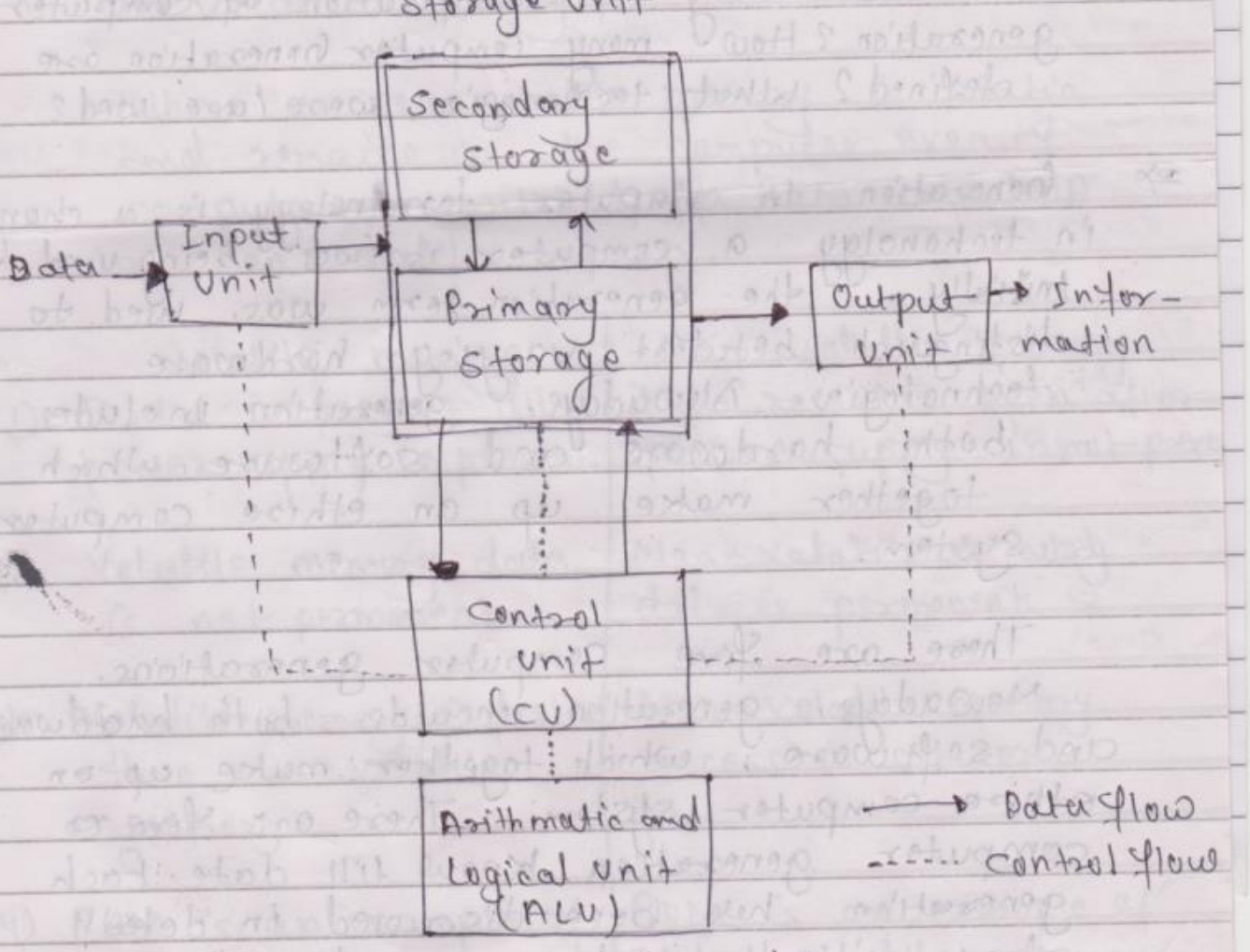
# Assigment - 1

1 What are the four fundamental parts of computers? Explain it with the help of diagram?

Ans) The four fundamental parts of computer are
1). CPU (Central Processing Unit)
2) Storage Unit
3) ALU (Arithmetic Logic Unit)
4) Control Unit

Block diagram of computer



2. Disuss about the ~~eof~~ classificantion of computer based on size and capacity.

=> On the based of size and capacity.

