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Course : Fundamental of IT
and programming

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CCA-101: Fundamentals of IT and Programming:

Assignment - 01.

Q.No1: What are the four fundamentals parts of Computers. Explain it?

Ans: A Computer has four main Components
→ Input units.
→ The Central Processing Unit or CPU,
The Primary memory unit and
Output units.
Input Unit are device to input informations e.g keyboards.
CPU: Processes the data, Primary memory stores the data and output give us output.

Q.No2: Discuss about the classifications of Computer based on Size and Capacity?

Ans: Based on Size and Capacity Computer is classified in following groups.

1. Super Computer: These are the most powerful and largest in Size.
→ They process huge amount of data.
→ They perform one trillions Calculations in one Seconds.
→ e.g Jaguar, Roadrunner etc.

(2) Mainframe Computer :- They are also very large and perform millions of instruction in one seconds.
→ They are capable of supporting millions of user simultaneously.
E.g IBM. Mainframe Z.13, IBM System Z9 etc.

(3) Mini Computer :- These are much smaller than mainframe Computer.
→ They are less expensive.
E.g Apple IPOD, CDC 160A.

(4) Micro Computer :- These are most frequently used Computer.
→ It is also known as Personal Computer.
→ They can used one person at a time.
Eg Desktop Computer, Laptop.

Q no3 : What are Computer Generations? How many Computer generations are defined?

Ans :- The generation term was used to distinguish between varying hardware technology. There are five generations of Computer.

(1) First Generation 1940-1956 :- Vaccum tubes are used in first Computer generations, for memory and Circuitry for CPU. These tubes produce lot of heats.

Second Generations 1956 - 1963 Transistors are used in Second generation of Computer instead of vaccum tube. But Punch Card still relied in Second generation for input and printout for output.

Third Generation: 1964-1971: Transistors are replaced by integrated Circuits which drastically increase the speed and Efficiency of Computer. Instead of punch card and printout user interacts with Comput through Keyboard and monitors.

Fourth Generation 1971 - Present: In fourth generation of Computer thousands of integrated Circuits are built into Single Silicon Chip.
Fourth generation also Covered Graphical user interface mouse and handheld device.

Fifth Generation of Computer:

The Key generation Computer technology Seem to be VLSI architecture, parrelel processing Such as data flow Control, logical programming and applied artificial intelligence and pattren processing.

Qno4: Differentiate between Volatile and non- volatil memory?

Ans:- Volatile memory is the Computer Storage that only maintains it's data while the device is powered.
E.g RAM (Random Access memory) is volatile.

Non-volatile :- also known as Secondary memory is type of memory that has capability to hold saved data even if the power is turned off.
E.g Read only memory (ROM) Hard disk, floppy disk etc.

Q no5 :- Distinguish among System Software, application Software and Open Source Software on the basis of their features?

Ans :- System Software :- The type of software that is designed to run a Computer hardware and application programme.
Software like operating System, Compiler, editor etc.

Operating System :-
It is System Software that manage Computer hardware and Software resources and provide service.
→ operating System act as managers of all the resources of Computer.

Application Software :-

It is the Software Created for the Specific purpose used by end users. It can be called as app.

Eg word processor, a web browsers, an E.mail etc.

Some others types of Softwares:

→ Utility programmes

→ These programs analysis and maintains a Computers.

→ They are focused on how operating system work to performs the tasks to enable the smooth functioning of Computers.

→ Proprietory Software:

Softwares that is owned by an individuals or Company. These Software are non-free Computers Software for which the Software publisher or another persons retains intellectual property.

→ Open Source Softwares:-

The Computer Software in which Source Code is released under a license in which Copy right holder grant users right to study, change and distribute to any one for any purpose.

→ The Linux Operating System:- It is the best known example of open Source Software.

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Q no 6 :- Create a file in M-S word to insert a paragraph about yourself and save it with file name. Discribes all steps involved in it?

Ans :- Open M-S word in your System.
→ Click on new file.
→ Once this Click on blank doc. under the Recent Section, it will get in bold or highlited by default.

→ Click on the Create a new blank doc. will open.
→ Once it is opened you can write anything you want in the document.
→ You can also edit the text that you have written and many other things in documents.

(b) Write Step Regardings following?
To change the font style.
→ Select the text you want to modify.
→ Select the home tab and Locate the font grp.
→ Click the drop-down arrow next to font box.
→ Font style menu appears.
→ With the left click Select the font style.
→ If you want to change the font to bold Click „B" in format bar.

To Change the Font Size:

(1) Select the text.
(2) Click the drop-down arrow next to the font Size on the home tab. A drop-down menu appear
(3) Select the font Size from the menu.

To Change the Font Color:

(1) Select the text.
(2) On home tab locate the font group.
(3) Click the drop-down arrow next to font Color button.
(4) Font Color menu appear.
(5) Select the font Color with left Click.
(6) Word will Change the font Color of the Selected text.

