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CCA - 101 : Fundamentals of IT & Programmi

Assignment - 1

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

ANS - four fundamental parts of computer:

(i) Input device
(ii) out put device
(iii) memory
(iv) system unit

Input Device

Those device ~~accept~~ accept data and instruction are called input device.

Example - keyboard, Mouse, Scanner web camera.

Output Device

Those device supply output or information are called output device.

Example - Monitors, printers, projector.

Memory

Also called internal storage or main memory or random access memory (Ram) consists of very fast memories like magnetic core memory or semiconductor memory.

Stores program instructions or part of data for immediate need.

Data is stored in a computer memory in the form of words, bytes and bits.

System Unit

A system unit is the part of a computer that houses the primary divices that perform operations and produce results for complex calculat It includes motherboard, CPU, RAM.

Q2 :- Discuss about the classificatio of computers ? based on size and capac

Ans – classification of computer based on size and capacity :-

(i) Microcomputers
(ii) Mini computers
(iii) Mainframe computers
(iv) Super computers

Microcomputers

Designed to be used by individuals. Desktops and Laptops.

Mini computers

Can handle more data and more input and output than micro computers. Mostly multiuse, 4-200 users.

Mainframe computes

A very large computer. Hundred to thousand users can use simultaneously.

Super computers

like mainframe but with high processing power. The fastest type of computer that can perform complex operation at a very high speed. Many processors enabling them to process complex operation e.g weather forecast which will needs to be processed within a short period.

Q.3 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 / was being used. Initially the generation therm

was used to distinguish between varying hardware technologies. Nowadays, generation includes both hardware and software, which together make up an entire computer system.

First Generation: Vacuum Tubes (1940-1956)

The first computer systems used vacuum tubes for circuitry and magnetic drums for main memory, and they were often enormous, taking up entire rooms. These computers were very expensive to operate, and in addition to using a great deal of electricity, the first computers generated a lot of heat, which was often the cause of malfunctions. The maximum internal storage capacity was 20,000 characters.

Second Generation: Transistors (1956-1963)

The world would see transistors replace vacuum tubes in the second generation of computers. The transistor was invented at Bell Labs in 1947 but did not see widespread use in computers until the late 1950s. This generation of computers also included hardware advances like magnetic core memory, magnetic tape, and the magnetic disk.

The transistor was far superior to the vacuum tube, allowing computers to become smaller, ~~fast~~ faster, cheaper, more energy-efficient and more reliable than their first-generation predecessors.

Third Generation: Integrated Circuits (1964-1971)

The development of the integrated circuit was the hallmark of the third generation of computers. Thansistors were miniaturized and placed on silicon chips, called Semiconductors which drastically increased speed and efficiency of computers. Insted of punched cards and printouts, users world interact with a third-generation computers through keyboards, monitors, and interfaces with an operating stsem, which allowed the device to run many different applications at one time with a central program that munitored the memory.

Fouth Generation microprocessors (1971-Pres

The microprocessor usherced in the fouth generation of computers, as thousands of integrated circuits were built onto a single silico chip. the technology in the first generation that filled an entire room could now fit in the palm of the hand. the Intel 4004 chip developed in 1971, integrated all the components of the computer, from the central processing unit and memory to input/output controls on a single chip.

Fifth Generation: Artificial Intelligence (present and Beyond)

Fifth-generation computers technology based on artificial intelligence, is

still in development, though there are some applications, such as voice recognition that are being used today. The use of parallel processing and superconductors is helping to make artificial intelligence a reality. This is also so far the prime generation for packing a large amount of storage into a compact and portable device.

Q4: Differentiate between volatile & Non-volatile memories.

Sr no	Key	Volatile memory	Non-volatile memory
1	Date Retention	Date is present till power supply is present.	Data remains even after power supply is not present.
2	persistence	volatile memory data is not permanent.	Non-volatile memory data is permanent.
3	speed	volatile memory is faster than non-volatile memory.	No-volatile memory access is slower.
4	Example	Ram is an example of volatile memory	Rom is an example of Non-volatile memory.
5	Date Transfer	Data Transfer is easy in volatile memory	Date Transfer is difficult in Non-volatile memory.

