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L14 - 101 Fundamentals of IT and Programming Assignment 1

Ques:- What are the four fundamental parts of computer?
Explain it with the help of diagram?

Ans A computer has four main components.

- ① Input units.
- ② The central processing unit or CPU.
- ③ The primary memory and
- ④ Output units.

⇒ Input units:- The devices to input informations such as keyboards, and mouse.

⇒ CPU:- Center processing unit:- The CPU is further broken up into ALU, control units and instruction unit.

⇒ Primary Main Memory:- Primary memory is the computer memory that is directly accessible by CPU. It is comprised of RAM and provides the actual working space to the processor. It holds the data and instruction that the processor is currently working on.

⇒ Output devices:- An O/P device is any peripheral that receives data from a computer, usually for display, projection, or physical reproduction e.g. the image show on inkjet printer, an O/P device that make a hard copy of anything shown on the monitor.

Ques: Discuss about the classification of computer based on size and capacity?

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

- Super computers.
- Mainframe computers.
- Mini computer.
- Micro computers.

Super computers

A super computer is a computer with a high level of performance compared to a general-purpose computer. Performance of a supercomputer is measured in floating-pt. operations per second (FLOPS) instead of million instruction per second (MIPS).

Mainframe computer

A mainframe is a large integrated machine with a lot of memory, a lot of storage capacity, and a lot of high-end processors. To such a large functioning has a lot of computational power in comparison to normal computer systems.

Mini computers

Mini computer, computer that was smaller, less expensive, and less powerful than a mainframe or supercomputer but more expensive and more powerful than a personal computer. Mini computer were used for scientific and engineering computations, business transaction processing, file handling.

and database management.

Micro computer

A micro computer is a complete computer on a small scale, designed for use by one person at a time. An antiquated term, a microcomputer is now primarily called a personal computer (PC) or a device based on a single-chip microprocessor. Common microcomputer include laptops and desktop.

Ques: What is the meaning of computer gen. How many computers gen. are defined? which technologies were used?

Ans: Computer gen. is classification of computers into different groups according to their manufacturing date, memory device, hardware and software technologies used in them. There is five gen. of computer.

1st Gen.

The period of first gen. was from 1946-1959. The first computers of first gen. used vacuum tubes as the basic components for memory and circuitry for CPU. These tubes like electric bulbs, produced a lot of heat and the installations used to fuse frequently.

2nd Gen

The period of second gen. was from 1959-1965. In this gen, transistors were used that were cheaper, consumed less power, more compact in

in size, more reliable and faster than the first gen. machines made of vacuum tubes.

3rd Gen

The period of third gen. were computers that emerged due to the development of the integrated circuit (IC). They were the first steps toward computers as we know them today. Their main feature was the use of integrated circuits, which allowed them to be shrunk down to be as small as large toasters.

4th Gen

The period of 4th (fourth gen.) was from 1971-1980. Computers of fourth gen. used very large scale integrated (VLSI) circuits. VLSI circuits and other circuit on a single chip made it possible to have microcomputer of fourth generation.

5th Gen

The fifth gen. computer system (FCS) was an initiative by Japan's Ministry of International Trade and Industry (MITI), begun in 1982. To create computing and logic programming. It was to be the result of a govt. industry research project in Japan during the 1980's.

Ques:- Different b/w volatile and non-volatile memories

volatile Memory

① Volatile memory is the type of memory in which data is lost as it is powered-off.

② It is faster than non-volatile memory.

③ RAM is an example of volatile memory. (Random access memory)

NON-Volatile Memory

① Non-volatile memory is the type of memory in which data remains stored even if it is.

It is slower than volatile memory.

③ ROM (Read only memory) is an exple of non-volatile memory.

Ques:- Distinguish among system software, app sw and open source sw on the basis of their features?
System software

Ans System sw is a type of computer program that is designed programs. If we think of the computer system as a layered model, the system sw is the interface b/w the h/w and user applications. The O.S (operating system) is the best-known example of system software.