* SUPER COMPUTERS
* MAINFRANE
* MINI COMPUTERS
* MOBILE COMPUTERS
* MICRO COMPUTERS

3. What is the meaing of classification of computer generation? How many computer Generation are defined? What technologies were/are used?

=> Generation In computer terminology is a change in technolgy a computer is/was being used. Initially, the generation term was used to distinguish between varying hardware technologies. Nowadays, generation includes both hardware and software, which together make up an ethire computer system.

There are five computer generations. Nowadays, generation inculdes both hardware and soft ware, which together make up an ethire computer system. There are five computer generation know till date. Each generation has been discussed in detail along with their time period and characteristics.
Whether it's practical (like washing, machines, tumble, dryers, refrigerators, cars, flooring materials, windows, or door handles) or

or for leisure (like television, Blu-ray players, game consoles, reclining chairs, or toys) all these things are examples of technology.

4) Difference between Volatile & Non-Volatile memories.

→ Volatile Memory is used to store computer programs and data that CPU needs in real time and is erased once computer is switched off. RAM and ~~cha~~ cache memory are volatile memory.

Where as non-volatile memory is static and remains in the computer even if computer is switched off. ROM, and HDD are non volatile memory.

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

5. Distinguish among ~~sty~~ system software, application software and open source software on the basic of their features.

~~system~~

| System software | application software | open source software |
|---|---|---|
| 1) System software maintain the system resources and give the path for application software to run. | Application software is built for specific tasks. | open source software is just software There are no ethics associated directly to it. |
| 2) Low level languages are used to write the system software | 2) while high level languages are used to write the application software. | (2) Ethics are to be associated to the people not to the software. |
| 3) ~~Purpose~~ It a general pupose software | 3) while its a specific purpose software. | 3) Freedom is not an absolute concept. Freedom should be allowed not imposed. |
| 4) without system software system can't run. | without application software system always runs. | |

10. Create a file in MS-Word to insert a table in the document. Describle all steps involved in it.

Ans 1. Open a blank word document
2. In the top ribbon. press Insert.
3. Click on the Table button.
4. Either use the diagram to select the number of columns and raws you need, or click Insert table and a dialog box will appear where you can specify the number or columns and raws.
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.
6. Follow these instructions for ensuring your table meets APA formatting guidelines.

14. What tools are available to customize an Power point presentation?

Ans Visme. Visme is a cloud-based presentation tool that allows you to engage viewers and communicate your ideas...

- Haiku Deck...
- Pitchexific
- Canva
- Slide Camp..
- Powtoon
- VideoScribble
- Prezi

15.

16. What is the difference between machine language and high level language?

Ans) Machine language => To enter into the first step of making programs, you need to know the computer language., we have learnt that a computer processes the raw data to produce a meaningful information. But a computer does not work by itself.

High level language (HLL) => The program is written in simple English by using alphabets and numbers It is machine independent. It requires a translator* to convert HLL program to a machine language program.

(17.) Discuss about different type of c programming language?

Ans) Variables in C are associated with data type. Each data type requires an amount of memory and performs specific operations.

There are some common data types in C-

- 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.

The following table displays data types in C language.

| Data types | Bytes | Range. |
|---|---|---|
| short int | 2 | -32,768 to 32,767 |
| unsigned short int | 2 | 0 to 65,535 |
| unsigned int | 4 | 0 to 4,294,967,295 |
| int | 4 | -2,147,483,648 to 2,147,483,647 |
| long int | 4 | -2,147,483,648 to 2,147,483,647. |
| unsigned long int | 4 | 0 to 4,294,967,295 |
| Signed char | 1 | -128 to 127 |
| Unsigned char | 1 | 0 to 255 |
| float | 4 | 1.2E-38 to 3.4E+38 |
| double | 8 | 2.3E-308 to 1.7E+308 |

Here is the syntax of datatypes in C language.

19) Describe the syntax of the following statement

a) if - else statement
b) for loop
(c) while loop
(d) Do - ~~for~~ while loop

(a) if - else statement → The if else statement executes a block of code if a specified condition it true. If the condition is false another block of code can be executed. The if/else statement is a part of javaScript's "conditional" statements, which are used to perform different actions based on different conditions.

(b) For loop. → In computer science, a for-loop or simply for loop, is a control flow statement for specifying iteration, which allows code to be executed repeatedly. Various keywords are used to specify this statement: descendants of ALGOL use "for" while descendants of Fortran use "do". There are other possibilities, for example. COBOL, which uses "~~PERFO~~ PERFORM VARYING".

