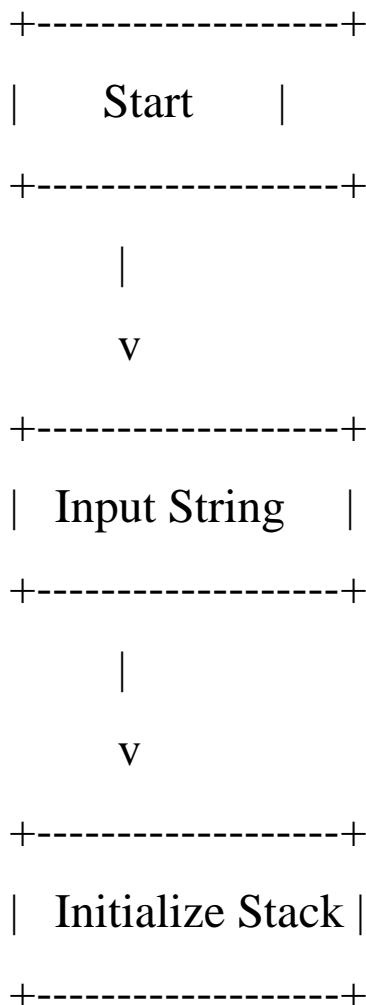


❖ Reverse String:

- Explanation- The problem is to reverse a given string using a stack data structure. The program should read a string input from the user, push each character onto the stack, and then pop the characters off the stack to form the reversed string. The output should display the original string alongside its reversed version.
- Time Complexity- $O(n)$
- Space Complexity- $O(n)$
- Flowchart-



```

    |
    v
+-----+
| Push each      |
| character to stack |
+-----+
    |
    v
+-----+
| Initialize     |
| Reversed String |
+-----+
    |
    v
+-----+
| Is Stack Empty? |
+-----+
    / \
  Yes  No
    |  |
    v  v
+-----+
| Return Reversed |

```

```

|   String   |
+-----+
|
|   v
+-----+
|   End     |
+-----+
|
|   v
+-----+
| Pop character |
| from stack and |
| append to     |
| Reversed String |
+-----+
|
|   v
+-----+
| Is Stack Empty? |
+-----+
|   /   \
| Yes   No
|       |

```

v v

+-----+

| Return Reversed |

| String |

+-----+