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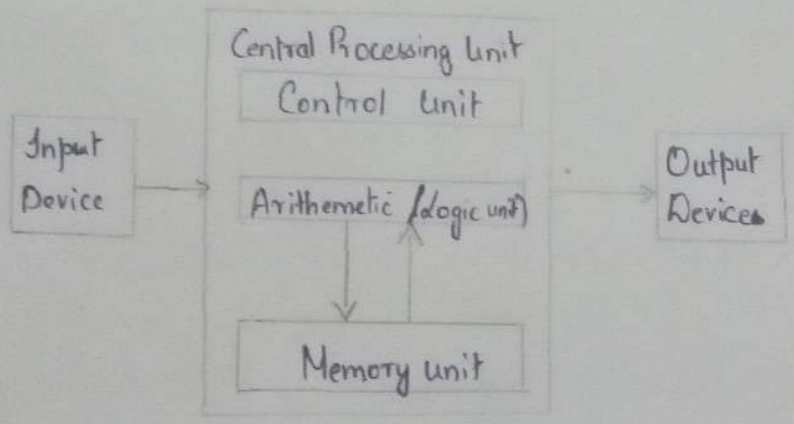
Topic - CCA-101 : Fundamentals of IT and Programming

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: Input, processing unit, Memory Unit and Output devices.



Q.2. Discuss about the classification of Computers based on sized and capacity.

Ans: Based on size and capity, computer are as follows:

- Super Computers
- Mainframe Computer,
- Mini Computers
- Micro Computers.

Q3. What is the meaning of computer generation? How many Computer Generation are defined? what technologies were/ are used?

Ans: The evolution of digital computing is often divided into generations. Each generation is characterized by dramatic improvements over the previous generation in the technology used to build computers, in terms of the internal organization of computer and programming languages.

There are five Generations of Computers

i) First Generation : Vacuum Tubes (1940-1956).

ii) Second Generation : Transistors (1956-1963).

iii) Third Generation: Integrated Circuits (1964-1971)

iv) Fourth Generation : Microprocessors (1971- present)

v) Fifth Generation : Artificial Intelligence (Present and Beyond).

Q4. Differentiate between Volatile and Non-Volatile memories.

Ans: Volatile memory stores data and information only until it gets a continous power. Non-volatile memory is the type of memory in which data remain stored even if it is powered-off.

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

Ans:

System Software	Application Software	Open-source Software
It is a type of software that is designed to run a computer's hardware and application programs. Software like operating systems, compilers, editors and drivers etc, come under this category. A computer cannot function without the presence of these.	It is a software created for a specific purpose, used by end users. It can be called an application or simply an app. Examples: word processor, accounting application, a web browser, an email client, media player etc.	It is a type of computer software in which source code is released under a license in which the copyright holder grants users the rights to study, change, and distribute the software to anyone and for any purpose. The dimux Linux operating System (OS) is the best-known examples of open source software technology.

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:

i) Click the Microsoft Office button / File tab

ii) Select New. The new Document dialog box appears.

iii) Select Blank document. It will be highlighted by default.

iv) Now we can create document by inserting text.

v) Finally save document.

To save document using Save As command:

i) click the Microsoft Office button / File tab.

ii) Select Save As - Word Document

iii) Select the location where you want to save the document using the drop-down menu.

v) Enter a name "yourself" for the document.

vi) 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

i) Select the text you want to modify

ii) Click on font style box on the Home tab. The font style drop-down menu appears.

iii) Move cursor over the various font styles.

iv) Left-click the font style you want to use.

v) Then font style will change in the document.

To change the font size

i) Select the text you want to modify

ii) Click on font size box in the Font group on the Home tab. The font size drop-down menu appears.

iii) Move your cursor over the various font size.

v) Left-click on font size you want to use.

vi) Then it will change font size in document.

To change the font Color

i) Select the text you want to modify.

ii) Click on the font color box on the Home tab. The font color menu appears.

iii) Move your cursor over the various font colors.

iv) Left-click the font color you want to use.

v) Then font color will change in the document.

To highlight (in yellow) the line that read "need to get INS's address.

i) Select the text that read "need to get INS's address.

ii) Click on the Text Highlight color in font group on the Home tab.

iii) Various colors will appears

iv) Move the cursor over the various colors.

v) Click on color yellow color

vi) Then text highlight color will change in the document.

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.

Ans: To create a new document:

i) Click the Microsoft office button / File tab.

ii) Select New. The New Document dialog box appears.

iii) Select Blank document. It will be highlighted by default.

iv) A new blank document appears in the Word window.

v) Now create document by inserting text

MS word

Ms word is a widely used commercial word processor developed by Microsoft.

vi) Finally save document.

vi) Select Save As. Word Document

vii) Select the location to save the document using the drop-down menu.

viii) Enter a name 'ms-word' for the document.

ix) Click the save button.

