

JAVA - J2EE Batch 2

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Assignment-8

2 PROBLEM STATEMENT - FIND CHARACTER AT SPECIFIED LOCATION IN A STRING

Given a string find the character in particular location in the string

This exercise contains a class named CharacterFinder with the following method:

```
+characterLocator(String, String) : character
```

- Should take two String values as input and return a character as result
- Should also handle exception thrown by logic using try and catch

Example

```
Sample Input:  
This is a demo sentence, 8  
Expected Output:a
```

```
Sample Input:  
This is a demo sentence, xyz  
Expected Output:NumberFormatException
```

```
Sample Input:  
This is a demo sentence, 40  
Expected Output:StringIndexOutOfBoundsException
```



```
CharacterFinder.java
1 package com.Day7;
2
3 public class CharacterFinder {
4     public char characterLocator(String inputString, String index) {
5         try {
6             int idx = Integer.parseInt(index);
7             if (idx < 0 || idx >= inputString.length()) {
8                 throw new StringIndexOutOfBoundsException();
9             }
10            return inputString.charAt(idx);
11        } catch (NumberFormatException e) {
12            System.out.println("NumberFormatException");
13            return '0';
14        } catch (StringIndexOutOfBoundsException e) {
15            System.out.println("StringIndexOutOfBoundsException");
16            return '0';
17        }
18    }
19 }
20

CharacterFinderMain.java
1 package com.Day7;
2
3 import java.util.Scanner;
4
5 public class CharacterFinderMain {
6
7     public static void main(String[] args) {
8         Scanner scanner = new Scanner(System.in);
9         CharacterFinder finder = new CharacterFinder();
10
11         System.out.print("Enter the string: ");
12         String inputString = scanner.nextLine();
13
14         System.out.print("Enter the index: ");
15         String index = scanner.nextLine();
16
17         char result = finder.characterLocator(inputString, index);
18         System.out.println("Character at index " + index + ": " + result);
19
20         scanner.close();
21     }
22 }
23 }

Console
<terminated> CharacterFinderMain [Java Application] D:\my\eclipse-jee-2024-03-R-win32-x86_64\eclipse\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64.17.0.10.v20240120-1143\jre\bin\javaw.exe (21-Mar-2024, 5:52:28 pm - 5:52:41 pm) [pid: 27188]
Enter the string: This is a demo sentence
Enter the index: 8
Character at index 8: a
```

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3 public class CharacterFinder {
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18         System.out.println("Character at index " + index + ": " + result);
19
20         scanner.close();
21     }
22 }
23 }

Console
<terminated> CharacterFinderMain [Java Application] D:\my\eclipse-jee-2024-03-R-win32-x86_64\eclipse\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64.17.0.10.v20240120-1143\jre\bin\javaw.exe (21-Mar-2024, 5:51:35 pm - 5:51:52 pm) [pid: 25180]
Enter the string: This is a demo sentence
Enter the index: xyz
NumberFormatException
```

```
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3 public class CharacterFinder {
4     public char characterLocator(String inputString, String index) {
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Console
<terminated> CharacterFinderMain [Java Application] D:\my\eclipse-jee-2024-03-R-win32-x86_64\eclipse\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64.17.0.10.v20240120-1143\jre\bin\javaw.exe (21-Mar-2024, 5:49:04 pm - 5:49:08 pm) [pid: 21552]
Enter the string: This is a demo sentence
Enter the index: 40
StringIndexOutOfBoundsException
```