Saud Khan

Fa21-bse-033

Software Testing

Mid-Lab

ALGORITHM 4: FIRST NON-REPEATING CHARACTER

CONTROL FLOW GRAPH
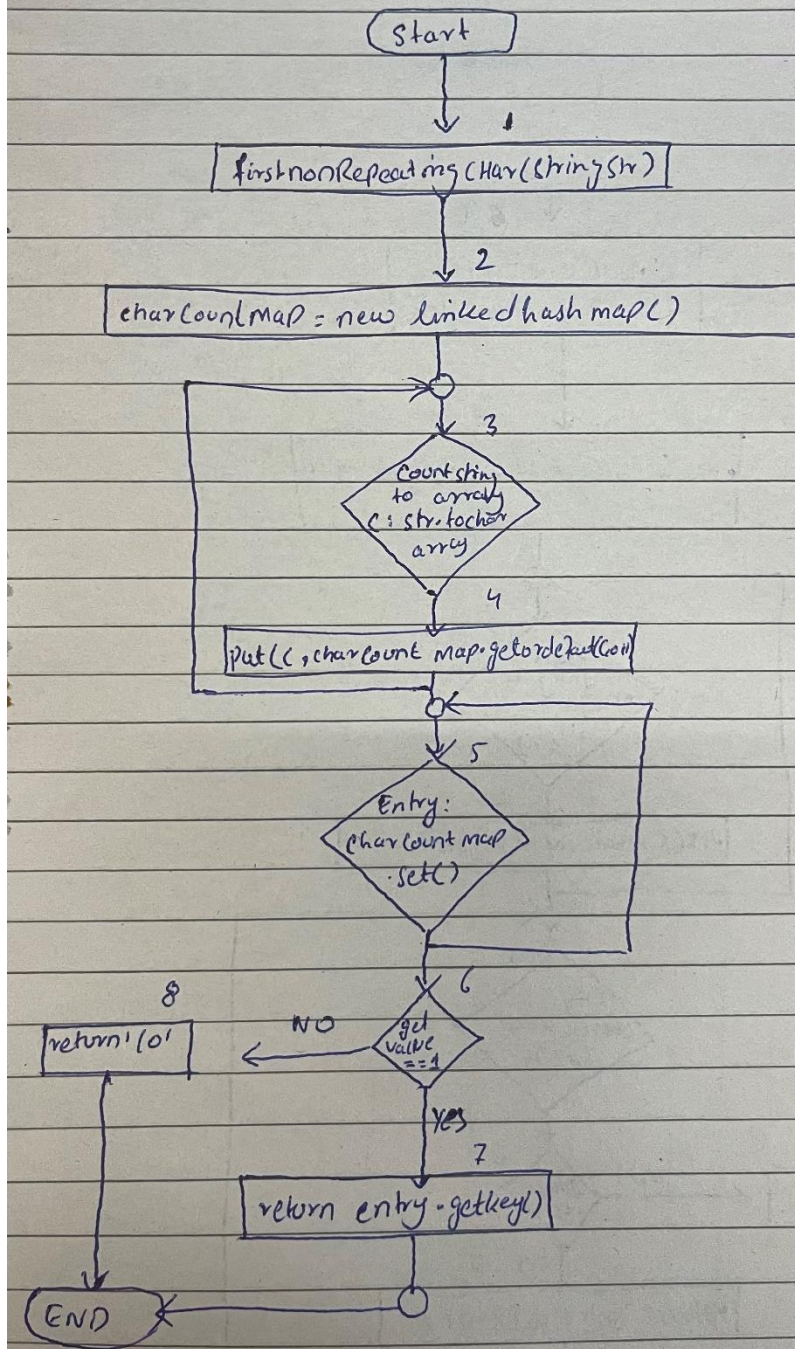
Saud Khan

Fa21-BSC-033

Date: _____ Software Testing   Day: _____

FIRST NON-REPEATING CHARACTER

(Start)

↓ 1

firstnonRepeating CHar (string str)

