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Course Code : CCA 101
Course Name : Fundamentals of IT and Programming

CCA - 101 : Fundamentals of IT and Programing

(Assignment - 1)

Q No1: What are the four fundamental parts of computer? Explain it with the help of diagram.

Ans:→ A computer has four components:
1) The central processing unit or CPU,
2) The primary memory,
3) Input units and
4) Output units.

⇒ Central Processing Unit (CPU), principal part of any digital computer system, generally composed of the main memory, control unit, and arithmetic-logic unit.

Q No2: Discuss about the classification of computers based on size and capacity.

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

- Super Computers
- Mainframe Computers
- Mini Computers and
- Micro Computers.

1) Super Computer is the very fastest and powerful, and expensive type of computer for processing data.

2) Mainframe Computer are multi-programming, high-performance computers, and multi-user, which means they can handle the workload of more than 100 users at a time on the computer.

3) Mini Computer is a digital and multi-user computer system with the connection of more than one CPU.

4) Micro Computer: To-day we are using many computers at home is also the most common micro-computers.

Q No3: What is the meaning of Computer Generation? How many Computers Generations are defined? What technologies were/are used?

Ans: Generation in computer technology is a change in technology a computer is/was being used.

There are Five computers generations known till date.

1st generation: Vaccuum Tubes (1940-1956)
2nd generation: Transistors (1956-1963)
3rd generation: Integrated Circuits (1964-1971)
4th generation: Microprocessors (197-Present)
5th generation: Artificial Intelligence (Present and Beyond)

Q No4: Differentiate between Volatile and Non-Volatile memories.

Ans: 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 remains stored even if it is powered-off.

Q No 5: Distinguish among system software, application software and open saure software on the basis of their features.

Ans:
- System Software automatically starts running once the system is turned on and stops when the system is shut down.
- Application Software runs as and when the user requests it. Application Software is user sperific and it is not needed to run the system on the whole.
- System Software is endowed with a general purpose.

Q No 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:
Step 1: Open MS word on your system.
Step 2: Click on the new file when you open the word file when the dialog bar appear.
Step 3: Once this click on blank doc under the recent section, it will get in bold or highlighted by default.
Step 4: Click on the create A new blank doc will open.
Step 5: Once it is opened you can write anything you want in the doc for yourself.

Step 6: You can also edit the text you have written as you can change the background colour, or the text and many other things in the docs.

Q No 6: Write steps regarding following;
1) To change the font style
2) To change the font size
3) To change the font color
4) To highlight (in Yellow) the line that reads "need to get GVS's address":

Ans: 1): Go to format > font > font. + D to open the Font dialog box.
Select the font and size you want to use.

2): Select the text or cells with text you want to change.
To select all text in a Word document, press Ctrl + A.
On the home tab, click the font size in the Font Size box.
You can also type in any size you want, with in following limits.

3): Select the text that you want to change.
On the home tab, in the Font group, mouse the arrow next to Font Color, and then select a color.

4): Click the Home Tab.
In the Font group, click the Text Highlight button. Word is now in highlighted mode.
Drag the mouse over the text you want to highlight.
Click the Text Highlight button again to return the mouse to normal operation.

Q No 7: Create a file in MS-Word for the following document and save it with file name 'ms_word'. Describe all steps involved in it.

MS Word

MS Word is a widely used commercial word processor developed by Microsoft.

MS word is application software, which is capable of

- Creating
- Editing
- Saving and
- Printing any type of document.

Ans: Creating

1) Click the Microsoft office button
2) Select New. The new document dialog box appears.
3) Select blank document, it will be highlighted by default.
4) A new blank document appears in the word window.
5) Now you can create document by inserting text.
6) Finally save document.

Editing

1) Click the Edit tab.
2) Select the text you want to edit.
3) Using the tool in the edit toolbar.

Change the required formatting including the font style paragraph alignment, List formatting and indentation options.

Saving

1) Click the Microsoft office button / File tab.
2) Select save as - word document.
3) Select the location where you want to save the document using the drop down menu.
4) Enter a name for the document.
5) Click the save button.

Printing any type of document

1) Select File > Print.
2) To preview each page, select the forward and backward arrows at the button of the page. If the text to small to read, use the zoom slider at the button of the page to enlarge it.
3) Choose the number of copies and any other options you want, and
4) Select the Print button.

