Name - Umar Farooq
Regd. no: CCA/2021/116211
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CCA-101: Fundamentals of IT & Programming
(Assignment - 1)

Q1 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
4) Output units

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

Q2 Discuss about the classification of computers based on size & capacity?

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

- Super Computers
- Mainframe Computers
- Mini Computers
- Micro Computers

1) Super Computer is the very fastest & powerful & expensive type of computer for processing data.
2) Mainframe computer are mainly multi-programming high-performance computers & multi-users which means they can handle the workload of more than 100 users at a time on the computer.
3) Mini Computer is a digital & multi-user computer system with the connection of more than one CPU.
4) Micro Computer: Today we are using many computers at home. Smartphone is a commonly used micro computer.

Q3 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 in which a computer is/are being used. There are five computer generations known till date.

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1st Generation : Vaccum Tubes (1940 - 1956)
2nd Generation : Transistors (1956 - 1963)
3rd Generation : Integrated Circuits (1964 - 1971)
4th Generation : Microprocessors (1971 - present)
5th Generation : Artificial Intelligence (Present & Beyond)

Q4 Differentiate between volatile & non-volatile memories?

Ans Volatile memory is the type of memory in which data lasts till the system is powered off.
Non-Volatile memory is the type of memory in which data remains stored even if it is powered off.

Q5 Distinguish among system software application software & open source software on the basis of their features?

Ans System Software automatically starts running once the system is turned on & stops when the system is shut down.
Application Software runs as & when the user requires it. Application software is user specific & it is not needed to run the system on the whole.
System Software is endowed with a general purpose.

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 Step 1 : Open Ms Word on your system
Step 2 : Click on the new file when you open the word file when the dialog box 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 & many other things in the doc.

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Q6b) Write steps regarding following;

1) To change the font style
2) To change the font size
3) To change the font colour
4) To highlight the line (in yellow) that reads "need to get 9HS's address"

Ans (1) Go to format > font > font... +1) to open the font dialog box.
Select the font & 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, within following limits.

(3) Select the text that you want to change.
On the home tab, in the Font group, choose the arrow next to font colour & then select a colour.

(4) Click on the home tab
In the Font group, click the text highlight button. Word is now in the 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

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.

MS word

MS word is a widely used commercial word processor developed by microsoft.
MS word is application software capable of:

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

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Creating

(1) Click the Microsoft office button
(2) Selat 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 toolbar.
Change the required formatting including the font style paragraph alignment, list formatting & 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 wing 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 is too small to read, we the zoom slider at the button of the page to enlarge it.
(3) Choose the number of copies you want & any other options &
(4) Select the Print button

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

Equations

$X_2 + Y_5 = 30$

$Z^3 + 8^4 = 50$

$42 + 8^8 = X_2 + 48$

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

Q9 Create a file in MS-word that converts 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 a 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 converts into table.

Select the text you want to convert	Select the Insert tab
Click on the Table Command, a dialog box appears	Click on Convert Text to table, a dialog box appears
Here set number of columns	Click on Ok finally, selected text convert in a table

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Ans (1) Select the text & make sure its 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. If 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 row to separate the text into columns.
(5) (Optional) customize autofill behaviour.
(6) Click OK.
The selected text is automatically turned into a table.

Q10 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 pass insert.
(3) Click on the table button.
(4) Select the number of column and rows 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 necessary. Standard features like bold, italics and underline are still available. These items may be helpful for creating headings or calling out certain items in the table

Q11 Create a following worksheet in MS-Excel and save it with name 'book 1'.

	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

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Ans (i) Right click the worksheet name tab (ii) Click select move or copy.
(iii) Click on the move selected sheet to books drop down menu select (new book)
(iv) Click Ok. Your new workbook opens with your mood worksheet.
(v) Click File > Save in your new workbook

Q12 Calculate the following things of a range (1 : (11) of data in the worksheet created in question no 10.

1) The sum of the marks using Autosum in a range of cells (1 : (11)
2) Average of the marks in a range of cells (1 : (11)
3) highest marks in a range of cell (1 : (11)
4) Minimum marks in a range of cell (1 : (11)

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.

() In a blank cell, type =MAX(

=) Select the cells you want to find the largest no. form. Close the formula with an ending.

