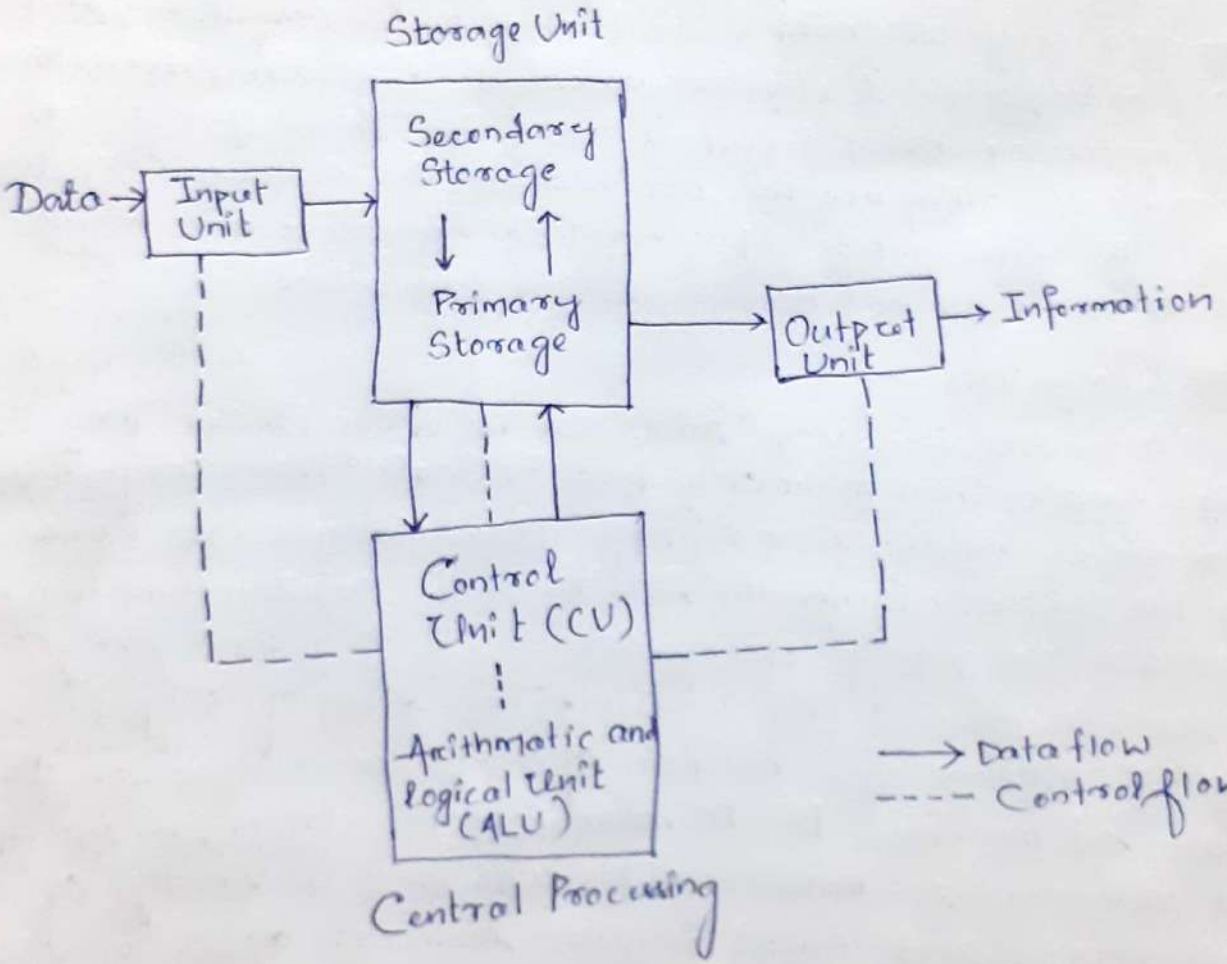
CCA-101 : Fundamentals Of IT & Programming

Assignment - 1

Q.1. What are the four fundamental parts of computer ? Explain it with the help of diagram.

