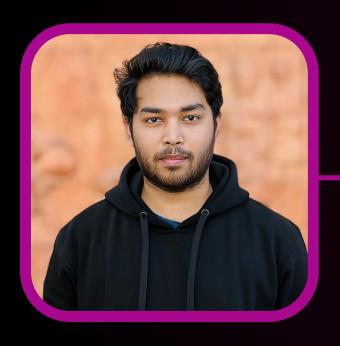


C Programming

Module 02



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Loops in C – for Loop

Repeating Tasks Efficiently

Class 08



Why Loops?

- To execute a block of code multiple times.
- Avoid repetition of code.
- Useful for tasks like:
 - Counting numbers
 - Calculating sum or product
 - Printing patterns

Syntax of FOR Loop

```
for (initialization; condition; increment/decrement) {
    // statements to execute
}
```

- Initialization: Start value of loop variable
- Condition: Loop runs as long as condition is true
- Increment/Decrement: Update loop variable after each iteration

Practice Problem

• Count backward from 10 to 1.

• Print your name 5 times. • Print your name n times (user input). • Count numbers from 1 to 10. • Count numbers from 1 to n (user input). • Print the sum of first 10 numbers. • Print the sum of first n numbers. • Print all even numbers up to 20. • Print all even numbers up to n (user input). • Print all odd numbers up to 30. • Print all odd numbers up to n (user input). • Print all natural numbers from a to b and their sum. • Print all even numbers from a to b and their sum. • Print all odd numbers from a to b and their sum. • Print multiplication table of 5. • Print multiplication table of n (user input). • Print all numbers divisible by 3 up to 30. • Print all numbers divisible by n (user input) up to 100.

