

01.

What is Control Structure?



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Control Structure



A control structure is a **block of code** that **manages the flow of execution in a program**.

Control structures dictate the order in which statements are executed

based on certain conditions.

Types of Control Structure



Types of Control Structure

- 1. **Sequential Structure:** The default structure where statements are executed one after the other in sequence.
- Selection Structure (Conditional Statements): Allows the program to make decisions and execute different blocks of code based on
- specified conditions.
 - **Repetition Structure (Loops):** Allows the execution of a block of code repeatedly as long as a specified condition is true.
- 3.

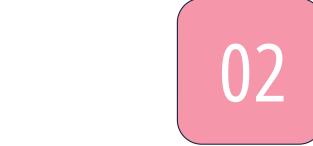
Sequential Structure

Sequential Structure



The default structure where **statements are executed one after the other in sequence**.

```
main()
{
      // Statement 1
      // Statement 2
      // Statement 3
}
```



Selection Structure (Conditional Statements)

Selection Structure (Conditional Statements) • • •

Allows the program to **make decisions** and **execute different blocks of code based on specified conditions**.

```
if statement if
else statement
ladder statement
nested statements
ternary statement
switch case
```

Repetition Structure (Loops)

Repetition Structure (Loops)



Allows the **execution of a block of code repeatedly** as long as a specified **condition is true**.

- 1. Entry Control Loop
 - while loop
 - for loop
- 2. Exit Control Loop
 - do while loop

Let's see Conditional Statements in detail...

If statement



if (condition)

// Code to be executed if the condition is true

If else statement



```
if (condition)
{ } else { }
  // Code to be executed if the condition is true
```

// Code to be executed if the condition is **false**

Ladder statement



```
if (condition 1) { }
  else if (condition 2)
 { } else if (condition
 3) { } else { }
 // Code to be executed if condition 1 is true
 // Code to be executed if condition 2 is true
 // Code to be executed if condition 3 is true
// Code to be executed if none of the conditions is true
```

