

## Assignment: Python if Conditional Statements

 Module: Python if Conditional Statements

 Objective:

To practice Python's decision-making statements and write logic-based programs using:

- if
- if-else
- if-elif-else
- nested if

By completing this assignment, learners will:

- Understand how conditional logic works
- Learn to combine comparisons and logical operators
- Gain confidence in writing decision-based programs

### Assignment Tasks

#### Q1. Basic if Statement

Write a Python program that checks if a number is positive.

Example Input:

Enter a number: 5

Example Output:

The number is positive

#### Q2. if-else Example

Write a program that accepts a number and prints whether it is even or odd.

Example Input:

Enter a number: 8

Example Output:

8 is even

#### Q3. if-elif-else Ladder

Write a program that accepts a student's marks and prints:

- Distinction if marks  $\geq 75$
- First Class if marks  $\geq 60$
- Second Class if marks  $\geq 50$
- Fail otherwise

Example Input:

Enter marks: 68

Example Output:

Result: First Class

#### **Q4. Nested if**

Write a program that accepts a number and:

- If the number is positive
  - Check if it is even or odd
  - Else print "Number is not positive"

Example Input:

Enter number: 6

Example Output:

6 is positive and even

#### **Q5. Largest of Three Numbers**

Write a program to input three numbers and print the largest number.

Example Input:

Enter three numbers: 10 25 8

Example Output:

25 is the largest number

#### **Q6. Grading System**

Accept marks out of 100 and assign grades:

- A: 90–100
- B: 80–89
- C: 70–79
- D: 60–69
- F: below 60

Example Input:

Enter marks: 72

Example Output:

Grade: C

#### **Q7. Vowel or Consonant**

Write a Python program to check whether an input alphabet is a vowel or consonant.

Example Input:

Enter a letter: e

Example Output:

e is a vowel

### **Q8. Leap Year Checker**

Write a program that checks if a given year is a leap year.

Rules:

- Divisible by 4 → Leap year
- But divisible by 100 → Not leap year
- Unless also divisible by 400 → Leap year

Example Input:

Enter year: 2024

Example Output:

2024 is a leap year

### **Q9. Simple Calculator (if-elif)**

Accept two numbers and an operator (+, -, \*, /). Perform the operation using if-elif.

Example Input:

Enter first number: 10

Enter second number: 5

Enter operator: \*

Example Output:

Result: 50

### **Q10. Eligibility Check**

Ask user for age and citizenship (Y/N). Print if they are eligible to vote (age ≥ 18 and citizenship = Y).

Example Input:

Enter age: 20

Are you a citizen (Y/N)? Y

Example Output:

You are eligible to vote

### **Bonus Challenge**

Write a program that checks if a given character is:

- Uppercase letter
- Lowercase letter
- Digit
- Special character

Example Input:

Enter a character: \$

 Example Output:  
It is a special character