Q No 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

$X_2 + Y_5 = 30$

$Z^3 + 8^4 = 50$

$4_2 + 8^8 = X_2 + 48$

Ans: 1) Select Insert > Equation or Press Alt+.
2) To use a built-in formula, select Design > Equation

3) To create your own, select design > equation > Ink equation.
4) Use styles or mouse to write your equations.
5) Select insert to bring your equations into the file.

Q No 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.

- Select the text you want to convert.
- Select the Insert tab.
- Click on Table command. A dialog box appears.
- Click on Convert Table to Table, a new dialog box appears here set number of columns.
- Click on OK Finally Selected text convert in a table.

Select the text you want to convert	Select the Insert tab
Click on the Table command. A dialog box appears.	Click on Conver Text to Table, a new dialog box appears.
Here set number of columns	Click on OK Finally Selected text convert in a table

Ans: 1) Select the text and make sure it's properly formatted. Word will insert a new column when a tab characters is found, so make sure that columns are separated by tabs.

2) Click the Insert tab.
3) Click the table button.
4) Select convert text to table.

4) If the text was formatted right, some of the options in this dialog box should already be filled in. Otherwise, set the numbers of columns and rows, and how to seperate the text into columns.

5) (Optional) Customize Autofit behaviours.

6) Click OK.

The selected text is automatically turned into a table.

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

Ans: 1) Open a blank word document.

2) In the top button press ↑ insert.

3) Click on the table button.

4) Select the number of column and row's you need, or click Insert table and a dialog box will appear where you can specify the number of columns and rows.

5) The blank table will now appear on the page. After it as neressary. Standard features like bold, italics and underline are still available. These items may be helpful for creating heading or calling out certain items in the table.

Q.No.1: Create a following worksheet in MS-Excel and save it with name 'book1'.

	A	B	C
1	Roll No.	Name	Marks
2	1	n1	60
3	2	n2	70
4	3	n3	80
5	4	n4	90
6	5	n5	77
7	6	n6	44
8	7	n7	88

Ans: 1) Right - click the worksheet name tab.
2) Click select move or copy.
3) Click on the move selected sheet to book drop-down menu select (new book).
4) Click ok. Your new workbook opens with your moved worksheet.
5) Click File > Save in your new workbook.

Q.No.2: Calculate the following things of a range (C2:C11) of data in the worksheet created in question no 1.

1) the sum of the marks using AutoSum in a range of cells (C2:C11)
2) average of the marks in a range of cells (C2:C11)
3) highest marks in a range of cell (C2:C11)
4) minimum marks in a range of cell (C2:C11)

Ans 12: a) To sum a column of numbers, select the cell immediately below the last number in the column. To sum a row of numbers, select the cell immediately to the right.

=> Autosum is in two locations: Home > Autosum, and Formulas > Autosum.

=> Once you create a formula, you can copy it to other cells instead of typing it over and over.
=> You can also use autosum on more than one cell at a time.
=> You can also sum numbers by creating a simple formula.

b) Click a cell below the column or to the right of the row of the numbers for which you want to find the average.

=> On the Home tab, click the arrow next to Autosum > Average and then press Enter.

c) In a blank cell, type "=MAX"
=> Select the cells you want to find the largest no. from. Close the formula with an ending).
=> Hit enter, then largest no. from your selection will appear.

d) => Select the cell C2 and write the formula.
=> =MIN(C2:C11), press Enter on your keyboard.
=> The function will return 3.
=> 3 is the minimum value in the range (C1:C12).

Q No 13: a) Describe various steps involved in the following
1) To modify column width of a worksheet
2) To modify the row height of a worksheet
3) To delete rows and column of a worksheet

Ans: 1) a) Select the column or column that you want to change.
b) On the Home tab in the cells group, click Format.
c) Under cell size, click column width.
d) In the column width box, type the values that you want.
e) Click OK.

2) a) Select the row or rows that you want to change.
b) On the Home tab in the cells group. Click format.
c) Under cell size, click row height.
d) In the row height box, type the value that you want and then click OK.

3) a) Select the cells, rows or column that you want to delete.
b) Right-Click and then select the appropriate delete option.

Q No 13: b) Describe the following terms in the worksheet.
1) Absolute reference and relative reference formula.
2) Cell address

Ans 1) ⇒ Select the cell in that contains the formula.
⇒ In the formula bar, select the reference that you want to change.
⇒ Press F4 to switch between the reference types.

2) ⇒ A cell is the intersection of a row and a column. Column are identified by letters (A, B, C), while rows are identified by numbers (1, 2, 3), each cells has its own name – or cell address based on its column and row.

