GIT Department of Computer Engineering

CSE 222/505 - Spring 2022

Homework 4 Report

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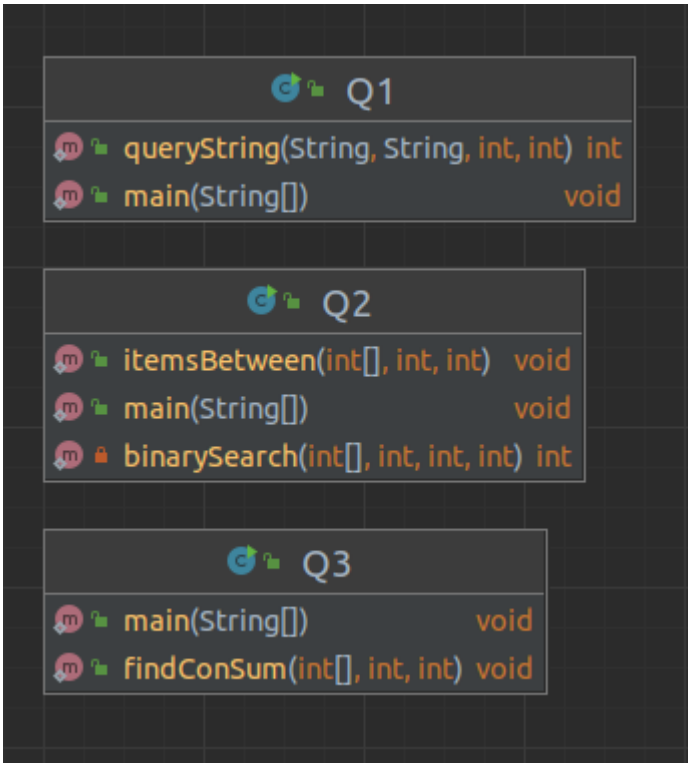
1. SYSTEM REQUIREMENTS

In this program there are three different functions for different problems. In the first function user enters a little string to search in a big string and occurence number than funtion returns the desired occurenc. In the second function user enters a sorted and two numbers from the array, than function prints the itemss between these integers. In the third function user enters an unsorted array and a sum to search a contiguous sub array that equals to this sum and print.

2. CLASS DIAGRAMS



3. PROBLEM SOLUTION APPROACH

In the first problem, in each recursive call, it is checked whether there is a match by going forward in the array, and it continues until the desired number of matches is found. In the second problem, two binary search are used to find the index of the two numbers in the array and the items in between are printed according to the indexes found. In the third problem, the sum of the numbers is checked by going one by one in the array for each recursive call, and when an equality is found, the found subarray is printed.

4. TEST CASES

Test Case #	Test Case Description	Test Data	Expected Result	Actual Result	Pass/Fail
Q1	Searching a little string in a big string	Big string = if it looks good it flys good little string = it occurence number = 2	expected result is to return 17	returned 17	Pass
Q2	Prints the items between given integers	Array = 1-10 number array n1 = 3 n2 = 7	should print “4 5 6”	printed “4 5 6”	Pass
Q3	Prints the right subarray	Array = 1, 3, 4,6, 7 sum = 13	Should print first subarray 3 4 6	printed “ 3 4 6”	Pass

5. RUNNING AND RESULTS

Q1

```
    public static void main(String[] args) {
        String bigString = "if it looks good it flys good";
        String searchString = "it";
        int occurence = 2;
        System.out.println("index of query string " + queryString(bigString,searchString, occur: 2, ssi: 0));
    }
}
```

```
Q1
/home/mustafa/.jdks/openjdk-17.0.2/bin/java -javaagent:/snap/intellij-idea-ultimate/348/lib/idea_rt.jar=42849:/
index of query string 17

Process finished with exit code 0
```

Q2

```
    public static void main(String[] args) {
        int arr[] = {1,2,3,4,5,6,7,8,9,10};

        itemsBetween(arr, n1: 3, n2: 7);
    }

}
```

```
Q2
/home/mustafa/.jdks/openjdk-17.0.2/bin/java -javaagent:/
Items between 4 5 6
Process finished with exit code 0
```

Q3

```
    public static void main(String[] args) {
        int arr[] = {1,3, 4, 6, 7};
        findConSum(arr, sum: 13, index: 0);
    }

}
```

```
Q3
/home/mustafa/.jdks/openjdk-17.0.2/bin/java -javaagent:/snap
Contiguous sub array is 3 4 6
Process finished with exit code 0
```