

# ASSIGNMENT1

DATE:20/11/2025

## Q1. what is c language?

Ans:

- C language is a general programming language. Developed by Dennis Ritchie in 1972. It was mainly created as a system programming language to write The UNIX operating system.

## 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 datatype.
- 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. `typedef` Used to give a new name (alias) to an existing data type. `enum` (Enumeration) Used to assign names to integer constants, improving code readability.

## Q4. what is the different data types

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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.

a) Array

read.

DataType Format Specifier Example  
int %d printf("%d", a); float %f printf("%f", b); Double %lf printf("%lf", c); Char %c printf("%c", ch); String(cha %s rarray( printf("%s printf("%d", a);", name);

1 byte. 2. Derived Data Types These data types are derived from the basic data types.

Q5. What is format specific:

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