(Ans) Mainly computer system consists of three parts, that are central processing unit (CPU), Input Devices, and Output Devices. and another one is Memory (RAM). The input devices are (keyboard, mouse etc) and Output devices are (monitor, printer etc)



A large amount of data is stored in the computer memory with the help of primary and secondary storage devices. The CPU is like the heart / brain of the computer. The user does not get the desired output, without the necessary option taken by the CPU. The CPU is responsible for the processing of all the instructions which are given by the user to the computer system.

Q.2. Discuss about the classification of computers based on size and capacity.

(Ans) Computer are classified on different parameters, such as, storage capacity, processing speed and component (CPU) used in computers. Depending upon the computer's components used and features of different computers, they are classified into four groups, Microcomputers, Minicomputers, Mainframe Computers and Supercomputers.

Micro Computers :-

Micro computer is a computer whose CPU is a microprocessor. ~~are on a single~~ All the components of a microprocessor are on a single integrated circuit chip. Micro computer can be categorized as the desktop, programmable and workstation. The microprocessor based computers are called third generation computers. They are the backbone of the modern computer era. The first and second generation computers are based on vacuum tubes and bipolar junction transistors.

Mini Computers :-

Mini computers were interduced in early 1960s. They were faster than micro computers. Basically these computers were mainly multi-user systems, where many users work on the systems. Generally these types of computers had larger memories and greater storage capacity. They had large instruction set and address field. These kinds of computers have efficient storage for handling of text, in comparison to lower bit machines. Due to more efficient processor, speed and memory size, minicomputer was used in variety of applications and could support business applications along with the scientific applications. Minicomputer was a multi-user system which means more than one user could use this system simultaneously.

Mainframe Computers :-

Mainframe computers are large and expensive machines. The word length of mainframe computers may be 48, 60 or 64 bits, memory capacity

... organizations, large ... airlines reservation where a large database has to be maintained.

Super Computers:

Super Computers are the fastest computer in current era. The processing capabilities of Super computer lies in the range of GIPS2, word length 64-128 or may be in 256 or so. The memory capacity of Super computer is in some gigabytes or in terabytes. The storage capacity of this type of computer is in exabytes.

Q.3. What is the meaning of computer generation? How many Computer Generations are defined? What technologies were/are used?

(Ans) Generation in computer terminology is a change in technology a computer is being used. Initially, the generation term was used to distinguished between varying hardware technologies. Nowadays, generation includes both hardware and software which together make up an entire computer system.

Nowadays, generation includes both hardware and Software, which together make up an entire computer system. There are five computer generations known till date. Each generated has been discussed in detail along with their time period and characteristics.

→ 1940-1956: First Generation:- Vacuum Tubes
These early computers used vacuum tubes as circuitry and magnetic drums for memory.

→ 1956-1963: Second Generation:- Transistors.

→ 1964-1971: Third Generation:- Integrated Circuits

→ 1972-2010: Fourth Generation:- Microprocessors

A transistor computer, now often called a second generation computer, is a computer which uses discrete transistors instead of vacuum tubes. The

first generation of electronic computers used vaccum tubes. which generated large amounts of heat, were bulky and unreliable.

Q.4. Difference between Volatile & Non Volatile memories.

(Ans)

Volatile Memory	Non-Volatile Memory
(1) Data is present till power Supply is present.	(1) Data remains even after power supply is not Present.
(2) Volatile memory data is not permanent.	(2) Non-volatile memory data is permanent.
(3) Volatile memory is faster than non volatile memory.	(3) Non-volatile memory access is slower.
(4) RAM is an example of Volatile Memory.	(4) ROM is an example of non-volatile memory.

Q.5. Distinguish among system software, application Software and open source software on the basis of their features?

