

Rotate a String Left by K Positions

Write a program to rotate a given string *s* left by *k* positions without using any built-in string functions.

For example, rotating "abcdef" by 2 would give "cdefab".

Instructions: Do not use built-in rotation or substring functions. Implement the logic manually.

Program:

```
import java.util.Scanner;

public class StringRotator {

    public static String rotateLeft(String s, int k) {

        char[] arr = s.toCharArray();

        int n = arr.length;

        k = k % n;

        char[] result = new char[n];

        for (int i = 0; i < n; i++) {

            result[i] = arr[(i + k) % n];

        }

        return new String(result);

    }

    public static void main(String[] args) {

        Scanner sc = new Scanner(System.in);

        System.out.print("Enter the string: ");

        String s = sc.nextLine();

        System.out.print("Enter the rotation value (k): ");

        int k = sc.nextInt();

        String rotated = rotateLeft(s, k);

        System.out.println(rotated);

        sc.close();

    }

}
```

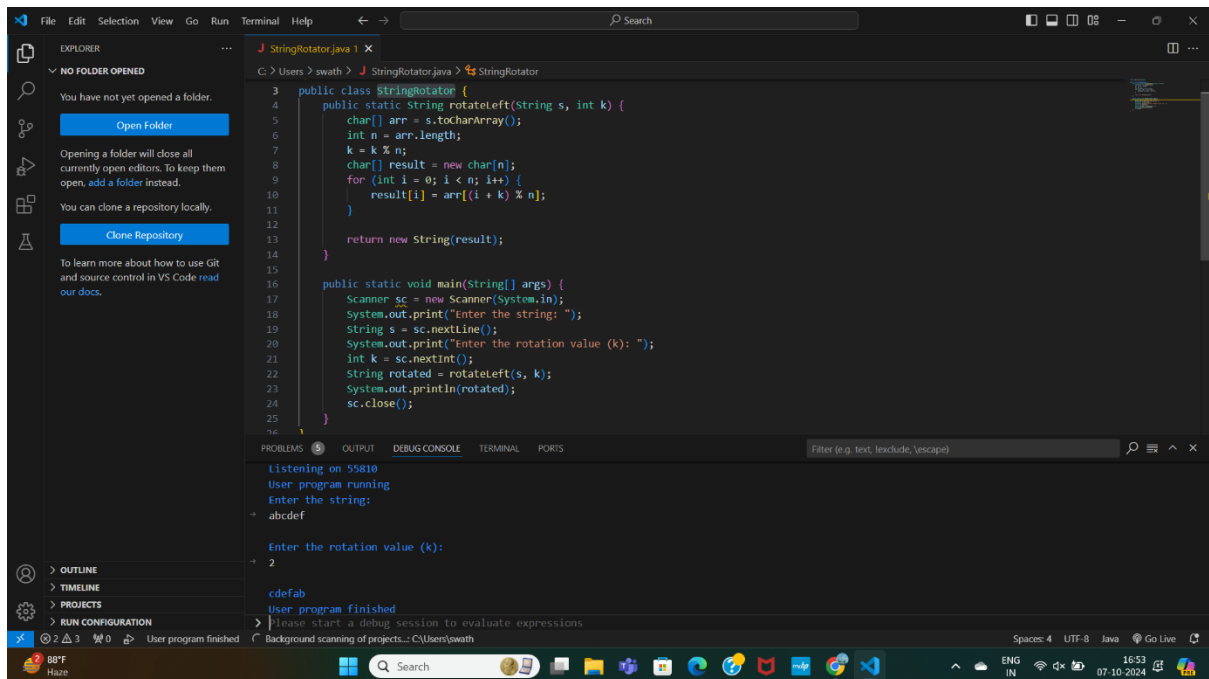
}

Output:

Testcase1-

Input: abcdef

Output: cdefab



```
File Edit Selection View Go Run Terminal Help
StringRotator.java
C:\Users\swath> J StringRotator.java
3 public class StringRotator {
4     public static String rotateLeft(String s, int k) {
5         char[] arr = s.toCharArray();
6         int n = arr.length;
7         k = k % n;
8         char[] result = new char[n];
9         for (int i = 0; i < n; i++) {
10             result[i] = arr[(i + k) % n];
11         }
12     }
13     return new String(result);
14 }
15
16 public static void main(String[] args) {
17     Scanner sc = new Scanner(System.in);
18     System.out.print("Enter the string: ");
19     String s = sc.nextLine();
20     System.out.print("Enter the rotation value (k): ");
21     int k = sc.nextInt();
22     String rotated = rotateLeft(s, k);
23     System.out.println(rotated);
24     sc.close();
25 }
26
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
Listening on 55810
User program running
Enter the string:
+ abcdef
Enter the rotation value (k):
+ 2
cdefab
User program finished
Please start a debug session to evaluate expressions
Background scanning of projects... C:\Users\swath
```

Testcase2:

Input: 123456789

Output: 456789123

```
3 public class StringRotator {
4     public static String rotateleft(String s, int k) {
5         char[] arr = s.toCharArray();
6         int n = arr.length;
7         k = k % n;
8         char[] result = new char[n];
9         for (int i = 0; i < n; i++) {
10             result[i] = arr[(i + k) % n];
11         }
12         return new String(result);
13     }
14
15     public static void main(String[] args) {
16         Scanner sc = new Scanner(System.in);
17         System.out.print("Enter the string: ");
18         String s = sc.nextLine();
19         System.out.print("Enter the rotation value (k): ");
20         int k = sc.nextInt();
21         String rotated = rotateleft(s, k);
22         System.out.println(rotated);
23         sc.close();
24     }
25 }
```

Listening on 59877
User program running
Enter the string:
123456789
Enter the rotation value (k):
3
User program finished
456789123
Please start a debug session to evaluate expressions
Background scanning of projects: C:\Users\swath

Testcase3:

Input: swathi

Output: hiswat

```
3 public class StringRotator {
4     public static String rotateleft(String s, int k) {
5         char[] arr = s.toCharArray();
6         int n = arr.length;
7         k = k % n;
8         char[] result = new char[n];
9         for (int i = 0; i < n; i++) {
10             result[i] = arr[(i + k) % n];
11         }
12         return new String(result);
13     }
14
15     public static void main(String[] args) {
16         Scanner sc = new Scanner(System.in);
17         System.out.print("Enter the string: ");
18         String s = sc.nextLine();
19         System.out.print("Enter the rotation value (k): ");
20         int k = sc.nextInt();
21         String rotated = rotateleft(s, k);
22         System.out.println(rotated);
23         sc.close();
24     }
25 }
```

Enter the string:
swathi
Enter the rotation value (k):
4
hiswat
Please start a debug session to evaluate expressions
Background scanning of projects: C:\Users\swath