Assignment-8

FIND CHARACTER AT SPECIFIED LOCATION IN A STRING:

CODE:

```java
package Assignment8;

import java.util.Scanner;

public class CharacterFinder {
    public char characterLocator(String inputString,String position) {  1 usage
        try {
            int pos = Integer.parseInt(position);
            if (pos >= 0 && pos < inputString.length()) {
                return inputString.charAt(pos);
            } else {
                throw new IndexOutOfBoundsException("Position is out of bounds.");
            }
        } catch (NumberFormatException e) {
            System.err.println("Number Format Exception");
            return '\0'; // '\0' represents null character or an error state
        } catch (IndexOutOfBoundsException e) {
            System.err.println("StringIndexOutOfBoundsException");
            return '\0';
        }
    }
```

```java
    public static void main(String[] args) {
        CharacterFinder finder = new CharacterFinder();
        Scanner sc=new Scanner(System.in);
        System.out.println("Enter the string:");
        String inputString=sc.nextLine();
        System.out.println("Enter the position:");
        String position = sc.next();
        char result = finder.characterLocator(inputString, position);
        if (result != '\0') {
            System.out.println(result);
        }
    }
}
```

Output1:

```
"C:\Program Files\Java\jdk-20\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA 2024.1\lib\idea_rt.jar=58769:C:\Program Files\JetBrains\IntelliJ IDEA 2024.1\b
Enter the string:
This is a demo sentence
Enter the position:
10
d

Process finished with exit code 0
```

Output2:

```
"C:\Program Files\Java\jdk-20\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA 2024.1\lib\idea_rt.jar=58765:C:\Program Files\JetBrains\IntelliJ IDEA 2024.1\b
Enter the string:
This is a demo sentence
Enter the position:
abc
Number Format Exception

Process finished with exit code 0
```

Output3:

```
"C:\Program Files\Java\jdk-20\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA 2024.1\lib\idea_rt.jar=58777:C:\Program Files\JetBrains\IntelliJ IDEA 2024.1\b
Enter the string:
This is a demo sentence
Enter the position:
25
StringIndexOutOfBoundsException

Process finished with exit code 0
```