

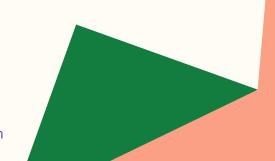
Conditional Statements

Day 5 - Python Basics

Shaida Muhammad

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ShaidaSherpao@gmail.com



Agenda

Python Online Free Ramzan Course 2025 Taught by: Shaida Muhammad

- 1 if statement
- if-else statement
- if-elif-else statement
- 4 Nested conditions

5 Hands-on practice

What are Conditional Statements?

- Definition: Conditional statements allow you to execute code based on whether a condition is True or False.
- Why use them?
 - Make decisions in your program.
 - Control the flow of your code.
- Example:

```
if age > 18:
    print("You are an adult.")
```



if Statement

Syntax:

```
if condition:
```

Code to execute if condition is
True

• Example:

```
age = 20
```

if age > 18:

print("You are an adult.")

- Explanation:
 - The code inside the if block runs only if the condition (age > 18) is True.



if-else Statement

```
Syntax:
    if condition:
        # Code to execute if condition is True
    else:
        # Code to execute if condition is False
Example:
    age = 15
    if age > 18:
        print("You are an adult.")
    else:
        print("You are a minor.")
```

- Explanation:
 - The else block runs if the condition in if is False.

if-elif-else Statement

Syntax:

```
if condition1:
    # Code to execute if
condition1 is True
elif condition2:
    # Code to execute if
condition2 is True
else:
    # Code to execute if all
conditions are False
```

• Example:

```
marks = 75
if marks >= 90:
    print("Grade: A")
elif marks >= 80:
    print("Grade: B")
elif marks >= 70:
    print("Grade: C")
else:
    print("Grade: D")
```

Explanation:

 elif is short for "else if." It checks multiple conditions in order.

Nested Conditions

- Definition: Placing one if statement inside another.
- Syntax:

```
if condition1:
    if condition2:
        # Code to execute if both conditions are True
```

• Example:

```
age = 20
country = "USA"
if age > 18:
    if country == "USA":
        print("You are eligible to vote in the USA.")
```

- Explanation:
 - The inner if statement is checked only if the outer if condition is True.



Hands-On Practice

 Task 1: Write a program to check if a number is positive, negative, or zero.

```
num = float(input("Enter a number: "))
if num > 0:
    print("Positive")
elif num < 0:
    print("Negative")
else:
    print("Zero")</pre>
```

 Task 2: Write a program to check if a person is eligible to vote (age >= 18).

```
age = int(input("Enter your age: "))
if age >= 18:
    print("You are eligible to vote.")
else:
    print("You are not eligible to
vote.")
```



• Task 3: Write a program to assign grades based on marks (A, B, C, D).

```
marks = float(input("Enter your
marks: "))

if marks >= 90:
    print("Grade: A")
elif marks >= 80:
    print("Grade: B")
elif marks >= 70:
    print("Grade: C")
else:
    print("Grade: D")
```

Recap

- **if statement:** Executes code if a condition is True.
- **if-else statement:** Executes one block if True, another if False.
- **if-elif-else statement**: Checks multiple conditions in order.
- Nested conditions: if statements inside other if statements.



Homework

- 1. Write a program to check if a number is even or odd.
- 2. Write a program to find the largest of three numbers.
- 3. Write a program to check if a year is a leap year.



Conditional Statements

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Q&A

- Do you have any questions?
- Share your thoughts.

Conditional Statements



Closing

Next class: Loops (for and while)