Assignment 1.

Date:20/11/2025

Q1.**what is c language**

Ans

• c language is a programing language which is used to communicat to the computers

• C language is called middlelevel programming language because it combines features of both high-level and low-level programming languages

Q2.Application of c

Ans:

1. Operating Systems Development:

Major parts of Windows, Linux, and Unix are written in C.

2. Device Drivers• :

Drivers for printers, tablets, scanners, graphics cards are written in C

3. Embedded Systems:

Used in devices like microwave ovens, washing machines, cameras, and smart watches.

4. Game Development:

C (and C++) is used to develop high-performance games.

Q3.what is variable?

Ans:

In C programming, a variable is a named storage location in memory

A collection of elements of the same data type.

B) Pointer

Stores the memory address of another variable.

c) Structure (struct)

Used to combine different data types into a single unit.

d) Union

Similar to structure, but memory is shared between members.

e) Function

A block of code that performs a specific task.

3. User-Defined Data Types

These are created by the programmer for specific needs.

a) typedef

Used to give a new name (alias) to an existing data type.

b) enum (Enumeration)

Used to assign names to integer constants, improving code readability.

Q5.What is format specific

Ans:

A format specifier is a special symbol used in functions like printf() and scanf() to tell the compiler what type of data you want to print or

that holds a value. This value can be changed or "varied" during the execution of a program. Variables are fundamental for storing and manipulating data within a C program

Q4.what is the different data types

Ans:

1. Primary (Basic) Data Types

These are the fundamental data types provided by the C language.

a) int

Used to store whole numbers.

Size: 2 or 4 bytes.

b) float

Used to store decimal (floating-point) numbers.

Size: 4 bytes.

c) double

Used to store large floating-point numbers with double precision.

Size: 8 bytes.

d) char

Used to store a single character.

Size: 1 byte.

2. Derived Data Types

These data types are derived from the basic data types.

a) Array

read.

Data Type	Format Specifier	Example
int	%d	printf("%d", a);
float	%f	printf("%f", b);
Double	%lf	printf("%lf", c);
Char	%c	printf("%c", ch);
String(char array(	%s	printf("%sprintf("%d", a);", name);