Q No 14: a) What tools are available to customize our power point Presentation ?

Ans: 1) Templates and Themes
2) Slide layout
3) Font
4) Color Themes
5) Icons
6) Shapes
7) Stock Photos
8) Charts and graphs
9) Maps
10) Tables
11) Flowcharts
12) Gantt charts
13) Radials
14) Progress bars
15) Animation
16) Transitions
17) Interactivity
18) Audio and video

b) Write the steps for the following action for creation of power point presentation.

=> Type your first name and last name in the subtitle section.

Ans => Using your mouse and cursor, click inside of the top textbox.

=> Using your keyboard, type the name of the animal you have been researching in class.

=> Using your mouse and cursor, click inside of the button textbox.

=> Using your keyboard, type your first and last name, click enter, and type your teacher's name.

-> Add a new slide which has a title and content.

Ans => Click the "Home" tab in the ribbon.

=> Then click the "new slide" button in the "slides" button group.

=> Alternatively, to add a new slide with a different slide layout.

=> Click the "Home" tab in the ribbon.

QNo15: Write steps for creation of a set of PowerPoint slides that demonstrates your skill to use the tools of PowerPoint. It should include the following things.

=> Title slide and bullets list.

Ans: 1) Click Home > Layout

2) Select title slides for a standalone title page or

3) Select title and content for a slide that contains a title and a full slide textbar.

Bullet list

1) On the left-hand side of PowerPoint window.

2) Click a slide thumbnail that you want to add bulleted or numbered text to.

=> Delay - Add time before an effect runs.

Part 2

Q No 16: What is the differene between Machine language and high level language?

Ans: A machine language is the only language that a computer directly understands, it is usually written in Zeros (0) and ones (1).
A program instruction in machine language may look something like this 11101011001 whereas,
A High Level language is a programming language that uses English and Mathematical symbols like +, -, % and many others, in its instructions.

Q No 17: Discuss about different data types of C Programming language.

Ans: These are some common data types in C Programming language.

=> Int - used to store an integer value.
=> Char - used to store a single character.
=> Float - used to store decimal numbers with single precision.
=> Double - used to store decimal numbers with double precision.

Q No 18: Find the output of the following expression.

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

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

$x = 4 * 2 + 25$

$= 8 + 25$

$= 33.$

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

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

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

$= 30 - 10 + 10$

$= 30.$

c) $Z = 40 * 2/10 - 2 + 10$

Sol: $Z = 40 * \frac{2}{10} - 2 + 10$

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

$= 8 - 2 + 10$

$= 16.$

Q No 19: Describe the syntax of the following statements?

a) if - else statement

Ans:

```
# include <iostream>
using namespace std;
int main () {
int number;
count << "Enter an integer:";
"in" >> number;
if (number > 0) {
    count << "you entered a positive integer:" << number
          << end 1;
          }
else if (number < 0) {
count << "you entered a negative integer:" << number
      << and 1;
      }
else {
count << "you entered 0." << end 1;
      }
      count << "This line is always printed.";
      return 0;
      }
```

Output

Enter an integer:

b) For loop

Ans:
```
# include <stdio.h>
int main ()
{
  int i;
for (i=0; i<10; i++)
{ Printf ("Hellow World");
}
  return 0;
}
```

Output

Hellow World Hellaworld

c) While loop

Ans:
```
# include <stdio.h>
  int main ()
{
  int i=0;
  while (i<10)
{ Printf ("Hello World");
      i++;
}
```

Output

Hello World Hello World

d) do-while loop

Ans
```
# include <iostream>
using namespace std;
int main ()
 int i=1;
   do {
      { cout << i << "1";
```

```
i++;
    }
while (i<=10);
            }
```

Output

1 2 3 4 5

Q No 20: Find the output of the following program segments.

a)
```
# include <stdio.h>
  int main ()
{
int i;
for (i=1; i<2; i++)
Printf ("9MS Ghaziabad\n");
        }
```

=> Output

9MS Ghaziabad

b)
```
# include <stdio.h>
  int main ()
{
int i = 1;
while (i<=2)
{
Printf ("9MS Ghaziabad\n");
    i = i + 1;
            }
    }
```

=> Output

9MS Ghaziabad

9MS Ghaziabad

c)

```
# include <stdio.h>
    void main ()
{
int a = 10 , b = 100;
if (a>b)
 printf ("Largest number is %od\n", a );
   else
    printf ("Largest number is %od\n", b);
        }
```

⇒ Output

Largest number is 100.