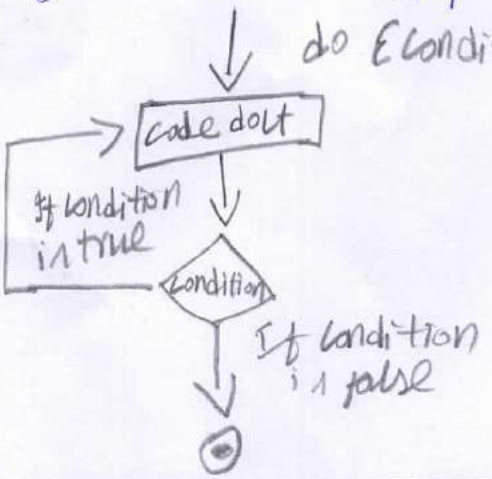


(c) White loop:

Ans 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) Do-while loop:

Ans The C do while statement creates a structural loop that executes as long as a specified condition 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" (ie, compares equal to zero) the loop is exited.



Q20. Find the output of the following program segments.

a)

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

b)

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

c)

```
#include <stdio.h>
void main()
{int a=10, b=100;
 if (a>b)
printf("Largest number is %d\n", a);
else
printf("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] exited with code=0 In 1992 second	[Running] cd "g:\c-program" && gcc a3.c -o a3 && "g:\c-Program)"a3 IMS Ghaziabad IMS Ghaziabad [Done] exited the code=0 in 0.282 seconds	[Running] cd "g:\" && gcc a4.c -o a4 && "g:\"a4 largest number is 100 [Done] exited with code=22 in 0.258 seconds.