(Ans) System software is used for operating computer hardware. On other hand Application Software is used by user to perform Specific task. System software are installed on the computers when operating system is installed. On the other hand Application software are installed according to user's requirements. Open Source Software is used for which the original source code is made freely available and may be redistributed and modified according to the requirement of the user.

Q.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 - At first we open MS-Word

Step 2 - Then to give a little different defination to the heading, we choose font size of 20 to make it bigger and font style as Times New Roman.

Step 3 - We write the heading "yourself"

Step 4 - From the next line we change the font style and size from the menu bar above and write the whole paragraph.

Step 5 - After finishing with writing part we go to file → Save as → Desktop.

Step 6 - A window opens up there we save the file name as "yourself" and click to save.

Hence the file gets saved in the Desktop.

(b) Write steps regarding following

→ To change the font size.

Step 1 : At first we select the text to which new font size needs to be applied.

Step 2 : Then in the menu bar, under home option we select the font size from the drop down list.

→ To change the font style

Step 1 : We select the text to which new font style needs to be applied.

Step 2 : In menu bar, under home option we select the desired font option we select the desired font style from the drop down menu.

Q.6) Write steps regarding followings :-

→ To change the font ~~style~~ color.

Step 1: We select the text to which new font color needs to be applied.

Step 2: In menubar, under home option we select the font colour option there different coloured boxes are present we select the desired colorer.

→ To highlight Text :-

Step 1: We select the text need to get IMS's address.

Step 2: Then in the menubar there's an option to highlight text there we select yellow colorer.

7)

Ans) Step 1 - From the menubar we select font style times new Roman and size a little bigger than the other text.

Step 2 - We write "MS word" as a heading.

Step 3 - Again in the menubar we select the font colour from box of red and font size lower than the previous one and write "Ms-word"

Step 4 - Then we go to menubar and change font colour to black and continue writing.

Step 5 - Then from the bullet section we select the bullets and we get bullet in the desired location, we continue writing.

Step 6 - In the first bullet we write text with font colour blue selection from the menu bar.

Step 7 - Then again we do enter to get next bullet and this time we select font colorer black.

Step 8 - Again we change font colour to red.

Step 9 - For the last bullet we select the bold

option. So the text is in Bold

Step-10 - We go to file → Save as → Desktop in the window that appears, we save the file as 'ms-word' and word document in save as type then click save.

Q.8

Step-1 :- We open MS-word and write a little bigger font size write write "Equations" then we select it and from the menu bar we select 'U' option to get it renderlined.

Step-2 : We write x and to subscript 2 we select 'x_2' from the home option in menubar and type 2 then for superscript again we select 'x^2' from the home option in menu bar and finish typing all the equations.

Step-3 - Then we go to file → Save as - Desktop in the window that appears we type the wave equation and in the save as type we select word documents and click save.

Q.9.

Step1 - We select table from the menubar → insert and in the table we already select 3 rows and 2 columns.

Step2 - After the table is created, we select the first line the given text and click ctrl+x to cut it and in the first cell of the table we click ctrl+V to paste it.

Step3 - We select the next line and click ctrl+x and in the second cell of the table we click ctrl+V to paste it.

Step4: All the highlighted texts are in this way cut and pasted in the table accordingly hence consisting the text in tabular format.

Step5: We go to file → Save as → Desktop and save name as 'text-to-table and select 'word Document' in save filetype and click Save.

Q.10

(Ans) Step1: We select table from the insert option of the menu bar.

Step2: While selecting in clicking down triangle we get to sellct the no. of rows and columns by moving the cursor over the boxes we select desired cells and click. These cells are put in the tabular format in the document.

Q.11

(Ans) Step1: We open excel app then in the first we write "Rollno", "Name" and "marks".

Step2: We fill the other cells accordingly as given in the question.

Step3: We go to file → save as → desktop and saves the file as 'book1' then the save file type we click excel workbook and click save.