(c) While loop → In most computer programming languages, a while loop is a control statement that allows code to be executed repeatedly. Based on a given Boolean condition. The while loop can be thought of as a repeating if statement.

d) Do while loop. → In most ~~compeul~~ computer programming languages a do, while loop is a control flow statement that executes a block of code at least once and then either repeatedly executes the block or stops executing it, depending on a given boolean condition at the end of the block.

CCA 101 Fundamentals of IT & Programing.
Do it yourself Assingmonent with solution.

6.1 Write a program in C to display your name and address on computer screen.

Solution
```
#include <stdio.h>
void main() {
    Printf("\n Dr sheelesh Kumar sharma");//
it display the string inside quotation on
computer screen.
Printf("\n IMS Ghaziabad"); it displays the string
inside quotation on computer screen }
```

Output
Dr. sheelesh Kumar sharma
IMS Ghaziabad.

2. Write a program in c add two integer numbers

Solution
```
# include <stdio.h>
  void main() {
    int n1, n2, sum; // it declares three variables
n1, n2 and sum as integer type
  scanf("%d", &n1, &n2); // it reads two numbers
that are stored in variables n1 and n2 respecti
vely.
  Sum = n1 + n2; // calculating sum.
  Printf("Sum = %d", sum); // It displays the value
      of sum }
```

Output
Enter two integer numbers: 10 20
Sum = 30

(3) Write a program in C to computer the value of x in this expression.
$x = 20/(8-4)*8-2$

Solution
```
# include <stdio.h>
void main() {
int x;
x = 20/(8-4)* 8-2;
printf("X = %d"; X); // it displays the value of x
}
```

Output =
x = 38

(4) Write a program in c to computer a quotient and remainder.

Solution
```
# include <stdio.h>
void main() {
int dividend ; divisor , quotient , remainder; // it
declares variables as integer type printf("Enter
dividend : ");
Scanf ("%d", & dividend); // it reads the value
of divisor
```

```
quotient = dividend / divisor; // it computers
        quotient.
remainder = dividend % divisor; // it computer
        remainder.
printf("Quotient = %d \n", quotient); // it displays
    the value of quotient printf("Remainder = %
    d", remainder); // it displays the value of
    remainder
        }
```

output

```
Enter dividend = 20
Enter divisor = 3
Quotient = 6
Remainder = 2
```

(5.) Write a program in C to swap the value of two integer numbers.

Solution Swap numbers using temporary variable.

```
# include <stdio.h>
void main () {
    int n1, n2, temp;
n1 = 10;
n2 = 20;
temp = n1; // value of n1 is assigned to temp.
n1 = n2; // value of n2 is assigned to n1
n2 = temp; // value of temp (initial value of n1)
    is assigned to n2
```

After
printf("\n After swaping, n1 Number = %d", n1);
printf("\n After swaping, n2 Number = %d", n2);

output.
After swaping; n1 Number = 20
After swaping; n2 Number = 10

In the above program, the temp variable is assigned the value of the n1 variable. Then the value of the n1 varible is assigned to the n2 variable.
Finally; the temp (which holds the initial value of n1) is assigned to n2. This completes the swapping process.

Swap number without using tempoary varible.

```
#Include <stdio.h>
  void main() {
   int n1, n2;
   n1 = 40;
   n2 = 10;
  // swapping
   n1 = n1-n2; //n1 = 40-10 so n1 = 30
   n2 = n1+n2; //n2 = 30+10 so n1 = 40
   n3 = n2-n1; //n1 = 40-30 so n1 = 10
   printf("\n After swapping n1 Number = %d", n1);
  printf("\n After swapping n2 Number = %d", n2);
    }
```

output
After swaping n1 Number 210.
After swapping n2 Numbers 40

6. Write a program to ~~check~~ find the largest of three numbers.

Solution:
```
# include<stdio.h>
void main() {
 int n1, n2 n3, largest;
printf("Enter three different number:");
 scanf("%d%d%d", &n1, &n2, &n3);

 if (n1>n2)
  largest = n1;
 else
  largest = n2;
in(n3 >= largest)
  largest = n3;

 printf("largest number is %d", largest);
 }
```

Output
Enter three numbers; 30 20 40
largest number is 40

(7.) Write a program to check whether a integer numbers is even or odd.

