



TOPSTechnologies

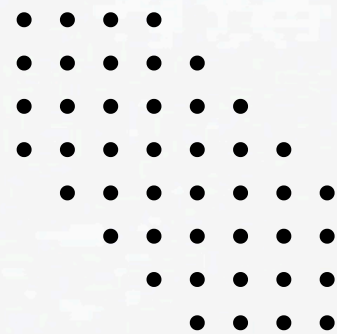
# Conditional Statements

**Presented for :**

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### Que 1

Conditional statements in programming are used to control the flow of a program based on certain conditions. These statements allow the execution of different code blocks depending on whether a specified condition evaluates to true or false, providing a fundamental mechanism for decision-making in algorithms.

#### 1.If-Else Conditional Statement-

The if-else statement extends the if statement by adding an else clause. If the condition is false, the program executes the code in the else block.

*Syntax of If-Else Conditional Statement:*

```
if (condition) {  
    // code to execute if condition is true  
} else {  
    // code to execute if condition is false  
}
```

*Use Cases of If-Else Conditional Statement:*

- Executing one block of code if a condition is true and another block if it's false.
- Handling binary decisions.

#### 2.if-elif Statement in Python-

The if-elif statement is shortcut of if..else chain. While using if-elif statement at the end else block is added which is performed if none of the above if-elif statement is true.

### Que.2

*Nested If Else Statements are a fundamental concept in programming. They allow us to create more complex decision-making structures by placing one if else statement inside another.*

*A nested if statement in Python is an if statement located within another if or else clause. This nesting can continue with multiple layers, allowing programmers to evaluate multiple conditions sequentially. It's particularly useful in scenarios where multiple criteria need to be checked before taking an action.*

SYNTAX -

*if condition1:*

*# Code to execute if condition1 is true*

*if condition2:*

*# Code to execute if both condition1 and condition2 are true*