12)

→

(Ans) The sum of the marks using Auto sum in a range of cells (C2:C11)

Step-1 - We select the cells from C_2 to C_{11} and click Auto Sum (Σ) in the formulas tab in menu bar.

→ Average of the marks in the range of cells (C_2 : C11)

Step-1 - We select the cells from C_2 to C_{11} and then in the down triangle Beside Autosum (Σ) we click in the drop down menu we select Average. And the average of the cells are printed

→ Highest marks in a range of cells (C2: C11)

Step 1 : We select the cells from C2 to C11

Step 2 : In the down triangle beside (Σ) in formulas tab we select max in the drop down list.

~~The highest marks in a range of cells (C2 : C11)~~

The highest marks is entered in the below cells.

→ Minimum marks in a range of cells (C2 : C11)

Step 1 : We select the cells.

Step 2 : We select min from Autosum from formulas tab in menu bar.

13)

a) → To modify Colocemn width of a Worksheet.

Step 1 :- We hover the cursor over the column names (A, B, C .....) and when we get ↔ symbol we click and stretch the line till the required width.

→ To modify the row height of a Worksheet :-

We hover the cursor over row names (1, 2, 3 ...) which ever row we want to modify to its end We hover and when we get ↕ symbol we click

and stretch the line. till required length.

→ To delete rows and columns of a worksheet.

To delete a row we select that entire row or to delete a column we select the entire column and click the right button in the options that comes we select delete and it asks to shift cells or left accordingly and we click OK.

(b) → Absolute reference and relative reference in formula.

The cells are actually relative reference since they change relative to where we copy the formula. if we do not want will refer us to where we copy the formula. then making these cells refers us absolute cell references does the work. placing a '$' before the column letter if we want that column to always stay the same.

→ Cell address :-

A cell reference or a cell address is a combination of a column letter and a row number that identifies a cell on a worksheet. eg. A1 refers to cell at the intersection of cell A and row 1.

14) a)

1. Creating or Opening a presentation that has more than one slide.
2. We select the slide show.
3. We click custom slide show to expand the menu and then select custom shows.
4. We click New to create a custom show or edit an existing one.
5. Giving a districtive name to our show. We select the appropriate slides and click the add button. We use the arrow on the right if we want to change

the slide order in our custom show. Then we click OK to apply changes.

b)

Step1 - We open the powerpoint and click to blank document.

Step2 - We go to file → Save as → Desktop and in the window that appears we save the ppt as "test ppt".

Step3 - Then we select and the first slide we write the name of our college as title with desired font in its section.

Step4 - On the Subtitle Section we write surname.

Step5 - we go to Insert tab in the member and click new slide.

→ new slide with title and content space appears.

15)

Step 1: We create a project by starting with first slide with title and content section. Here we write the title as "Marks of students" and write a few lines the subjects taughts by clicking on the Bullets option in home tab in menubar.

Step 2: We go to Insert and click the new slide and in title section we write "Marks".

Step 3: We go to Insert and in the table option we select desired no. of columns and cells.
Then the excel sheet that is created we fill the table accordingly with student roll no, name and marks obtained in different subjects.

Step 4: We go to Insert and click online pictures and type a phase students intersection with teachers and press enter.

Step 5: We filter the results by type for clipart.

Step 6: We select a picture and click Insert.

Step 7: The desired clipart is Insert now we write a paragraph on students marks distribution over the five years span.

and how it affected students - teacher interaction.

Step 8 - We go to insert and insert a new slide.

Step 9 - In this slide we write a little about students activities other than studies and how it affected their mental health and marks.

Step 10 - We go to animation and we select 'fly-In' for the first slide then we go to the next slide and go to animations tab in members and select 'wipe' and wheel for other

Step 11 - Then we go to transition and select 'Reveal' for all.

Step 12 - We go to slide show tab in the menu bar and select accordingly and select from beginning.

CCA - 102 : Data Communication

ASSIGNMENT

Q.1. What are the different types of networks?