Q8. Create a file in Ms-word for the following document and save it with file name 'equation'. 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: i) Click the Microsoft Office button / File tab.

ii) Select New The New Document dialog box appears.

iii) Select Blank document. It will be highlighted by default.

iv) A new blank document appears in the word window.

v) Now create document by inserting text

Equations

$X_2 + Y_5 = 30$

$Z^3 + Q^4 = 50$

$A_2 + B^8 = X_2 + Y^8$

vi) Select Save. As - Word Document

vii) Select the location to save the document using the drop down menu.

viii) Enter a name 'equation' for the document.

ix) Click the Save button.

Q.9. Create a file in MS word that convert existing highlight text to table show below and save it as file name 'text_to_text table'. Describe all step involved in it.

Ans: To convert existing text to a table:

i) Select the text that want to convert.

ii) Select the Insert tab.

iii) Click on Table command A dialog box appears.

iv) Click on Convert Text to Table, a new dialog box appears

v) here set number of columns.

vi) Click on Ok

vii) Finally selected text convert in a table.

viii) Select Save As - Word Document

ix) Choose Save Selection To Quick Tables

x) Enter a name "text_to_table' for the document

xi) Click the Save button.

Q.10. Create a file in MS-word to insert a table in the document. Describe all steps involved in it.

Ans:

i) Place the insertion point in the document to insert the table

ii) Select the Insert tab.

iii) Click the Table command

iv) Drag a mouse over the table diagram to select the number of columns and rows in the table.

v) Left click the mouse, and the table appears in the document.

vi) Enter text into the table.

Q.11 Create a following worksheet in MS-exel and save it with name 'book1'.

Ans: To create a new blank workbook:

i) Left click the Microsoft Office button or File tab.

ii) Select New. The New Workbook dialog box appears, and Blank Workbook is highlighted by default.

iii) Click on this

iv) A new blank workbook appears in the window.

To insert text:

i) Left click a cell to select it. [redacted] select a cell, the cell address appears in the Name Box.

ii) Enter text into the cell using your keyboard. The text appears in the cell and in the formula bar.

[redacted]

To move through a worksheet using the keyboard.

i) Press the Tab key to move to the right of the selected cell.

ii) Press the Shift key then the Tab key to move to the left of the selected cell.

iii) Use the Page up and Page Down keys to navigate the worksheet.

iv) Use the arrow keys.

Q13 a) Describe various steps involved in the following

1) To modify column width of a worksheet.

Ans: i) Position the cursor over the column line in the column heading.

ii) and a double arrow will appear

iii) Left click the mouse, then drag the cursor to the right to increase the column width or to the left to decrease the column width.

iv) Release the mouse button.

2) To modify the row height of a worksheet

Ans: i) Position the cursor over the row line to modify. and a double arrow will appear

ii) Left click the mouse, then drag the cursor upward to decrease the row height or downward to increase the row height.

iii) Release the mouse button.

3) To delete rows and columns of a worksheet

Ans: i) Select the row or column that want to delete

ii) Click the Delete command in the Cells group on the Home tab.

iii) Selected column or row deleted.

To Save workbook using Save As Command:

i) Click the Microsoft Office button or File tab.
ii) Select Save As
iii) Select the location
iv) Enter a name 'book1' for the workbook.
v) Click the Save button.

Q.13 b) Describe the following terms in the worksheet

1) Absolute reference and relative reference in formula

Ans: Absolute reference

An absolute reference is designated in the formula by the addition of a dollar sign ($). It can precede the column reference or the row reference or both.

Examples of absolute referencing include:

A2:	The column and the row do not change when copied.
A$2:	The row does not change when copied.
$A2:	The column does not change when copied.

Absolute relative reference:

i) Relative reference: Cell references in formula automatically adjust to new locations when the formula is pasted into different cells. This is called a relative reference.

ii) Sometimes when we copy and paste a formula, we don't want one or more cell references to change.

iii) An absolute reference solves this problem

A

2) Cell address

Ans: Each rectangle in the worksheet is called a cell. Each cell has a name, or a cell address, based on the column and row where it is located.

Q. 14. a) What tools are available to customize our Power Point Presentation?

Ans:

Q. 14. b) Write the steps for the following action for creation of power point presentation

1) Open a Blank presentation

Ans:

i) Select office button → New. The New Presentation window appears.

ii) In the left side of the New Presentation window, click Installed Templates.

iii) Click a template to select it...

iv) Click Create.

2) Save the presentation as Lab1.pptx

Ans:

i) Locate and select the Save command on the Quick Access Toolbar.

ii) If saving the file for the first time, the Save As pane will appear in backstage view.

iii) Then need to choose where to save the file.

iv) Enter a name 'Lab1.pptx' for the presentation.

v) The Save As dialog box will appear.

3) Add a Tittle to the first slide : the name of your college /university.

Ans:

i) Click on the tittle, subtitle, or text placeholder

ii) Type the text as "Assam Downtown University"

iii) If necessary, press [Enter] to move to a new line

iv) Click anywhere on the slide outside of the placeholder to deselect it.

4) Type your first name and last name in the subtitle section.

Ans:

i) Select Click on the subtitle

ii) Type the text as 'Banti Marwein'.

5). Add a New slide which has a Tittle and Content.

Ans:

i) Click the "Home' tab in the Ribbon.

ii) Then click the "New slide' button in the slide button group.

iii) Insert a new slide and choose the slide layout.

iv) Click the drop-down part of this button.