Solution
```
#include <stdio.h>
void main() {
 int num;
 printf("Enter a number:");
 scanf("%d", &num);
 if(num%2)==0) {
  printf("Even number");
 else
  printf("odd number");
}
```

Output 1
Enter a number: 12
Even number

Output 2
Enter a number: 11
odd number

8. write a program to diplay table of any integer number:

Solution:

```
#include <stdio.h>
void main() {
int n, i;
printf("Enter an integer: ");
scanf("%d", &n);
for(i=1; i<=10; ++i) {
  printf("%d * %d = %d\n", n, i, n*i);
}
}
```

Output:

Enter an integer: 9

9 * 1 = 9
9 * 2 = 18
9 * 3 = 27
9 * 4 = 36
9 * 5 = 45
9 * 6 = 54
9 * 7 = 63
9 * 8 = 72
9 * 9 = 81
9 * 10 = 90

9. Write a program to display first ten terms of the Fibonacci sequence.

Solution. The Fibonacci sequence is 0, 1, 2, 3, 5, 8, 13, 21, 34

The Fibonacci sequence is a sequence where the next term is the sum of the previous two term.
The first two terms of the Fibonacci sequence are 0 following by 1.

```
# include <stdio.h>
  void main() {
   int i, n, t1 = 0, t2 = 1, nextTerm;
   printf("Enter the number of terms");
   scanf("%d", &n);
   printf("Fibonacci Series:");
   for(i = 1; i <= n; ++i) {
   printf("%d", t1);
   nextTerm = t1 + t2;
   t1 = t2;
   }
  }
```

Output
Enter the number of terms: 10
Fibonacci series: 0, 1, 1, 2, 3, 5, 8, 13, 21, 34,

10. Write a program to calculate the sum of digits of a an integer number.

Solution
```
# include <stdio.h>
void main() {
int n, sum = 0, digit;
printf("Enter an integer:");
scanf("%d", &n);
while (n != 0) {
  digit = n % 10;
  sum = sum + digit;
  n = n / 10;
}
printf(" Sum of the digits = %d", sum);
}
```

Output
Enter and integer = 142
Sum of the digits = 7

11. Write a program to reverse an integer number.

Solution
```
# incudle <stdio.h>
Void main() {
Int n, rev = 0, digit;
Printf("Enter an integer: ");
Scanf("%d", &n);
while (n != 0) {
```

```
digit = rev in %10;
rev = rev * 10 + digit;
n = n/10;
}
printf("Reversed number = %d", rev);
}
```

output

Enter an integer = 345

Reversed number = 543

This program takes an integer input from the user 345. The while loop is used until n != 0 is false. In each iteration of the digit (digit = n %10), when n is divided by 10 is calculated and the value of n is reduced by 10 times (n = n/10.) Inside the loop. the reversed number is computed using : rev = rev * 10 + digit.

12. Write a program to calculate factors of a positive integer.

Solution =>

```
# include <stdio.h>
void main () {
 int num, i;
 printf("Enter a positive integer:");
 scanf("%d", &num);
 printf("Factors of %d are:", num);
 for (i = 1; i <= num; ++i) {
  printf ("%d ", i);
    }
```

```
    }
}
```

Output

```
Enter a positive integer: 10
Factors of 10 are: 1 2 5 10
```

CCA 102 Data Communications
ASSIGNMENT

1. What are the different types of networks?

Ans) There are different types of Networks.

- LAN (Local Area Networking)
- WLAN (Wireless Local Area Networks)
- WAN (Wide Area Networks)
- MAN (Metropolitan Area Network)
- CAN (Campus Area Networks)

2. Explain the shielded twisted pair (STP) and unshielded twisted pair (UTP)

Ans) The basic difference between UTP and STP is UTP (Unshielded twisted pair) is a cable with wires that the are twisted together to reduce noise and crosstalk. On the contrary STP (Shielded twisted pair) is a twisted pair cable confined in foil or mesh shield that guards the cable against electromagnetic interference.

(3.) What is difference between baseband and broadband transmmission?

Ans Whereas baseband uses digital signaling boardband uses analog signals in the form of multiple trasmission frequencies. For signals to be both sent and received, the trasmission

media must be split into two channels.