Application software

An Application sw program (application or app for short) is a computer program designed to carry out a specific task other than one relating to the operation of the computer itself, typically to be used by end users. word processor, media players, and accounting sw are exple.

Open source software

Open-source software (OSS) is computer software that is released under a license in which the copyright holder grants users the rights to use, study, change and distribute the software and its code to anyone and for any purpose. Open-source software may developed in a collaborative public manner.

Ques 1) 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 1) Open word. or if word is already open select File > New.

2) In the search for online templates box enter a search word like letter, resume, or invoice or select a category under the search box like Business personal, or education.

3. Click a template to see a preview.

4. Select create.

(b) Write steps regarding following:

(i) To change the font style.

Ans 1) Select the text you want to modify.

(ii) To change the font size.

Ans 1) Select the home tab and locate the font group.

(iii) To change the font colour.

Ans 1) Click the drop-down arrow next to font style box.

(iv) To highlight (in yellow) the line that records needs to get IMS's address."

Ans If you want to change the font to bold or italic click the 'B' or 'I' icons on the format bar.

Ques:- Create a file in MS word for the following documents and save it with file "ms-word". Describe all-steps involved in it.
MS word.

MS word is a widely used commercial word processor developed by microsoft

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

Creating

Ans 1 Click the microsoft office button/file tab.

2. Select new. the new document dialog box appear.

3. Select Blank document, It will be high lite 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 font style, paragraph, alignment, list formatting and indent option.

Saving

- To save doc. using save as command.
1. Click the microsoft office button file tab.
 2. Select save as word document.
 3. Select the location where you want to save the doc. using the drop-down save the doc. using the drop-down menu.
 4. Enter a name for the doc.
 5. Click the save button.

Printing any type of document

1. Select File Print
2. To preview each page, select the forward and backward arrow's at the bottom of the page. If the text is too small of the page. If the text is too small, use the zoom slider at the bottom of the page to enlarge it.
3. Choose the no. of copies and any other options you want, and select the print button.

Ques: Create a file in MS word for following document and save it with the file. Name equation Describe all steps involved in it.

eg eq.

$$x_2 + \frac{1}{5} = 30$$

$$z^3 + 0^4 = 50$$

$$A_2 + B^6 = x_2 + y^0$$

- Ans
1. Select insert > equation on focus Alt + =
 2. To use a built-in formula, select design > equation.
 3. To create your own, select design > eq > ink equation.
 4. Use your finger, stylus, or mouse to write your equation.
 5. Select insert to bring your equation into the file.

Proc:-

Select the text and make sure its property formatted.

Word will insert a new column when a tab character is found.

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

If the text was formatted right, some of the options in this dialog box should already be filled in otherwise set the no's of columns and rows, and how to separate the text into columns.

5. (Optional) customize Autofit behavior.
6. Click ok.

The selected text is automatically turned into a table.

Proc

- Ans 1 Open a blank word document.
2. On the top ribbon, press insert.
 3. Click on the table button.
 4. Select the no. of columns and rows you need, or click insert table and a dialog box will appear where you can specify the no. of columns and rows.
 5. The blank table will now appear on the page after it as necessary. Standard features like available. These items may be helpful for creating headings and calling out certain items in the table.

Ques: Create a following marksheet in MS-Excel and save it with name 'book 1'.

- Ans 1 Right-click the worksheet name tab.
2. Click select move and 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.
Click file > save in your new workbook.

Ques 2: The sum of the mark using Autosum in a range of cells (C2 : C11)

- Ans 1 To sum a column of number's select the cell immediately below the last number in the column. To sum a row of no's, select the cell immediately to the right.
- 2 Autosum is in two location: Home > Autosum and formulas > Autosum.

- 3. Once you create a formula, you can copy it to other cells instead of typing it over and over.
e.g. if you copy the formula in cell B12 to cell C12, the formula in C12 automatically adjusts to the new location and calculates the numbers in C2:C11.
- 4. You can also use autosum on more than one cell at a time.
e.g. you could highlight both cell B12 and C12, click autosum and total both columns at the same time.
- 5. You can also sum numbers by creating a simple formula.

