

# O1 Control Structure

Types of Control Structures O2
Selection
Structure

If statement,
If else statement,
Ladder statement



01

# Control Structure

Types of Control Structures





#### **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.





#### Sequential Structure

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

#### **Selection Structure**

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

#### Repetition Structure

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

# RED & WHITE SKILL EDUCATION SHAPING SKILLS FOR SCALING HIGHER...!!!

# Types of Control Structure

# Sequential Structure

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

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





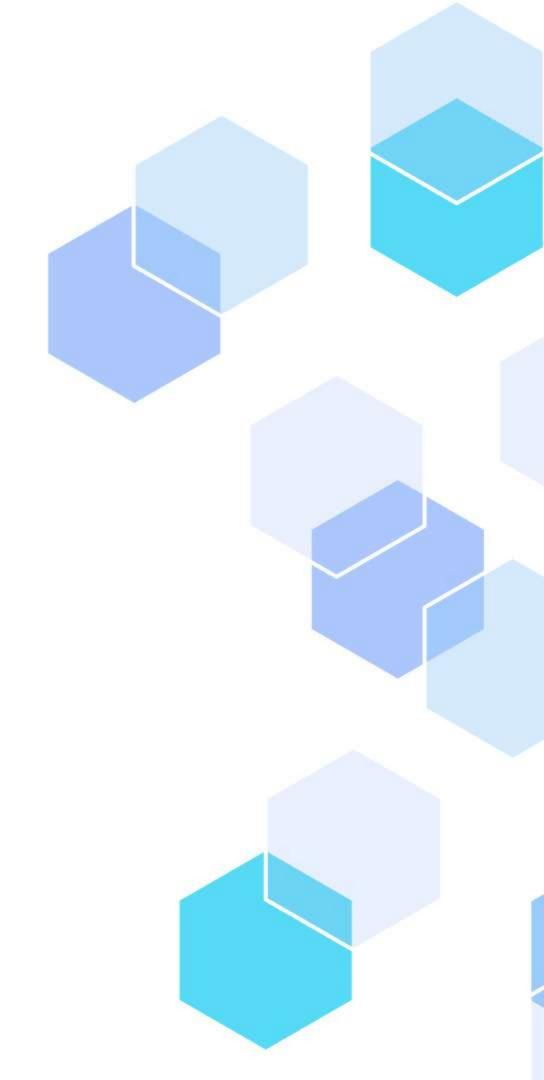
#### Selection Structure

(Conditional Statements)

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

- 1. if statement
- 2. if else statement
- 3. ladder statement
- 4. nested statements
- 5. ternary statement
- 6. switch case





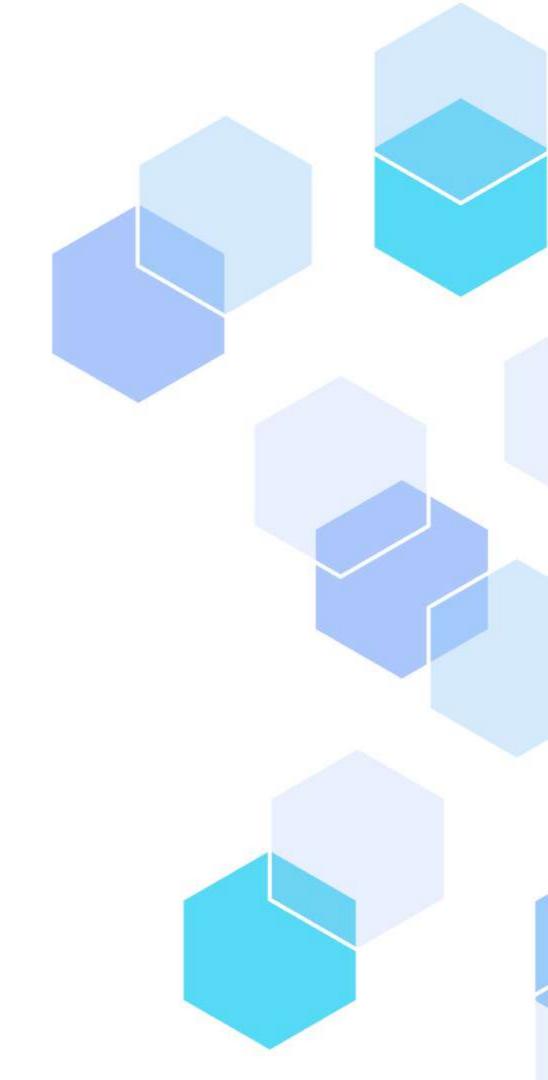
## Repetition Structure

(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





02

# Selection Structure

If statement,
If else statement,
Ladder statement





#### If statement

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





#### If else statement

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





#### Ladder statement

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





## TL;DR

#### **Control Structure**

A Block of code that
 ► manages the flow of execution in a program.

Dictate the order in which
 statements are executed
 based on certain conditions.

I.e., Sequential, Selection, and Repetition.

#### **Selection Structure**

Allows the program to make decisions.

 Execute different blocks of code based on specified conditions.

I.e., if statement, if else
 statement, and ladder statement.

