

Unit:2 ; Class:3

Operators; Input & Output

What are Operators?



- Operators are symbols used to perform operations on variables and values.
- Types of operators in Python:
 - Arithmetic Operators
 - Comparison Operators
 - Logical Operators
 - Assignment Operators
 - Bitwise Operators
 - Identity Operators
 - Membership Operators

Arithmetic Operators



- Perform basic mathematical operations.
- Examples:
 - + Addition
 - - Subtraction
 - * Multiplication
 - / Division
 - // Floor Division
 - % Modulus
 - ** Exponentiation

```
x = 10
y = 3
print(x + y) # 13
print(x ** y) # 1000
```

Comparison Operators



- Compare two values and return `True` or `False`.
- Examples:
 - `==` Equal to
 - `!=` Not equal to
 - `>` Greater than
 - `<` Less than
 - `>=` Greater than or equal to
 - `<=` Less than or equal to

```
x = 10
y = 5
print(x > y) # True
print(x == y) # False
```

Logical Operators



- Combine conditional statements.
- Examples:
 - **and**: Returns **True** if both conditions are **True**.
 - **or**: Returns **True** if at least one condition is **True**.
 - **not**: Reverses the result of a condition.

```
x = 10
y = 5
print(x > 5 and y < 10)  # True
print(not(x < 5))        # True
```

Assignment Operators



- Assign values to variables.
- Examples:
 - `=` Simple assignment
 - `+=` Add and assign
 - `-=` Subtract and assign
 - `*=` Multiply and assign
 - `/=` Division and assign

```
x = 10
x += 5  # x = x + 5
print(x)  # 15
```

Input and Output in Python



- **Input:** Allows users to provide data to the program.
 - Syntax: `input("Enter something: ")`
- **Output:** Displays data to the user.
 - Syntax: `print("Hello, World!")`

```
# Input
name = input("What is your name? ")

# Output
print("Hello, " + name + "!")
```

Practice Time



1. Write a Python program to take two numbers as input and display their sum.
2. Compare two numbers and print if the first is greater than the second.
3. Use logical operators to check if a number is between 10 and 20.

Summary of Class 2



- Learned about different types of operators.
- Understood how to take input and display output.
- Practiced simple coding examples.

Assignment: Operators; Input & Output

Task 1: Write a program that takes two numbers as input and performs the following:

- Addition
- Subtraction
- Multiplication
- Division

Task 2: Comparison Operations 2. Write a program that compares two numbers input by the user and prints:

- Which number is larger
- Whether the two numbers are equal

Task 3: Logical Operations 3. Write a program that checks whether a given number is:

- Greater than 10
- Less than 50
- Divisible by both 2 and 5

Task 4: Input & Output 4. Write a program to ask the user for their name, age, and favorite color, then display the following message:

- "Hello [name], you are [age] years old and your favorite color is [color]!"



Thank You

A large light blue rectangle with a black border, containing the text "Thank You". It is flanked by a yellow square on the left and a red square on the right.