



CONDITIONAL STATEMENTS IN PYTHON

Conditional statements are used to make decisions in a program.

Python supports: **if**, **if-else**, **if-elif-else**.

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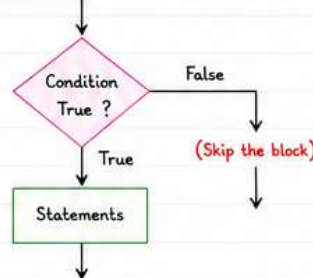
1 IF Statement

- Executes a block of code if the condition is True.
- If condition is False, the block is skipped.

Syntax:

```
if condition:
    # statements
```

Flowchart:



Example:

```
x = 10
if x > 5:
    print("x is greater than 5")
print("Done")    # Always executed
```

Note:

Indentation is very important in Python.

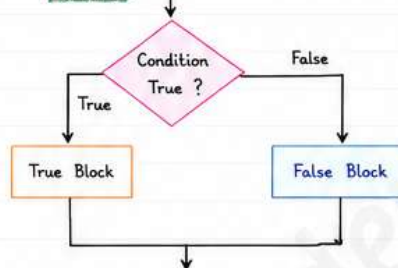
2 IF-ELSE Statement

- Executes one block if condition is True
- otherwise executes another block.

Syntax:

```
if condition:
    # statements when True
else:
    # statements when False
```

Flowchart:



Example:

```
num = -4
if num >= 0:
    print("Positive or Zero")
else:
    print("Negative Number")
```

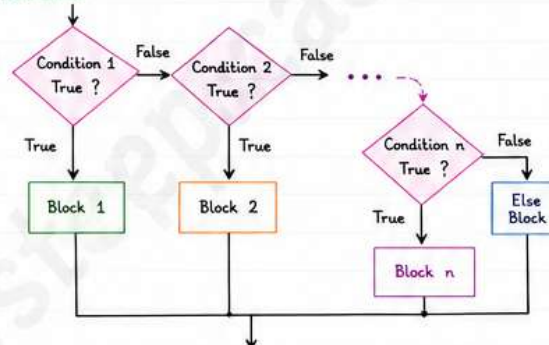
3 IF-ELIF-ELSE Statement

- Used when we have multiple conditions.
- Python checks conditions from top to bottom and executes the first True block.

Syntax:

```
if condition1:
    # block 1
elif condition2:
    # block 2
elif condition3:
    # block 3
else:
    # else block
```

Flowchart:



Example:

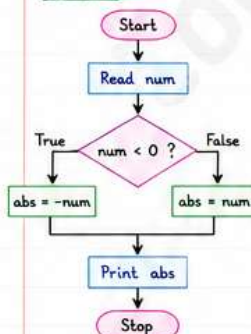
```
marks = 75
if marks >= 90:
    print("Grade A")
elif marks >= 75:
    print("Grade B")
elif marks >= 60:
    print("Grade C")
else:
    print("Need Improvement")
```

4 SIMPLE PROGRAMS

(A) Absolute Value of a Number

Problem: Find the absolute value of a number.

Flowchart:



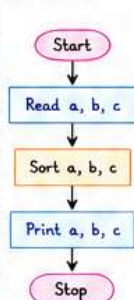
Python Code:

```
num = float(input("Enter a number: "))
if num < 0:
    abs = -num
else:
    abs = num
print("Absolute value is:", abs)
```

(B) Sort Three Numbers

Problem: Read three numbers and display them in ascending order.

Flowchart:



Python Code:

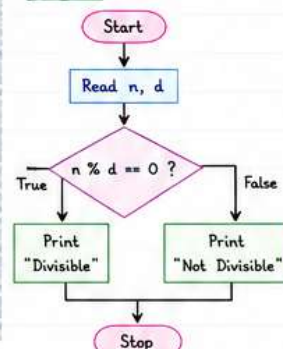
```
a = float(input("Enter first number: "))
b = float(input("Enter second number: "))
c = float(input("Enter third number: "))
if a > b:
    a, b = b, a
if a > c:
    a, c = c, a
if b > c:
    b, c = c, b
print("Sorted order is:", a, b, c)
```

(Using simple comparison and swapping)

(C) Divisibility of a Number

Problem: Check whether a number is divisible by another number.

Flowchart:



Python Code:

```
n = int(input("Enter a number: "))
d = int(input("Enter divisor: "))
if d == 0:
    print("Divisor cannot be zero")
elif n % d == 0:
    print("Divisible")
else:
    print("Not Divisible")
```

Exam Tip

Draw flowchart first, then write code. It helps in better understanding!

Key Points

- ✓ Use **if** when one condition is enough.
- ✓ Use **if-else** when two choices are there.
- ✓ Use **if-elif-else** for multiple choices.
- ✓ Always maintain proper indentation.

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