To Highlight (in yellow) the line that Read needs to get "IMS" addresses.

(1) Select your text
(2) Go to the home tab
(3) Click the arrow next to text highlighted Colour button
->
(4) Choose the yellow Colour from the drop down menu.

Q no 07: Create a file in M.S word for the following document and Save it with file M.S Word.

Describe all steps involved in it.

* Creating:

1) Click the microsoft office button.
2) Select new. The new document dialog box appears.
3) Select blank document.
4) A new blank document appears in the word window.
5) Now you can create document by inserting the text.

→ Editing.

1) Click the edit tab.
2) Select the text you want to edit.
3) Using the tools to change the require formatting like font style, foragraph align. and list formatting.

→ Saving

- To save document using save as command.
- Click the microsoft office button.
- Select Save as - word document.
- Select the location where you want to save the document
- Enter the name for document.
- Click the Save button.

Print any type of documents.

- Select file > Print.
- Select the forward and backward arrow at the bottom of the page. If text is too small to read use the zoom slider.

- Choose the number of Copies and any other options you want and Select the print button.

Q No 8: Create File in M-S word for the following document and Save it with the file name. Describe all Steps.

E.g Equations

$X_2 + Y_5 = 30$

$Z_3 + Q_4 = 50$

$A_2 + B_0 = x_2 + y_8$.

Ans:

→ Select Insert > Equation or press Alt + =.

→ To use a built-in formula Select the design > equations.

→ To Creat your own, Select design > Equation >.

→ Use your fingers, Style or mouse to write your Equation.

→ Select insert to bring your equation into the file.

Q No 9: Create a file in M-S word that Convert existing highlighted text to table and Save it as file name text to table. Describe Step also?

Select the text you want to Convert	Select the Insert tab
Click on table Command. A dialog box appear.	Click the Convert text to table a new dialogue box appear.
Here Set the numbers of Columns.	Click on ok. Finally Select text Convert in a table

Ans:- Select the text and make sure it is properly formatted.
Word will insert a new column when a tab character is found, so make sure that column are seperated by tab.
(2) Click the insert tab.
(3) Click the table button.
(4) Select Convert text to table.
If the text is formatted right, some of the options in this dialogue box should already be filled in.
(5) Click ok.
The selected text is automatically teened into table.

Qno10:- Create a file in M-S word to insert a table in document. Describe all steps?

Ans:- Open a blank word document.
- In top ribbon press insert.
- Click on table button.
- Select the number of column and row you needs.
- The blank table will know appear on the page. After it as necessary. Standard features like bold, italic, and Underline are still available. These items may be helpful for creating heading or calling out certain items in the table.

Q no 11 : Create a following mark sheets in M-S Excel and Save it with name book1?

1	Roll.no	Name	Marks
2	01	n1	60
3	02	n2	70
4	03	n3	80
5	04	n4	90
6	05	n5	74
7	06	n6	86
8	07	n7	93

Sol Right Click the work sheet name tab.
- Click Select move or copy
- Click on the move Selected sheet to book drop-down menu. Select (new book).
- Click ok. your new workbook open with your moved work sheet.
- Click file > Save in it your new work book.

Q no 12 : Calculate the following things of range (C_2-C_{11}) of data in work sheet?

⇒ The Sum of the marks using autosum in a range of cell (C_2-C_{11})

⇒ Average of the marks in the range of cell (C_2-C_{11})

⇒ Highest marks in a range of cells (C_2-C_{11})

⇒ Minimum marks in the range of cells (C_2-C_{11})

Ans:- To Sum a Column of number Select the cell Immediatly below the last number in Column.
To Sum a Row of Column Select Cells to right.
- Autosum is in two Locations Home > autosum and Formula > autosum.
- Once you Create a formula you Can Copy it to other Cells.
- You Can also use autoSum On more than one cells at a time e.g By highlighted both Cell B12 and C12, Click autosum and total both Column at the Same time.
- You Can also Sum numbers by Creating a Simple formula.
- Average of masks in a range of Cell (C_2 : C_{11}).
- Click a Cell below the Column or to the right of the Row of number. for which you want to find the average.
- On the home tab, Click the arrow next to autosum average and then press Enter.

Heighest mark in the range of Cell (C_2-C_{11}).
Select the cell you want to find the Largest number form.
- Close the formula with an ending
- Hit Enter and the largest number from the your Selection will populate in the Cell.

Minimum marks in the range of Cell (C_2-C_{11}).
Select the Cell C_2 and write the formula.
• MIN (C_2:C_{11}). Press Enter on your keyboard.
• The function will return 3.
• 3 is the minimum value in the range (C_2:C_{11}).

Q no 13 : Describe various steps involved in the followings:
• To modify the Column width of worksheet.
• Select the Column that you want to change.
• On home tab, in the cell groups click format.
• Under cell size, Click Column width.
• In the Column width box, type the value that you want.
• Click ok.