=) Hit enter than largest no. from your selection will appear

D) =) Select the cell C and write the formula.

=) =MAX(1 : (11), press Enter on your keyboard.

=) The function will return 3.
=) 3 is the minimum value in the range (1 : (22)

Q13: 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 a) Select the column or columns that you want to change.
b) On the home tabe in the cells group, click format
c) Under cell size, column width should be clicked
d) In the column width box, type the value 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, types the value that you want and then click Ok.

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

Q13: b) Describe the following terms in the worksheet.
1) Absolute reference and relative reference formula.
2) Cell address.

Ans 1) => Select the cell 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.

Q14: a) What tools are available to customize our power point presentation?

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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) Flow charts
(12) Icon charts
(13) Radials
(14) Progress bars
(15) Animation
(16) Transitions
(17) Interactivity
(18) Audio and video

Q#3) Write the steps for the following action for creation of powerpoint presentation

=) Open a blank presentation

Ans =) Select the file tab to go to backstage view
=) Select new on the left side of the window, then click blank presentation
=) A new presentation will appear.
=) Save the presentation as Lab 1.pptx

Ans =) Create a blank presentation
=) Save a presentation
=) Apply a design theme
=) Compare presentation views
=) Format text
=) Insert Smart Art
=) Insert and modify shapes.

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=> Edit and Duplicate slides.

=> Add a title to the first slide, the name of your college.

Ans => Select the slide where layout you will change so that it can have a title.

=> Click Home > layout

=> Select the title slide for a standalone title page or select title and content for a slide that contains a title and a full slide text box.

=> Many other layout options include titles too. Pick the ones that's best suited for your presentation.

=> Select the click to add title text box. Enter your title for that slide

=> 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.

=> 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.

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

=> Title slide and bulleted 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 textbox.

=> Bullet list

Ans 1) On the left hand side of Power point window.

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

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3) On the slide, select the lines of text in a text placeholder or table that you want to add Bullets or numbering to.
4) On the Home tab, in the Paragraph group clicks Bullets or Numbering

=> Inserting Excel Sheet

Ans 1) Click on the tab object
2) In the insert object dialog box
3) Select create from file.
4) Click or tap Browse and in the Browse Box
5) Find the excel workbook with the data you want to insert and link to
6) Before you close the Insert and object box, select link and click OK.

=> Clip art and text

Ans 1) Open the Powerpoint and go to "Insert" > "Online Pictures".
2) Select the clip art. A window popup, and you can type a word or phrase that will describe the images you search for then press the Enter key
3) Insert the clip art, you can filter the results by "Type".

=> Slide Show effects

Ans 1) Select the object or text you want to animate
2) Select animations and choose an animation
3) Select effect and choose an effect.

=> Manage Animations and effects

Ans 1) On click - start an animation when you click a slide
2) With Previous - Play an animation at the same time as the previous animation in your sequence.
3) After previous - start an animation immediately after the previous one happens
4) Delay - Add time before an effect runs.

Part - 2

Q16 What is the difference 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 zeroes (0) and ones (1).

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A program instruction in machine language may look something like this 1110101100l whereas,
A High level language is a programming language that uses English and Mathematical symbols like +, -, /, * and many others, in its instructions.

Q17 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. 10

Q18: Find the output of the following expression.

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

Sol
$x = \frac{20}{5} * 2 + 30 - 5$
$= 4 * 2 + 30 - 5$
$= 8 + 25$
$= 33$

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
$Z = 40 \times 2/10 - 2 + 10$
$= \frac{80}{10} - 2 + 10$
$= 8 - 2 + 10$
$= 16$

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Q19 Describe the syntax of the following statements (if-else statement.

Ans (a) If else statement

```
#include <iostream>
using namespace std;
int main ( ) {
int number.
count<<"Enter an integer:";
int >> number;
if (number > 0){
  count<<"you entered a positive integer:"<< number
        << and 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("Hello World");}
```

return 0; }

Output
Hello World Hello World

(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{
count<<i<<"1";
i++;
}
While (i<=10);
}
```

Output
1 2 3 4 5

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Q20 Find the output of the following program segments

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

=> Output

GMS Ghaziabad

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

=> Output

GMS Ghaziabad
GMS 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);
```

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=> Output

Largest number is 100