1. PROGRAMMING LANGUAGE (C, JAVA, PYTHON, C SHARP)
2. DATA STRUCTURES AND ALGORITHMS (C AND JAVA*)
3. LEET CODE OR CODECHEF
4. CORE KNOWLEDGE

THREE TYPES OF DATA TYPES AVAILABLE IN C PROGRAMMING

1. **PRIMITIVE OR PRIMARY**
    a. INT
    b. CHAR
    c. FLOAT
    d. DOUBLE
2. **USER DEFINED**
    a. STRUCT(STRUCTURE)
    b. UNION
    c. TYPE DEF
    d. ENUM(ENUMERATION)
3. **DERIVED DATATYPE**
    a. ARRAY
    b. POINTER (STORES THE ADDRESS OF THE VARIABLE)

PRIMITIVE DATATYPE

1. **INT:**
    SIZE: 2 0R 4 BYTES BASED ON COMPILER
    RANGE: 2 POWER N = 2 POWER 32 = -4294967296 to +4294967295
    FORMAT SPECIFIER: %d
2. **CHAR:**
    SIZE: 1 BYTES
    RANGE: -128 TO +128
    FORMAT SPECIFIER: %c
3. **FLOAT:**
    SIZE: 4 BYTES
    RANGE: 1.2E-38 TO 3.4E+38
    FORMAT SPECIFIER: %f
4. **DOUBLE:**
    SIZE: 8 BYTES
    RANGE: 2.3E-308 TO 1.7E+308
    FORMAT SPECIFIER: %lf
5. **SHORT INT:**
    SIZE: 2 BYTES
    RANGE: 32768 TO 32767
    FORMAT SPECIFIER: %hi
6. **LONG INT:**
    SIZE: 8 BYTES
    RANGE: -128 TO +128
    FORMAT SPECIFIER: %ld

SIGN MODIFIERS

1. SIGNED
2. UNSIGNED

SIGNED:

IT ACCEPT BOTH +VE AND -VE

RANGE: -4294967296 TO +4294967295

FORMAT SPECIFIER: %d OR %i

UNSIGNED:

IT ACCEPT ONLY +VE

RANGE: O TO 4294967295

FORMAT SPECIFIER: %u

SOME KEY POINTS

- #Include→preprocessor directive
- Printf→Inbuild Function
- Return 0 →terminate the program execution
- THE FORMAT OF THE MEMORY ADDRESS IS GOING TO BE 10 OR 12 HEXA DECIMAL FORMAT

MAIN MEMORY:

- HEAP SECTION
- STACK SECTION
- CODE SECTION

OPERATORS

1. ARITHMETIC
2. LOGICAL
3. BITWISE
4. SIZEOF
5. ASSIGNMENT
6. INCREMENT/DECREAMENT(UNARY)
7. COMPOUND ASSIGNMENT
8. RELATIONAL
9. TERNARY OR CONDITIONAL

1.ARITHMETIC:

+ →ADDITION

-→SUBTRACTION

*****→MULTIPLICATION

/→DIVISION

% → MODULO

2.RELATIONAL

< →LESS THAN

>→GREATER THAN

! →NOT

<=>= →LESS THAN OR GREATER THAN OR EQUAL TO

3.LOGICAL OPERATORS

&&→AND

|| →OR

4.UNARY OPERATORS

- PREINCREMENT **++A**
- POSTINCREMENT **A++**
- PREDECREMENT **--A**
- POSTDECREMENT **A—**

5.BITWISE OPERATOR

- AND→&
- OR→|
- BITWISE EX-OR →^
- BITWISE COMPLEMENT →~