Series Of Consecutive Numbers Program

Problem 1:

Write a Python program that forms a continuous series of numbers together and then print only a portion of that string.

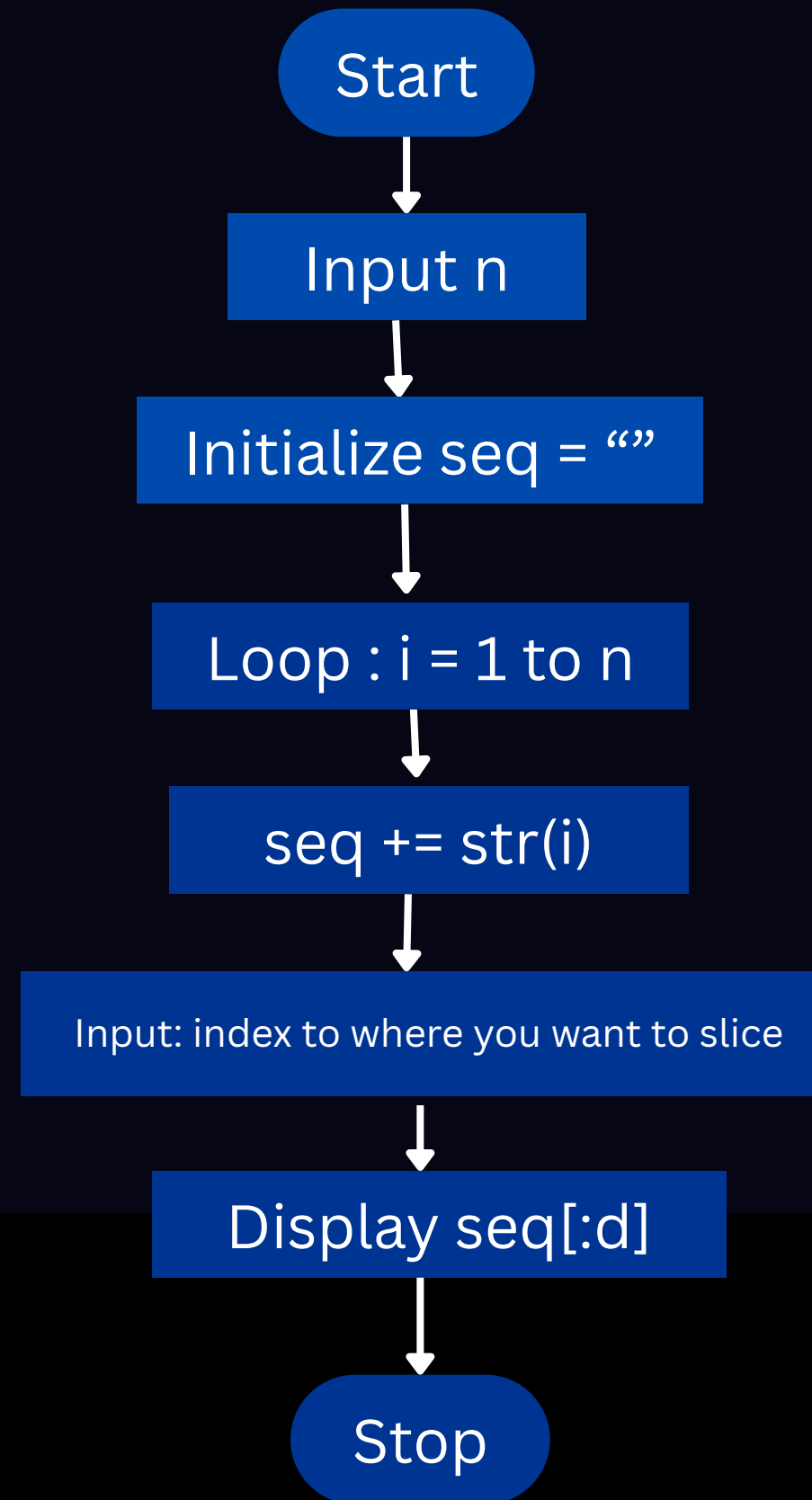**Input:**   A number n from user.

Process: Create a string by concatenating digits 1 to n.

Output: A sliced part of the final string.

Algorithm:

1. Start.
2. Create an empty string.
3. Use a loop to generate values.
4. Convert each value to string and append it to main string.
5. Slice the final string to get the required part.
6. Print the sliced string.
7. Stop.

Flowchart:

Start

↓

Input n

↓

Initialize seq = ""

↓

Loop : i = 1 to n

↓

seq += str(i)

↓

Input: index to where you want to slice

↓

Display seq[:d]

↓

Stop

Problem 2:

Write a program to find the digit at a given position in the sequence formed by concatenating natural numbers.

