TOPS Technology

Python Fundamentals

Presented By:

Nandni Vala

Conditional Statements:

1.Introduction to conditionalstatements: if, else, elif.

- Conditional statements allow a program to make decisions based on whether a condition is true or false.
- **if Statement :**
- The if statement is used to execute a block of code if a specified condition is true.
- **Syntax:**

```
if condition:
    # Code to execute if the condition is true
```

- **Example:**

```
x = 10
if x > 5:
    print("x is greater than 5")
```

- **else Statement:**
- The else statement specifies a block of code to execute if the if condition is false.
- **Syntax:**
- if condition:
- # Code to execute if the condition is true
- else:
- # Code to execute if the condition is false
- **Example:**
- x = 3
- if x > 5:
- print("x is greater than 5")
- else:
- print("x is less than or equal to 5")

- **elif Statement**
- The elif statement (short for "else if") checks multiple conditions in sequence. It is used when there are more than two possible outcomes.
- **Syntax:**
- if condition1:
- # Code to execute if condition1 is true
- elif condition2:
- # Code to execute if condition2 is true
- else:
- # Code to execute if none of the above conditions are true
- Example:
- x = 7
- if x > 10:
- print("x is greater than 10")

```
➢elif x == 10:
➢    print("x is exactly 10")
➢else:
➢    print("x is less than 10")
```

2.Nested if-else conditions.

➢**Nested if-else** refers to an if-else statement within another if or else block. It allows for testing multiple levels of conditions and is used when decisions depend on multiple criteria.

➢**Structure of Nested if-else:**

```
• if condition1:
•     if condition2:
•         # Code to execute if both condition1 and condition2 are true
•     else:
•         # Code to execute if condition1 is true but condition2 is false
• else:
•     # Code to execute if condition1 is false
```

- **Example:**
- num = int(input("Enter a number: "))

- if num >= 0: # Outer condition
-     if num == 0: # Inner condition
-         print("The number is zero.")
-     else:
-         print("The number is positive.")
- else:
-     print("The number is negative.")