FOR LOOP

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WHAT IS LOOP

- A loop is a programming structure that repeats a block of code until a specified condition is met.
- Used to automate repetitive tasks and reduce redundancy.

TYPES OF LOOPS

- While Loop
- For Loop
- Do-While Loop

FOR LOOP

A for loop is used for iterating over a sequence (that is either a list, a tuple, a dictionary, a set, or a string).

This is less like the for keyword in other programming languages, and works more like an iterator method as found in other object-orientated programming languages.

With the for loop we can execute a set of statements, once for each item in a list, tuple, set etc.

ALGORITHM

1. Start

2. Input Step: Take an integer input i from the user.

3. Loop Setup: Use a for loop with a range from 1 to i+1:The range(1, i+1) ensures the loop runs from 1 to i

4. Loop Execution: For each value num in the range and print value of num.

5. Loop Ends: When all numbers from 1 to i are printed.

6. Stop.

EXAMPLE AND OUTPUT

main.py (left screen)

main.py | Output

```python
i=int(input("Enter the number: "))
for num in range(1,i+1):
    print(num)
```

Run

Output (right screen)

main.py | Output

```
Enter the number: 10
1
2
3
4
5
6
7
8
9
10

=== Code Execution Successful ===
```

Thank You