

Python conditional statements: making decisions in code

How to execute different code blocks based on true or false conditions

★ What Are Conditional Statements?

Conditional statements help Python make decisions.

They allow your program to execute different code based on conditions (True/False).

Conditional statements in Python allow a program to make decisions and control the flow of execution. They check conditions and run specific code when those conditions are true or false. They help programs respond differently to various situations and make the logic dynamic and interactive.

Overview

Using if statements effectively

if statements run code blocks only when a condition evaluates to True

```
python
```

```
age = 18
```

```
if age >= 18:
```

```
    print("You are an adult.")
```

Using if-else Statements effectively

Runs one block if condition is true, otherwise another block.

```
python
```

```
num = 5

if num % 2 == 0:
    print("Even number")
else:
    print("Odd number")
```

Overview

Using if-elif-else Statements effectively

Overview

Used when you have multiple conditions.

```
marks = 75

if marks >= 90:
    print("Grade A")
elif marks >= 75:
    print("Grade B")
else:
    print("Grade C")
```

Comparison operators

These operators return Boolean results (True/False) that drive conditional logic.

Not equal

The `!=` operator tests if values on both sides are not equal to each other.

Greater than

The `>` operator compares if value on left is greater than value on right.

Equal to

The `==` operator checks if values on both sides are equal to each other.

Greater or equal

The `>=` operator checks if value on left is greater than or equal to value on right.

Less or equal

The `<=` operator checks if value on left is less than or equal to value on right.

Less than

The `<` operator compares if value on left is less than value on right.

Real-Life Example

```
temperature = 32

if temperature > 30:
    print("It's hot")
elif temperature > 20:
    print("It's warm")
else:
    print("It's cold")
```