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

Ans:- System software

System software is the type of software that is the interface between application software and system. Low level Languages are used to write the system software maintains the system resources and gives the path for application software can not run without system software.

Application software is the type of software that runs as per request. It runs on the platform which is provided Languages are used to write the application software. the main difference between system software & application software is that without system software the system can not run on thother hand the application software ~~hard~~ will not run.

Open source software

Open source software is computer software whose source code is available openly on the internet and programmers can modify it to and new features and capabilities without any cost. ~~Hered~~ Here the software is developed and texted through open collabration. This software is managed by an open source community of

developeres. It provides community support which is available for maintenance we can get it for free of cost. Ex - Android

Q.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.

Ans :- Open MS word - File New Bank document set the paragraph Then type the below Sentences. First of all I welcom to all of you My name Pinki Lenka. I am 23 years old. I study in +3 Arts in N.S womens kakatpur. My father is Kumare Lenka he is a farmer. My mother name is Kabita Lenka, she is a house wife. My village name is Naiguan, post-Dercuni Dist-Puri that's all About me.

-> After that press Ctrl+S through the keyboard to save the file.
-> "Save As" screen display.
-> Then choose the location.
-> Then type the filename "Pinki"
-> Then click the "Save" button.

Q6 b:- write steps regarding followings

->To change the font style
->To change the font size
->To change the font color
->To highlight (in yellow) the line that reads "need to get IMS's address".

Ans! - To change the font style

a - Type until you ready to format characters
b - Click on the Toolbar button for the format you want.
Click on the button [B] (or press ctrl+B) to boldface.
Click on the Italic button [I] (or press ctrl+I) to italicise.
Click on the underline button [U] (or press ctrl+
to underline.
(c) Type the characters.
(d) Select the same style button, or press the ctrl+ key combination again to turn the feature off.

To change the font size

Select the text you wish to modify. Click the drop-down arrow next to the font size box on the Home tab. A drop down menu appears. Move the mouse pointer over the various font sizes. A live preview of the font size will appear in the document. Select the font size you wish to use. You can also use the Grow Font and Shrink Font commands to change the size.

To change the font color

Select the text you wish to modify.
Click the font color drop-down arrow on the Home tab. The Font color menu appears.
Select the font color you wish to use. The font color will change in the document. Your color choices aren't limited to the drop-down menu that appears. Select more colors at the bottom

of the list to access the colors dialog box. Choose the color that you want and click OK

TO Highlight Text

From the Home tab, click the Text Highlight color drop-down arrow. The Highlight color menu appears. Select the desired highlight color. Select the text you with to modify. It will then be highlighted.

Q7. Create a file in MS-word for the following document and save it with file name (MS word Describe all steeps involved in it.

Ans:- -> File menu -> New -> Blank document

->Type the following paragraph

MS word

MS word is a widely used commercial word processor developed Microsoft. MS word is application software, which is capable of

creating
editing
saving, and
printing any type of document

-> select text 'MS word' which is above on the paragraph.

-> Choose font name, font size, and font style (Bold) from the home Tab.

-> select text "MS word" From First Line of paragraph.

-> Choose font color as red from home Tab

-> select text "creating" and choose font color as cyan from hom tab.

-> select text "saving" and choose font color as

From home tab. and select text "and" choos strike through option in the home tab.
→ Select text "printing any type of document choose bold option in home tab.
→ Select Last 4 Lines, choose option in home tab.
→ file menu - save
→ Type file Name "MS word" and finally click on save button.

Q.8 ÷ create a file in MS-word for the following document and save it with file name (equations, Describe all steps involved in it.

Equations

$x_2 + y_5 = 30$

$Z_3 + Q_4 = 50$

$A_2 + B_8 = x_2 + y_8$

Ans :- Open the ms word then type "Equation" then select it then press ctrl+B, Then press ctrl+U After that then press enter key. then press Alt + = After that equation box will be display. than type text & Num in the equation box.

$x-2 + y-5 = 30$

$Z^3 + Q^4 = 50$

$A-2 + B^8 = x-2 + y^8$

After that press Esc key.
then click file → save
save as box will be display.
then type File Name "Equation"
After that click on "save" button.

