EXPERIMENT NO: 8 Number Type Identifier

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

Theory:

1. Conditional Statements (if, elif, else)

Conditional statements are used to make decisions in a program by executing different blocks of code based on conditions.

- Control the flow of the program based on conditions.
- Execute specific code only when a condition is met.

2. Loops (for, while)

Loops are used to **repeat a block of code** multiple times until a condition is met.

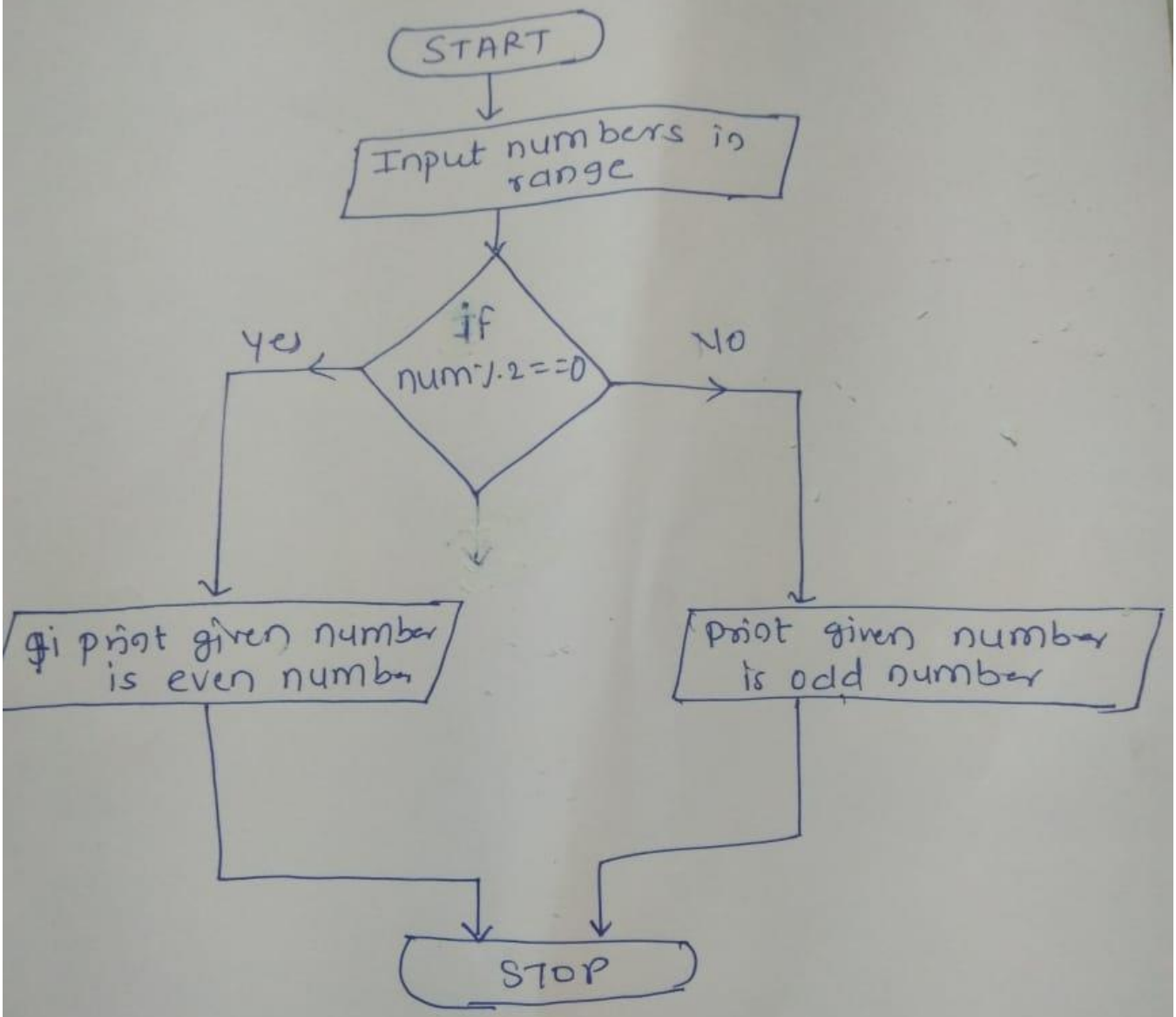
Types of Loops:

1. **for loop** – Iterates over a sequence (list, tuple, dictionary, range, etc.).
2. **while loop** – Repeats as long as a condition remains **True**.

Algorithm:

1. **Start**
2. **Input** the number of elements (`n`) to check.
3. **Use a loop** to take `n` numbers as input (or iterate over a range).
4. **Inside the loop**:
   - **Check if the number is even** using `if number % 2 == 0`
   - **If True**, print `"Even Number"`
   - **Else**, print `"Odd Number"`
5. **Repeat** the process for `n` numbers.
6. **End**

Flowchart :- Number Type Identifier



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Program:

```
# input range from user
start = int(input("Enter the start of range:  "))
end= int(input("Enter the end of range:  "))
# Loop through range
for num in range(start, end+1):
    if num %2 ==0:
        print(num, "given number is even number")
    else :
        print( num, "given number is odd number")
```