To modify the row height of a worksheet.
• Select the rows that you want to change.
• On the home tab, In the cell group, click the format.
• Under cell size, Click row height.
• In row height box, type the value that you went, and then click ok.

To delete rows and Column of a worksheet.
• Select the cell rows or Column you want to delete.
• Right-click and then select the delete option Eg Delete cells and Shift up, Delete cell and Shift left. Delete rows or Column.

Q no 13b: Describe the following terms in WorkSheet? Absolute Reference and Relative Reference in formulae.

- Select the Cell that Contain the formula.
- In the formula bar Select the Refrence that you want to Change.
- Press F4 to Switch between Refrance type.

→ Cell adress:

A Cell is the intersection of Rows and Column Column are identified by the Letters (A, B, C) while Rows are identified by numbers 1. 2. 3 Each cell has it own name or Cell adress based on it Column and Rows.

Q no 14: What tools are available to Customize our power point presentation.

Ans:

→ Templates and themes.
→ Slide Layout.
→ Fonts
→ Colour themes
→ Icon, Shapes, Stock photos, Maps, Table flow charts.
→ Icon Charts
→ Redials.
→ Animation
→ Audio and Video.

3) Write Steps for following action for the Creation of power point Presentation.

Open a blank presentation:
Select the file tab to go backstage views.
Select new on the left side of window then Click blank presentation.
- A new presentation will appear.

Save the presentation as lab-1 pptx.
Creat blank presentation.
Save a presentation
- Apply a design themes.
- Format text.
- Edit and duplicate Slides.

Add a title to first slide
Slide will be selected first whose layout you will change.
Click home > Layout >
- Select title slide for standalone title page
- Many other title options include title too.
Pick one that best suited presentation.
- Select click to add title text box.
- Enter title for that slide.

Enter your first name and last name in subtitle section.

- Using mouse and Cursors Click inside the top text box.
- In keyboard types the name of animals you have been Searching in class
- Click inside of the button text.
- Using keyboard, Type your first and last name and then Click enter.

→ Add new slide which has title and Catent.
- Click the home tab in the Ribbon.
- Click on new slide button in slide button group.
- Alternatively, to add a new slide with different slide Layout
- Click home tab in Ribbons.

Q no 15: Write steps for Creations of Set of powerpoint that demonstrate your skill to use tools of powerpoint.
→ Title and bullet slide.
→ Title Slide: It is first slide of presentation. It Contain subtitle, of all the slide
Click home → Layout. Then Select title slide.
→ Bullet slide: Click on slide thumbnail that you want to add bullet.
- On slide Select the numbered text in text place-holder that you wants to add bullets.
- On home tab in the paragraph group Click bullets.

→ Inserting Excel Sheet:

- In insert tab, Click Object.
- Select Create from file.
- Click browse and in browses box find the Excel work book.
- Before you close the insert object box Select link and click ok.

Q no 16: What is difference between Machine Language and High Level Language?

Ans: The machine Language is only language that a Computer directly understand, It is usally written in binary form. 0 and 1.
A high level language is programming language that use english and mathematical Symbols like +, -, /. and many others in Instructions.

Q no 17: Discuss about different data type of Programming Language?

Ans: These are Some Common data type in C Programming language:

- Int: Used to store an integer value.
- Char: Used to store Single Characters.
- floats: To Stores decimals numbers, with Single Precision.
- Double: To Store decimal number with double precision.

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Q.NO18: Find output of following expression?

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

$x = \frac{20}{5_1} * 2 + 30 - 5$

$x = 4 * 2 + 25 = 8 + 25 = \boxed{33}$

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

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

$y = 30 - (4 + 6) + 10$

$= 30 - 10 + 10 = \boxed{30}.$

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

$z = \frac{40 * 2}{10} - 2 + 10$

$z = \frac{80}{10} - 2 + 10$

$z = 8 - 2 + 10 = \boxed{16}$

Q.NO19: Describe the Syntax of following Statements?

If - else statement.

Ans:

```
# include <iostream>
using namespace std;
int main()
  int number;
Count << "Enter an integer";
if (number >= 0)
Count << you entered a positive integer:" <<
number << endl.
```

```
Else if (number < 0)
Count << "you entered a negative integer:" << number
        << endl.
    }
    else {
    Count << you entered 0." << endl;
    }
    Count << " this line is always printed.";
      return 0;
      }
      output.
        Enter an integers.
```

(b) For loop

```
# include <stdio.h>
  int main ()
{
  int i;
for (i=0, i<10; i++
  {
    printf ("Hello world")
  }
    return 0;
      }.
```

output : Hello world

(C) while loop:

```
# include <stdio.h>
  int main ()
  while (i<10)
{   printf ("Hello world")
}
```

out put : Hello world, Hello world.

Q NO 20: Find output of following programme Segments?

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

```
# 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);
}
```
output
Largest number is 100.