

Aim:- Write a python program to demonstrate the use of if else statement

Theory:-

In Python, If-Else is a fundamental conditional statement used for decision-making in programming. If...Else statement allows to execution of specific blocks of code depending on the condition is True or False.

if Statement

if statement is the most simple decision-making statement. If the condition evaluates to True, the block of code inside the if statement is executed.

if....else Statement

if...else statement is a control statement that helps in decision-making based on specific conditions. When the if condition is False. If the condition in the if statement is not true, the else block will be executed.

Nested If Else Statement

Nested if...else statement occurs when if...else structure is placed inside another if or else block. Nested If..else allows the execution of specific code blocks based on a series of conditional checks.

if...elif...else Statement

if-elif-else statement in Python is used for multi-way decision-making. This allows us to check multiple conditions sequentially and execute a specific block of code when a condition is True. If none of the conditions are true, the else block is executed.

Program:

if....else Statement

Python program to check if the input number is odd or even.

A number is even if division by 2 gives a remainder of 0.

If the remainder is 1, it is an odd number.

```
num = int(input("Enter a number: "))
if (num % 2) == 0:
    print("Number is Even")
else:
    print("Number is Odd")
```

if...elif...else Statement

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

Python program to find the largest number among the three input numbers

following lines to take three numbers from user

```
num1 = float(input("Enter first number: "))
num2 = float(input("Enter second number: "))
num3 = float(input("Enter third number: "))
```

```
if (num1 >= num2) and (num1 >= num3):
    largest = num1
elif (num2 >= num1) and (num2 >= num3):
    largest = num2
else:
    largest = num3
```

```
print("The largest number is", largest)
```

Nested If Else Statement

Program to determine grade based on marks

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

```
if marks >= 50:
    print("You passed!")

    if marks >= 90:
        print("Excellent! You got an A+")
    elif marks >= 75:
        print("Great job! You got an A")
    elif marks >= 60:
        print("Good! You got a B")
    else:
```

```
    print("You got a C")  
else:  
    print("Sorry, you failed.")  
Output:
```

Result:Hence, we successfully performed if else statement in python.