4. What is the difference between a hub, modem, router and a switch?

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

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

Ans) But the MAC address is part and parcel of the network adapter, just as your internal organs are part of you. When you move to a new house, you take your liver with you. In the same way, when you move a NIC to a different computer, it takes its MAC address with it.

6. When troubleshooting computer network problems, what common hardware related problems can occur?

Ans) The network consists of hardware, problems can vary from a defective network card or hard

drive . malfunctioning . a bad starting materials or incorrect configuration.

7. In a network that contains two servers and twenty workstations where is the best place to install an Anti-virus program?

Ans) In a network that ~~consists~~ contains two servers. and twenty workstations, where is the best place to install an Anti-virus program the best Solution is to install anti-virus on all the computer in the networks.

(8) Defind static IP and Dynamic IP ? Discuss the difference between IPV4 and IPV6.?

Ans) It is provided by ISP (Internet service provider) While it is provided by DHCP (Dynamic Host Configuration protocal?.. - static ip address does not change any time it means if a static ip address is provided then it can't be changed or modified ~~whti~~ while dynamic ip address change any time :

9. Discuss TCP/IP model in detail ?

Ans) TCP/IP Reference model is a four-layered suite. of communication protocols. TCP stands for

Transmission Control Protocol and IP stands for Internet protocol. The four Host-to-Network layer - It is the lowest layer that is concerned with the physical transmission of data.

10. What is a Web Browser (Browser)? Give some example of browser.

Ans) A web browser or simple browser is an application used to access and view websites. common web browsers include Microsoft Internet Explorer, Google Chrome. Mozilla Firefox and Apple Safari. The primary function of a web browser is to render HTML, the code used to design or markup webpages.

(11) What is a search engine? Give example?

Ans, A search engine is a web-based tool that enables users to locate information on the world wide web. Popular examples of search engines are Google, Yahoo! and MSN Search.

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

Ans) Positive use of the Internet makes our lives easy and simple. The Internet provides us useful datas. information, and knowledge for personal, social, and economics development and it up to us to utilize our time on the world wide web in a productive manner.

13. What is an Internet service Provider ? Give Some example of ISP in India?

Ans) An Internet service provider is an organistation that provides services for accessing using or participating in the Internet. Internet service providers can be organised in various forms, such as commercial, community-owned, non, profit, or otherwise privately owned. Example → are airtel, BSNL etc.

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

Ans) The main difference between MAC and IP address is that MAC Address is used to ensure the physical address of computer. It uniquely identifies the devices on a network. While IP address

used to uniquely identifyise the connection of network with that device take part in a network.

15. How do we view my Internet browser's history?

Ans, To ~~view~~ view the web history in ~~Google~~ Google chorome, click to open the menu: at the top-right of its windows and ~~sheets~~ selects History. then click History a second time. Or press Ctrl + H on your keyboard. This shows the web history as a list of pages, organised by time and date in the current tab.

Assignment

CCA-103 Communication & Soft skills

(1) Elaborate the process & elements of communication in detail through suitable examples.

Ans) Communication process involves elements like sender, receiver, encoding decoding, channel / media, voice and feedback These elements are explained below:

(1) Sender: He is the person who sends his ideas to another person. For example, If a manager wants to inform his subordinates about the introduction of a new product. he is the sender.

2. Message: The idea, feeling, suggestion, guidelines, orders or any content which is intended to be communicated is message. For example, message is the introduction of new product.

3. Encoding: It is the process of converting the idea, thinking or any other component of message into symbols, word, actions diagram, etc. for example, message is connected in word and actions.