↓ 2

charCountMap = new linked hash map ()

↓ 3

Count string to array
C: str. tochar arry

↓ 4

put (c, charCount map. getordefault (c. 0))

↓ 5

Entry:
char Count map
. set ()

↓ 6

get value == 1

NO → return '0'   (8)

yes ↓ 7

return entry. getkey ()

END

TEST CASES:

T-ID	DESCRIPTION	INPUT VALUES	EXPECTED	ACTUAL	STATUS
1	Test with non repeating character	aabcc	b	B	**Pass**
2	Test with all repeating character	Sswwiiss	Null	Null	**Pass**
3	Test with all unique characters	Abc	A	A	**Pass**
4	Test with empty string	" "	Null	Null	**Pass**

TC1:

```
23        @Test
24        public void testFirstNonRepeatingChar() {
25          System.out.println("firstNonRepeatingChar");
26          String str = "aabcc";
            Character expResult = 'b';
28          Character result = FirstNonRepeatingChar.firstNonRepeatingChar(str);
29          assertEquals(expResult, result);
30        }
31
32
```

javaapplication1.FirstNonRepeatingCharTest ❯ ○ testFirstNonRepeatingChar ❯ expResult ❯

Output - JavaApplication1 (test) ✕ 🕙 Test Results ✕

javaapplication1.JavaApplication1Test ✕ javaapplication1.FirstNonRepeatingCharTest ✕

Tests passed: 100.00 %
Both tests passed. (0.047 s

```
main
First non-repeating character is: b
firstNonRepeatingChar
```

TC2:

```
24      public void testFirstNonRepeatingChar() {
25          System.out.println("firstNonRepeatingChar");
26          String str = "sswwiiss";
        Character expResult = null;
28          Character result = FirstNonRepeatingChar.firstNonRepeatingChar(str);
29          assertEquals(expResult, result);
30      }
31
32
```

javaapplication1.FirstNonRepeatingCharTest ⟩ ⬤ testFirstNonRepeatingChar ⟩ expResult ⟩

Output - JavaApplication1 (test)   ✕ | Test Results   ✕

javaapplication1.JavaApplication1Test ✕ | javaapplication1.FirstNonRepeatingCharTest ✕

Tests passed: 100.00 %	main
Both tests passed. (0.047 s	First non-repeating character is: null
	firstNonRepeatingChar

TC3:

```
24      public void testFirstNonRepeatingChar() {
25          System.out.println("firstNonRepeatingChar");
        String str = "abc";
27          Character expResult = 'a';
28          Character result = FirstNonRepeatingChar.firstNonRepeatingChar(str);
29          assertEquals(expResult, result);
30      }
31
32
```

javaapplication1.FirstNonRepeatingCharTest ⟩ ⬤ testFirstNonRepeatingChar ⟩ str ⟩

Output - JavaApplication1 (test)   ✕ | Test Results   ✕

javaapplication1.JavaApplication1Test ✕ | javaapplication1.FirstNonRepeatingCharTest ✕

Tests passed: 100.00 %	main
Both tests passed. (0.047 s	First non-repeating character is: a
	firstNonRepeatingChar

TC4:

```
24   public void testFirstNonRepeatingChar() {
25       System.out.println("firstNonRepeatingChar");
        String str = "";
27       Character expResult = null;
28       Character result = FirstNonRepeatingChar.firstNonRepeatingChar(str);
29       assertEquals(expResult, result);
30   }
31
32
```

javaapplication1.FirstNonRepeatingCharTest 〉 ● testFirstNonRepeatingChar 〉 str 〉

Output - JavaApplication1 (test) ✕ | Test Results ✕

javaapplication1.JavaApplication1Test ✕   javaapplication1.FirstNonRepeatingCharTest ✕

Tests passed: 100.00 %

Both tests passed. (0.047 s

```
main
First non-repeating character is: null
firstNonRepeatingChar
```

CODE: CHECK THE CODE FROM REPOSITERY

Class: FirstNonRepeatingChar

Test Class: FirstNonRepeatingCharTest