

CS163/164 Final Study Guide - ANSWERS

Fall 2016

1 Written

1.1 Short Answer

1. int, double, char, short, long, float, byte, boolean
2. `ArrayList <Double> doubleList = new ArrayList<Double>();`
3. `doubleList.add(3.14);`
`doubleList.add(123.4);`
`doubleList.add(86.3);`
`doubleList.add(-2.1);`
4. `System.out.println(doubleList);`
5. `for (int i = 0; i < doubleList.size(); i++)` *// could use any loop*
`System.out.println(doubleList.get(i)+"");`
6. `System.out.println(doubleList.get(2));`
7. `doubleList.add(1, 98.5);`
8. `doubleList.remove(doubleList.size()-1);`
9. `doubleList.remove(86.3);`
10. `ArrayList<String> lines = new ArrayList<String>();`
11. `try {`
`Scanner read = new Scanner (new File ("input.txt"));`
`} catch (Exception e) { // Your catch might be different`
`System.out.println(e.getMessage());`
`}`

`while (read.hasNextLine())`
`lines.add(read.nextLine());`
13. `System.out.println(lines.size());`
14. `try {`
`PrintWriter pw = new PrintWriter (new File (outfile));`
`} catch (IOException e) { // Your catch might be different`
`System.out.println("Cannot read to " + outfile);`
`}`

```
    for (String line : lines)
        pw.println(line);
```

16. [-5, 2, 1, 4, 9]

17. [-5, 1, 4, 2, 9]

1.2 Tracing

1. 6

2. [5, 1, 1, 3, 4, 1]

3. 1

4. [10, 2, 2, 6, 8, 2]

5. 2

2 Programming

2.1 Code

NOTE: Your code/solution may be different!

```
import java.util.ArrayList;
import java.io.*;
import java.util.Scanner;

public class QPractice implements QInterface {
    private ArrayList<String> words = new ArrayList<String>();
    public void read (String inputfile){
        try {
            Scanner reader = new Scanner (new File (inputfile));
            while (reader.hasNext())
                words.add(reader.next());
        } catch (IOException e){
            System.out.println(e.getMessage());
        }
    }
    public int find (String word){
        for (int i = 0; i < words.size(); i++)
            if (words.get(i).equalsIgnoreCase(word))
                return i;
        return -1;
    }
    public String mostCommon (){
        int count = 0;
```

```

String common = words.get(0);
int [] c = new int [words.size()];
for (int i = 0; i < words.size(); i++) {
    for (int j = 0; j < words.size(); j++) {
        if (words.get(j).equalsIgnoreCase(common))
            count++;
        c[i] = count;
        common = words.get(i);
    }
}
int max = c[0]; int index = 0;
for (int i = 0; i < c.length; i++){
    if (c[i] > max){
        max = c[i];
        index = i;
    }
}
return words.get(index).toUpperCase();
}
public void write (String outputfile){
    try {
        PrintWriter pw = new PrintWriter (new File (outputfile));
        pw.println(mostCommon());
        pw.println(find("fire"));
        pw.close();
    } catch (IOException e){
        System.out.println(e.getMessage());
    }
}
public static void main (String [] args){
    QPractice q = new QPractice();
    q.read("../in.txt");
    q.write("../out.txt");
}
}

```

2.2 Output File Contents

SNOW!

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