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Lab - 10

**Section A**

Step 1

The method firstRepeatedCharacther() returns the same occurring alphabet at adjacent position of index.

Step 4

String Index Out of Bounds Exception

It does not check for second repeated character.

Step 5

The nature of the bug was a silly. The programmer did not write the conditions in for loop correctly. The int i < string. length () – 1;

**Section B**

Step 2

There something wrong with the method test to find repeated characters in the string.

Step 3

The step into at this break point goes into test method.

Step 4:

The step takes us to the first line in the test method.

Step 5: We should use step to detect the algorithm error within our test method.

Step 6:

C = 0 i = 1

C= 1 i= 2

C= 2 i = 8

C= 3 i = 11

Step 7:

The position where c increases is special because, the adjacent position to c has the same alphabetic character and c increments by 1.

Step: 8

The program does not read the lines into the method. As it goes to next line in main program. Basically, it terminates the method.

Step9: It doesn’t find the start of first aa group because the for loop starts int i = 1; So it does not read the character at 0 position.

Step 10

Because of the second if condition used in our method word.charAt(i - 1) = word.charAt(i)

The word.charAt(i - 1) cannot read character at – 1 position.

**Sec C**

1. We set the break point at the line with this code String letter = word.substring(i, i + 1);

Because the output shows error with this command.

2. Before for loop it shows value of Sting from at first position i = 0 only. It just reading the first characters in the for loop, whereas its index position is incrementing in the while loop.

3. Yes the bug happens during printing the output in tester class because String letter = word.substring(i, i + 1); is out of for loop.

4. The for loop was just checking for first character of the string at word.substring(0,1) everytime in the for loop.

5.Yes I got the enough information to fix the bug.

String letter = word.substring(i, i + 1); should be inside the for loop so that it checks for each character in the string for vowel.