Ans. The different types of networks are

1. PAN (Personal Area Network)
2. LAN (Local Area Network).
3. WLAN (Wireless Local Area Network)
4. CAN (Campus Area Network)
5. MAN (Metropolitan Area Network)
6. WAN (Wide Area Network)
7. SAN (Storage Area Network)
8. SAN (System - Area Network)
9. POLAN (Passive Optical Local Area Network)
10. EPN (Enterprise private Network)
11. VPN (Virtual private Network)

Q.2. Explain the Shielded twisted pair and unshielded twisted pair?

(Ans) Shielded twisted pair is a special kind of copper telephone wiring in some business installations.

(ii) An outer covering or shield is added to the Ordinary twisted pair telephone wires; the shield functions as a ground.

(b) Unshielded twisted pair is a ubiquitous type of copper cabling used in telephone wiring and local area networks (LANs)

Q.3. What is difference between baseband and broad band transmission?

(Ans) Baseband transmission transmits a single data signal / stream / channel at a time which broad band transmission transmits multiple data / signal / streams / channels simultaneously at the same time.

Q.4) What is the difference between hub, modem, router and the Switch?

(Ans) Hubs are "dumb" devices that pass on anything received on one connection to all other connections. Switches are semi intellegent devices that learn which devices are on which connection. Routers are essentially small computers that perform a varcity of intellegent tasks.

Q.5) When you move the NIC cards from one PC to another PC, does the MAC address gets transferred as well?

(Ans) Yes, that's because MAC addresses are hard wired into the NIC circuitry, not the P.C.

(Q.6) When troubleshooting computer network problems, what common hardware-related problems can occur?

(Ans) Most common hardware related problems are PaBX, LAN Card, WLAN Card and Wi-fi AP if it is Wireless, Cables, Switches, Routers and Wireless Controllers.

(Q.7) In a network that contains two Servers and twenty workstations, where is the best place to install an Anti-Virus program?

(Ans) Anti Virus On all devices, Servers and Work-Stations.

Q.8) Define Static IP and Dynamic Ip? Discuss the difference between IPV4 and IPV6?

(Ans) When a device is assigned a Static IP address, the address does not change. The Most devices use dynamic IP addresses, which are assigned

by the network when they connect and change over time.

And the difference between IPv4 & IPv6 is IPv4 is 32-Bit IP address whereas IPv6 is a 128-Bit IP address. IPv4 is a numeric addressing method. Whereas IPv6 is an alphanumeric addressing method. IPv4 binary bits are separated by a dot (.) whereas IPv6 binary bits are separated by a colon (:).

Q.9) Discuss TCP/IP model in detail.

(Ans) The internet protocol suite is the conceptual model and set of communications protocols used in the internet and similar computer networks. It is commonly known as TCP/IP because the foundamental products in the Suite are the Transmission control protocol and the Internet protocol.

Q.10) What is the Web browser ? Give some example of browser

(Ans) A web browser is a software application for accessing information on the World Wide Web.

→ When a user requests a web page from a particular website, the web browser retrieves the necessary content from a web server and then displays the page on the user's device.

→ Examples :- Google Crome, Morzilla Firefox, apple Safari, Internet Explorer.

Q.11) What is a serch engine ? Give example.

(Ans) A Search engine is a web-based tool that enables users to locate information on the World Wide Web.

(ii) Popular Examples of Search Engines are Google, Yahoo and MSN Search

Q.12) What is the internet & WWW? What are the uses of internet in our daily life?

(Ans) The internet is the wider network that allows computer networks around the world run by companies, governments, universities and other organisations to talk to one another.

→ WWW :- This is stands for World Wide Web.
→ It is a collection of webpages found on this network of computers.

→ The most popular uses of Internet in our daily life is :-

→ Electronic Mail →
→ Research
→ Downloading files
→ Discussion groups.
→ Interactive games
→ Education & self improvement etc.