(b) Average of the marks in a range of cells (C2:C11)

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

2. On the home tab, click the arrow next to autosum > average, and then press enter

(c) Highest mark in a range of cells (C2:C11)

Ans In a blank cell type "=MAX(C2:C11)"

2 select the cell you want to find the largest numbers from.

3 close the formula with an ending parenthesis.

4 Hit enter and the largest number from your selection will populate in the cell.

- (D) Minimum marks in a range of cells $C_2:C_{11}$
- Ans
1. Select the cell C_2 and write the formula
 2. $=MIN(C_2:C_{11})$ Press Enter on your keyboard
 3. The function will return 3.
 4. 3 is the minimum value in the range $(C_2:C_{11})$

Ques) Describe various steps involved in the following

(1) To modify column width of a worksheet

Ans

Select the column or columns that you want to change.

1. On the home tab, in the cell groups click format.
2. Under cell size, click column width.
3. In the column width box, type the value that you want.
4. Click ok.

(2) To modify the row or height of a worksheet.

Ans

Select the row or rows that you want to change.

1. On the home tab, in the cells group click format.
2. Under cell size, click Row height.
3. In the Row height box, type the value that you want and then click ok.

(3) To delete rows and columns of a worksheet?

1. Select the cells, rows or columns that you want to delete.
2. Right-click and then select the appropriate delete option.
e.g delete cells and shift up.

(b) Describe the following terms in the worksheets.
① Absolute reference and relative reference in formula.

- Ans
1. Select the cell that contains the formula.
 2. In the formula box select the reference that you want to change.
 3. Press F4 to switch b/w the reference types

② Cell Address

Ans A cell is the intersection of of a row and a column column are identified by letter (A, B, C) while rows are identified by no's (1, 2, 3) Each cells has its own name or cell address - based on its column and row In this e.g the selected cell intersects column C and row 5, so the cell address is C5

Ques 4(a) What tools are available to customize our power point presentation?

- Ans ①
- | | |
|------------------------|-----------------|
| ① Templates and themes | ⑩ Flowcharts |
| ② Slide layouts | ⑪ Icon charts |
| ③ Font | ⑫ Radial |
| ④ Colour themes | ⑬ Progress Bars |
| ⑤ Icons | ⑭ Animation |
| ⑥ Shapes | ⑮ Transition |
| ⑦ Stock photos | ⑯ Interactivity |
| ⑧ Charts and graphs | ⑰ Audio |
| ⑨ Maps | ⑱ Video |
| ⑩ Tables | |

(b) write the steps for the following action for creation

of power point presentation.

- 1. Open a blank presentation.
- Ans: Select the file tab to go to backstage view.
- 2. Select new on the left side of the window then click blank presentation.
- 3. A new presentation will appear.

4. Save the presentation as lab 1 ppix.

Ans: Create a blank presentation

- 1. Save a presentation.
- 2. Apply a design
- 3. Format text
- 4. Insert smartart
- 5. Insert and modify shapes.
- 6. Edit and duplicate slides.

5. Add a title to the first slide the name of your college.

Ans: Select the slide whose layout you will change so that it can have a title.

- 1. Click home > layout.
- 2. Select 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.

May other layout option include title, too, Pick the ones that's best suited for your presentation.

- 4. Select the click to add title text box
- Center your title for that slides.

Q) Types your first name last name in the subtitle section;

- Ans ->
1. Using your mouse and cursor, click inside of the top textbox.
 2. Using your keyboard type the name of the animal you have been researching in class
 3. Using your mouse and cursor, click inside of the bottom textbox.
 4. Using your keyboard type your first and last name, click enter and type your teacher's name.

Q) Add a new slide which has a title and content.