Q.9 :- 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: To convert Existing Text to a Table: Select the text you wish to convert, select the Insert tab. Click the Table command. Select convert Text to Table from the menu. A dialog box will appear.

Converting text to a table

Choose one of the options in the separate text at : section. This is how word knows what text to put in each column. Click OK. The text appears in a table.

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

Ans :- To Insert a Blank Table :- Place your insertion point in the document where you want the table to appear. Select the Insert tab. Click the Table command. Hover your mouse over the diagram squares to select the number of columns and rows in the table.

Inserting a new table

Click your mouse, and the table appears in the document. You can now place insertion point anywhere in the table to add text.

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

Ans :- Open MS Excel -> File - New
Now type in A1 Roll in B2 Name s in C1 Mar
Now type in A2 '1's in A3 '2's select A2 to A11 then press ctrl+D (bill to down)
Then type in B2 'n1's in B3 "n2"s select B2 to B

then type in C2, C3, C4, C5, C6, C7, C8, C9, C10 & C11 " 60, 70, 80, 90, 40, 50, 77, 44, 88 & 55 then select A1 : C11 after that click on Bold & then borders → then choose outside borders. After that press ctrl+S (for save) save As box display choose the location & in the file name box. Type " book1' then click save button.

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

Ans! -> Select cells from C2 : C11 and click on "Autosum" on the Home tab and press Enter key.

-> = average (C2 : C11)
-> = MAX (C2 : C11)
-> = minimum (C2 : C11)

Q13 :a— Describe various steps involved in the following.

Ans :- Modify column with in a new worksheet all the colums are set to the standard with. Adjust column width by dragging or double-clicking the right column heading border. You can Adjust several columns at once by first selecting columns and then adjusting on of selected colums. You can also choose the column command from the Home menu.

Modify Row Height Adjust row height (default 15.0 by dragging the boottom border of the row heading. You can Adjust several rows at once by Fist selecting rows and then adjusting the height on any one of the selected rows. You can also choose the Row command from the Home menu.

Q13.b Describe following terms in the worksheet.

Ans! - Relative Addressing ~~is~~ using that copy

command the formula in E7 is copied ~~the~~ for to cell E11, Excel copies it as =B11+C11+D11 .. This means that Excel does not record the formula in E7 (or E11) as sum of the values in ~~this~~ cells B7, C7, D7 (or B11, C11, D11). Both the formulas mean The sum of the values ~~in~~ in the three columns to the same row. Similarly a copy of the formula in cell G50 will be D50 + E50 + F50.

Absolute Addressing Referring to the value in a cell rather than the position of the cell is called ABSOLUTE ADDRESSING.

Example

Now suppose D7 contains the formula =C4*12. We wish to copy the formula to cells D8, D9, D10, such that it appears as =C4*12 in all these cells. Now if C4 is taken as a relative address then the copy of the formula to the cells D8, D9, D10 will be :-

D8 : =C5*12
D9 : =C6*12
D10 : =C7*12

This is because C4 in the formula in D7 means "one column left three columns up". But we wish to refer to the contents of cell "C4" in all the copies i.e. we wish EXCEL to treat C4 as an absolute location in the worksheet - column C, ~~and~~ row 4" so that when the formula is copied to cells D8, D9, D11 no address adjustment is done and we have

D8 :=C4*12
D9 : =C4*12
D10 :=C4*12

EXCEL uses a $ (dollar) sign to distinguish the absolute address from relative address. Thus to make relative address C4 as absolute "$C$4 will have to be typed in the formula in D7 Now if we type $C$4*12 in cell D7 and copy the formula to cell D8, D9, D10 we shall have.

D8 :=$C$4*12
D9 :=$C$4*12

Q14 a - what tools are available to customize our power point presentation?

Ans:- There are many tools abvailable to customize our powerpoint presentation These are. Templates & Themes Slide layout, Fonts, colors themes shapes, charts and Graphs, Tables flow charts Animation, Audio, Video Smart art etc.

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

Ans:- Creating a Black Presentation

(i) choose File > New
Blank presentation is already selected click creat
click create.

(ii) Save the presentation as Lab1.pptx

click at the file Tab
click at the save option from the file menu Bar
click save.

Then save as Dialog box will appear. Select the folder in which you want to save the presentati
Then mention the file name "Lab1.pptx"
and click at Save.

