Practical No 8

Aim

Develop a Python program that takes a numerical input and identifies whether it is even or odd, utilizing conditional statements and loops

Apparatus / Software Required

- Python Interpreter (Python 3.14.2)

Theory

Python provides **conditional statements and loops** to control the flow of a program.

Conditional Statement

Conditional statements are used to **perform different actions based on conditions**. Python mainly uses `if` and `else`.

Syntax:

```
if condition:
  statements
else:
  statements
```

Example:

```
num = 5

if num > 0:
  print("Positive number")
else:
  print("Negative number")
```

Loop

A loop is used to **execute a block of code repeatedly**. Python provides a `while` loop to repeat operations until a condition becomes false.

Syntax:

```
while condition:
  statements
```

Example:

```
i = 1
while i <= 5:
  print(i)
  i = i + 1
```

Modulus Operator (%)

The modulus operator `%` returns the **remainder of a division operation**.

Example:

10 % 2 = 0
7 % 2 = 1

If the remainder is **0**, the number is **Even**.
If the remainder is **not 0**, the number is **Odd**.

Algorithm

1. Start the program.
2. Ask the user to enter a number.
3. Use a loop to allow repeated execution.
4. Check the number using modulus operator `%`.
5. If the number `% 2 == 0`, display **Even Number**.
6. Otherwise display **Odd Number**.
7. Ask the user whether they want to continue.
8. Stop the program if the user chooses not to continue.

Program Code

Output

Conclusion