- Ans ->
1. Click the "home" tab in the ribbon.
 2. Then click the "new slide" button in the "slides" button group.
 3. Alternatively to add a new slide with a different slide layout.
 4. Click the "Home" tab in the ribbon.

Q) Title slide and bullet list?

Title slide

Ans -> The title slide is the first slide of a presentation. It usually contains a title and a subtitle. of all the slides in a presentation, the first slide is one of the most important as the title slide generally sets the tone.

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 text box.

④ Bullet list

Ans ① On the left-hand slide of the powerpoint window.

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

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, click bullets or numbering.

Part 2

Ques: What is the different b/w Machine lang and high level language?

Ans Machine language: A machine lang is the only lang that a computer directly understand it. It is usually written in zeros (0) and ones (1). A program instruction in machine lang. may look something like this 11001000 whereas

High level language.

A high level language is a programming lang. that uses English and mathematical symbols like +, -, % and many others its instruction.

Ques: Discuss about different data types C programming language?

Ans There are some common data types in C programming language.

- ① int - used to store an integer or value.
- ② char - used to store or single character.
- ③ float - used to store ~~or~~ single character. decimal no.'s with single precision.
- ④ Double - used to store decimal no.'s with double precision.

e.g #include <stdio.h>
int main()

```
{
    // datatypes
    int a = 10;
    char b = '5';
    float c = 2.88;
    double d = 28.888;
    printf("Integer datatype: %d\n", a);
    printf("Character datatype: %c\n", b);
    printf("double datatype: %f\n", d);
    return 0;
}
```

o/p ① integer datatype: 0 ④ Double float datatype: 2.888000
 ② char datatype: 5
 ③ float datatype: 2.880000

Qno 10 Find the output of the following expression.

Q) $x = 20/5 + 2 + 30 - 5$

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

$x = 4 + 2 + 30 - 5$

$x = 8 + 30 - 5$

$x = 8 + 25$

$x = 33$

hence, the value of x is 33 as.

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

$$\text{sol.} \quad y = 30 - 4 + 6 + 10$$

$$y = 30 - 0$$

$$y = 0$$

hence, the value of y is 30 as.

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

$$\text{Sol.} \quad z = 40 * 2 / 10 - 2 + 10$$

$$z = 8 - 2 + 10$$

$$z = 8 + 8$$

$$z = 16$$

hence, the value of z is 16 as.

Q no 19 Describe the syntax of the following statements:

a) if - else statement.

Ans

```
#include <iostream>
using namespace std;
int main ()
```

```
{
```

```
    int number;
```

```
    cout << "Enter an integer:";
```

```
    cin >> number;
```

```
    if (number > 0)
```

```
{
```

```
    cout << "you entered a positive integer:" << number << endl;
```

```
{
```

```
    else if (number < 0)
```

```
{
```



```

cout << "you entered a negative
integer : " << number << endl;
}
else
{
cout << "This line is always
printed";
return 0;
}

```

O/P

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;
}

```

O/P 10 times write Hello world.

(c) while loop

Ans

```

#include <stdio.h>
int main ()

```

```

{
int i=0;
while (i<10)

```



```
{  
printf("Hello world");  
i++;  
}
```

OP 10 times write hello world.

d) do-while loop:-

```
#include <iostream>  
using namespace std;  
int main ()  
int i = 1;  
do  
{  
cout << i << "\n";  
i++;  
while (i <= 10);
```

OP 1 to 10 as

Queso Find the output of the following program segments.

```
a) #include <stdio.h>  
int main ()  
{  
int i,  
for (i = 1; i <= 2; i++)  
{  
printf("I'm's Lyhazialbad\n");  
}}
```

OP
I'm's Lyhazialbad


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

O/P two times write IMS yhaziabad

```
(c) #include <stdio.h>
    void main ()
    {
        int a = 10, b = 100;
        if (a > b)
            printf ("larger no. is %d \n", a);
        else
            printf ("larger no. is %d \n", b);
    }
```

O/P larger number is b.