Q.13. What is an Internet Service provider? Give Some example of ISP of India?

(Ans) An internet service provider is an organization that provides services for accessing, using, or participating in the internet.

→ Examples :- AT&T, Verizon, Comcast, or Brigh House.

Q.14. Discuss the difference between MAC address, IP address and port address.

(Ans) MAC address is used to ensure the physical address of computer. while IP address are used to uniquely identifies the connection of network with that device take part in a network.

Q.15. How do we view my internet brower's history?

(Ans) → click to open the menu at the top right of its window and select History, then click History a second time.

CCA-103: Communication & Soft Skills

Assignment

Q.1. Elaborate the process & elements of Communication in detail through suitable examples.

Ans. Components of the communication process include a Sender, encoding of a message, selecting of a channel of communication, receipt of the message by the receiver and decoding of the message. back to the original Sender, which is called feedback.

(1) Sender:

The person who intends to convey the message with the intention of passing information and ideas to others is known as sender or communicator.

(2) Ideas:

This is the subject matter of the communication. This may be an opinion, attitude, feelings, views, Orders, or Suggestions.

(3) Encoding:

Since the subject matter of communication is theoretical and intangible, its further passing requires use of certain symbols such as words, actions or pictures etc. Conversion of subject matter into these symbols is the process of encoding.

(4) Communication Channel:

The person who is interested in communicating has to choose the channel for sending the required information ideas etc. This information is transmitted to the receiver through certain channels which may be either formal or informal.

(5) Receiver : Receiver is the person who receives the message or for whom the message is meant for. It is the receiver who tries to understand the message in the best possible manner in achieving the desired objectives.

(6) Decoding : The person who receives the message or symbol from the communicator tries to convert the same in such a way so that he may extract its meaning to his complete understanding.

(7) Feedback : Feedback is the process of ensuring that the receiver has received the message and understood in the same sense as sender meant it.

CCA-104 : Web Technologies
Assignment.

Q.1. Write html and css for the above question using div.

(Ans)

```
<html>
<head>
<style>
#header
{
 background-color : lightblue ;
 width : 100% ;
 height : 50 PX ;
 text-align: center ;
}
#navigation-left
{
float : left ;
width:15%.
background-colorer: red ;
}
#main
{
 float : left ;
 width : 70%
 background-color: lightgray ;
}
#sidebar-right {
 float: left ;
 width :15%.
 background-color : red;
}
```

```
#footer
{
clear : both ;
height : 50px ;
width 100% ;
text-align : center ;
background-color ; lightblue ;
}
#navigation-left,
#main #sider-right
{
min-height : 600px
}
</style>
</head>
<body>
<div id = "header" > Header </div>
<div id = "navigation-left" > Left </div>
<div id = "main" > Main </div>
<div id = "sidebar-right " > Right </div>
<div id = 'footer' > footer </div>
</body>
</html>
```

Q.3. Write a program to display count, from 5 to 15 using PHP loop as given below.

(Ans)
```
<? Php
$count = 5;
while ( $count <= 15 )
{
echo $count ;
echo "<br>";
$count ++;
}
```

Q.1. Write a program in JavaScript for Unit Conversion from Kilometers (Km) to Centimeter (cm) use of message box is necessary.

(Ans)
```
<!DOCTYPE html>
<html>
<title> Kilometers to cm Length
Converter </title>
<body>
<h2> Length Converter </h2>
<P> Type a value in the Kilometers field to convert the
    Value to cm : </P>
<P>
  <Lebel> Kilometers </Lebel>
  <input id = "inputKilometers"
type = "number" placeholder = "Kilometers"
On input = " Lenght Converter (this.value )"
On change = "Length converter (this. value)" >
</P>
<P> cm : <Span id = "Ouotput cm" ></Span></P>
<Script>
function Length Converter (valNam )
{
document. get Element By Id ("Ouotput cm") . inner
HTML = valNum * 100000;
}
</Script>
</body>
</html>
```