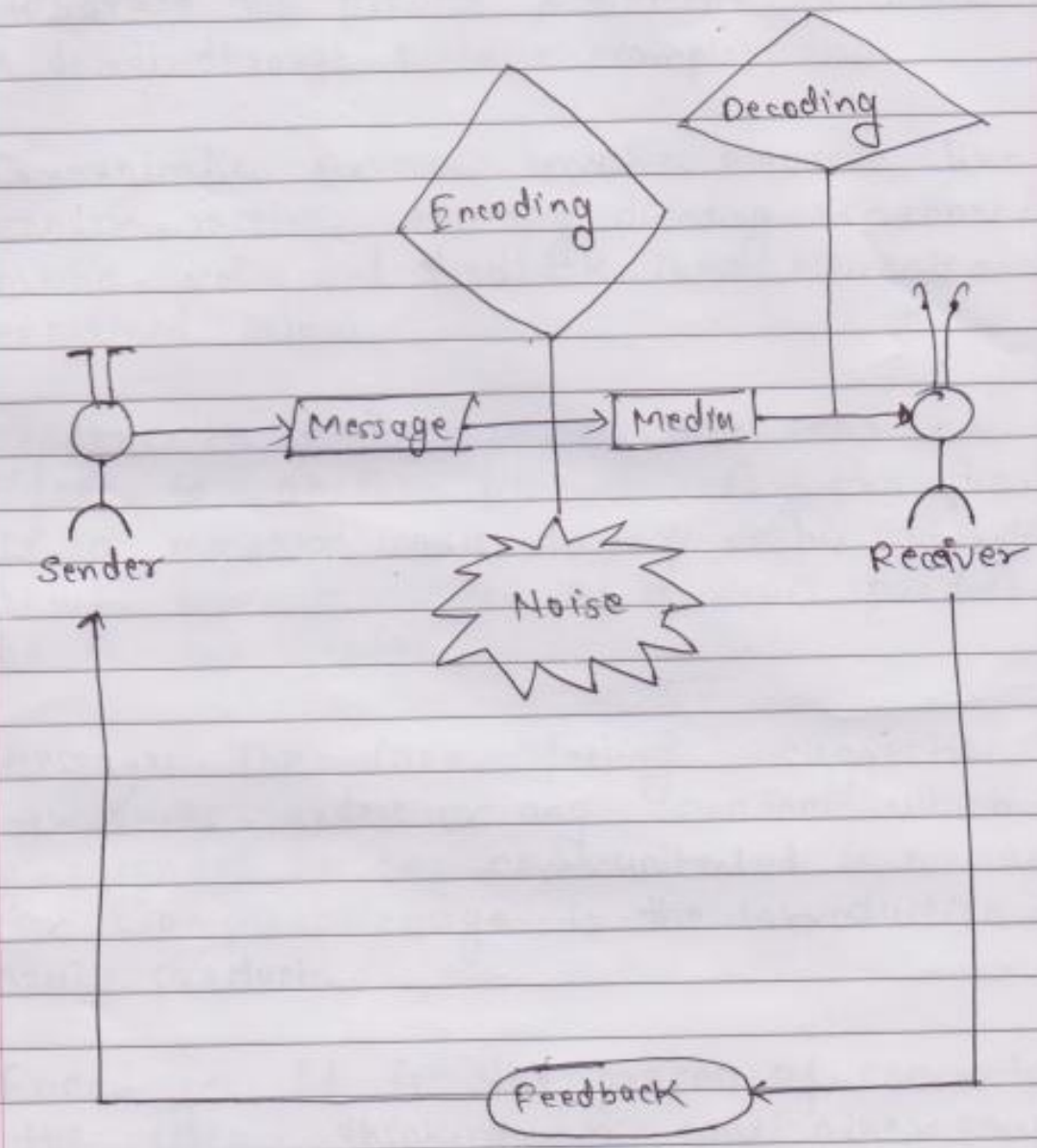
4. Media: It is the medium, passage or route through which encoded message is passed By the sender to the receiver. There can be various forms of media face to face communication, letter, radio, television, e-mail etc. For example manager inform about the introduction of a new product in a meeting through presentation.

(5.) Decoding :- It means translating the encoded message into language understandable by the receiver.

(6.) Receiver: He is the person to whom the message has been sent, for example, subordinates are receives.

7. Feedback :- It is the respone by the receiver. It marks the completion of the communication process.

(8) Noise :- It is hindrance in the process of communication. It can take place at any step in the entire process. It reduces the accuracy of communication e.g. 1) Disturbance in the telephone lines. 2) An inattentive receiver 3) Improper Decoding of Message etc.


Decoding
Encoding
Message
Medium
Sender
Noise
Receiver
Feedback

CRA 104: - Web Technologies
Part-2 Assignment

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 ++;
  }
?>
```

4. Write a program in javascript for unit conversion from kilometer (km) to centimeter (cm) use of message box is necessary.

Ans)
```
<p>
<label> Feet</label>
<input id = " inputfeet"
type = " number" placeholder = "feet"

onfpput = " length Convertor (this. value)"
onchange = " length Convertor (this .value)">
</p>
<p> cm: <span id = "outputmeters">
</span></p>
```