15. Write steps for creation of a set of PowerPoint slides that demonstrates your skills to use the tools of PowerPoint. It should ~~be~~ include the following things

i) Tittle slide and bullet list

Ans: Tittle slide

A Use the layout option to tittle a slide

i) Select the slide whose layout will change so that it can have a tittle.

ii) Click Home > layout

iii) Select Tittle slide for a standalone tittle page or select Tittle and content for a slide that contains a tittle and a full slide text box

iv) Select the Click add tittle text box.

Bullet list

i) Select the text that want to turn into a list.

ii) Click Format on the menu bar

iii) Select Bullets

iv) Click the Bulleted tab to view bullet option

v) Select the type of bullets we want, and click Ok.

2). Inserting Excel sheet.

i) On the worksheet, click a cell.

ii) Type the numbers or text that want to enter

iii) Press Enter or Tab.

iv) To enter data on a new line within a cell, enter a line break by pressing ALT+ENTER.

3) Clip art and Text.

Clip art

i). Open Microsoft Exel

ii) Open an existing document or start a new one.

iii) Click any cell to select it.

iv) At the top of the program window, click Insert

v) Move the cursor over Picture

vi) And select Clip Art or [redacted].

Text

i) Select a cell and begin typing

ii) The text appear in both the cell and in the formula bar above.

iii) To tell Excel to accept the data that just type, press Enter.

iv) The information will be entered immediately

v) The cursor will move down one cell.

4) Slide show effects.

Ans: i) Open Microsoft PowerPoint

ii) Go to File at the top of the screen and click New.

iii) In the "New Presentation" dialog box, click on "From Design Template".

iv) Step 4: Do slide Design. (As per requirement)

v) Step 6: Adding Text (As per requirement)

vi) Step 7: Adding Picture (As per requirement)

vii) Save the presentation

viii) Give the presentation

For execution of slide for presentation, select and click the slide show tab, do one of the following.

i) To start the presentation at the first slide, in the start slide Show group, click From Beginning.

ii) For starting the presentation, click From Current slide.

Part. 2.

Q.16. What is the difference between Machine Language and High Level Language?

Ans: Machine Language: A computer programming language consisting of binary instructions which a computer can respond to directly.

Sometimes it is referred to as machine code or object code, machine language is a collection of binary digits or bits that the computer reads and interprets. A computer cannot understand the programming languages used to create computer programs, so the program code must be compiled. Example: 01001000, 01100101, 01101100, 01101100 etc.

High Level Language: A high-level language is any programming language that enables development of a program in a much more user-friendly programming context.

This language is a programming language with strong abstraction about the details of the computer in contrast to low-level programming language (Assembly language).
Ex: C, C++, Java.

High level language are grouped in two categories based on Execution model - compiled or interpred language.

Q17. Discuss about different data types of C programming language

Ans: Each variable in C has an associated data type.

Each data type requires different amounts of memory and has some specific operations which can be performed over it. Following are the examples of some very common data types used in C:

1) Char: The most basic data type in C. It stores a single character and requires a single byte of memory in almost all compilers.

2) Int: As the name suggests, an int variable is used to store an integer.

3). float: It is used to store decimal numbers (numbers with floating point value).

4). double: It is used to store decimal numbers (numbers with floating point value but its range of values is high in comparison to float.

Q.18. Find the output of the following expression

a) $X = 2015 * 2 + 30 - 5$

Soln: $X = 4 * 2 + 30 - 5$

$x = 8 + 25$

$x = 33$

b) $Y = 30 - (40/10+16) + 10$.

Ans: ~~$Y = 30 - (40/26) + 10$.~~

$Y = 30 -$ 4

$Y = 30 - (40/10+16) + 10$

$Y = 30 - (4+16) + 10$

$Y = 30 - 20 + 10$

$Y = 30 - 30$

$Y = 0$.

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

Ans: $Z = 80/10-2+10$

$Z = 80/8 + 10$

$Z = 10 + 10$

$Z = 20$"

Q19. Describe the syntax of the following statements:

a). If- else statement

Ans: If statement can be followed by an optional else block of statements, which executes when the Boolean expression is false.

b) for loop

Ans: for loop is similar to while, Basic syntax of for loop is as follows:

```
for (expression 1 ; expression 2, expression 3)
{
Block of statements;
}
```

In the above syntax:

- expression 1 - Initializes variables
- expression 2 - Conditional expression, as long as this condition is true, for loop will keep executing
- expression 3 - expression 3 is the modifer which will increase or decrease the value of the variable.

c) while loop

Ans: Basic syntax of while loop is as follows:

```
while (condition)
    single statement;

OR
while (condition)
{
block of statements;
}
```

The above code can be represented in the form of a flow diagram as shown above.

d) do. while loop

Ans:

- do while loop is just like a while loop except that the test condition is checked at the end of the loop rather than the start. This has the effect that the body of the loop are always executed at least once.

- Basic syntax of do...while loop is as follows:

```
do
{
single statement
    or
Block of statements
} while (conditions);
```

This code can be represented in the form of a flow diagram as shown below