(iii) New -> Slid title -> in First placeholder
Type - N.S womens college.

(iv) Then type [redacted] Pinki Lenka in the subtitle section.

(v) Then click New slide & Then Slide layout box display. Then click 'title & content'.

Q16 What is the difference between machine Language and High Level Language?

Ans:- Machine Language The most elementary and fist type of computer language which was invented was machine language which was machine dependent. A program written in machine language cannot be run on another type of computer without

significant alterations. Machine language is sometimes also referred as the binary language i.e the language of 0 and 1 where 0 stands for the absence of electric pulse and stands for presence of electric pulse. very few computer programs are actually written in machine language.

High Level Language The assembly started using English like words but still it was difficult to learn these language. High level language are the computer language in which it is much easier to write a program than the low level language. A program written in high level language like as set of instruction. In 1957 a high level language called FORTRAN was developed by IBM which was specially developed for scientists and engineers. other high level language are ⊛ COBOL widely used for business data processing tasks. BASIC language developed for the beginners C language be used for any programming task PASCAL is other high level language that has gained acceptance among programmers.

Q17 Discuss about different data types of C programming Language.

Ans:- Data types of C programming Language

There are only a few basic data types in C

Char: a single byte, capable of holding one character.

Int: an integer

float: single-precision floting point

double: double-precision floating point.

Q19 Describe the syntax of the following statements.

Ans:- (a) If-else statement

The if-else statement is used to express decisions. The syntax is

if (expr) statement 1
[else statement 2]

where the else part is optional. The expression is evaluated, if it is TRUE (i.e., if expression has a non-zero value) statement 1 is executed if it is FALSE (expression in zero) and there is an else part, statement 2 is executed.

(b) FOR LOOP The for statement is the most commonly used looping statement in C. This statement includes an expression that specifies an initial value for an index. another expression that determines whether or not the loop is continued and a third expression that allows the index to be modified at the end of each pass. The general form is: for (expr1 : expr 2 , expr 3)
statement

Typically, expr 1 is an assignment expression expr 2 is a logical expression, and expr 3 is a unary expression or an assignment expression.

(c) while loop The while construct is used to carry out the looping operation. The general syntax is: while (expression) statement
The expression is evaluated. If it is non zero. the statement is executed and the ~~cont~~ br The statement can be simple but most of the times it a compound statement. It must have a statement to alter the value of expression in order to provide a stopping condition for the loop.

(d) do-while loop when a loop is constructed using the while statement the text for continuation of the loop is carried out at the beginning of each pass. sometimes, however it is desirable to have a

a loop with the test continuation at the end of each pass. This can be accomplished by means of the while statement.

The general form of the do-while statement is

do statment while (expression)

The statement will be executed repeatedly, as long as the value of Expression is not zero. Note that "statement" will always be executed at least once. since the test for repetition does not occur until the end of the first pass through the loop.

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

Ans:- open the ms powerpoint then click Lagout -> then click title slide (It is default slide) Now type the title Then click subtitle section then choose a bullet in the paragraph group of the nome tab. then type the Name & press enter key. Then click New slide & clicsk on (Blank" Then go to insert tab then click ("object" in the text Group. Object box will be display then click "Microsoft Excel work sheet" then click "ok" then click out side work sheet. then click a new slid -> Blank slide go to insert tap & click clip Art & add a clip art & draw a text box & type the text.

then click Transition tab & choose the Transition effects.

Q18 Find the output of the following expressions.

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

$\Rightarrow x = 4*2+30-5$

$\Rightarrow x = 8+30-5$

$\Rightarrow x = 38-5$

$\Rightarrow x = 33$

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

$\Rightarrow Y = 30 - 10 + 10$

$\Rightarrow Y = 30 - 20$

$\Rightarrow Y = 10$

(c) $Z = 4*2/10 - 2 + 10$

$\Rightarrow Z = 80/8 + 10$

$\Rightarrow Z = 10 + 10$

$\Rightarrow Z = 20$

Q20 Find the output of the following program segments.

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

Out put:

IMS Ghaziabad

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

Out put :

IMS Ghaziabad
IMS Ghaziabad

(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);
}
```

out put :

Largest number is 100