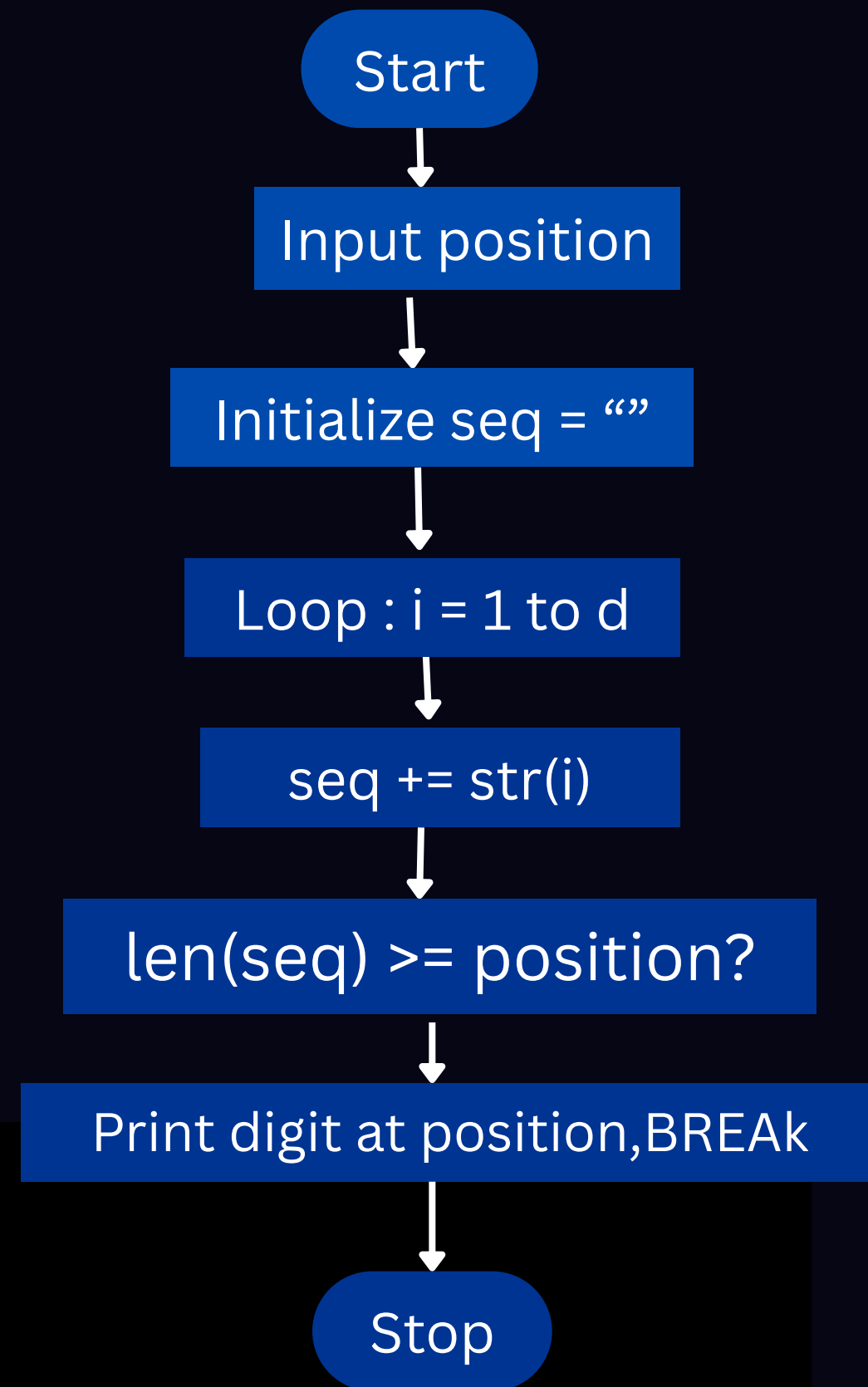**Input:** Position (d) to search for a digit.

Process: Generate series,search for digit at position.

Output: Display the digit at given position.

Algorithm:

1.Start

2.Input position value.

3.Initialize empty string sequence = ""

4.Loop from i = 1 to d

5.Concatenate str(i) to sequence.

6.Check if len(sequence)>= position.

7.If yes,print digit at position,BREAK

8.Stop

Flowchart:

Key Concept Used:

1.**String Concatenation:** Building sequence with +=

2.**Loops:** To generate number sequence.

3.**String Slicing:** Using [:d] to extract portions

4.**Conditional Logic:** If statements for decision making.

5.**Input/Output:** User interaction with input() and print().

Thank You!!

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