IRC_JAVA_CLASS_FILES

Test Summary

- No. of Sections: 1
- No. of Questions: 5
- Total Duration: 180 min

Section 1 - CLASS_EXERCISE_COD

Section Summary

- No. of Questions: 5
- Duration: 180 min

Additional Instructions:

None

Q1. **The minimum element in an array**

Obtain an array and write it into a file. Read the file contents and print the minimum element in the array.

Question Instructions:

1. The solution code should have its class name as **MinElement**
2. The main logic for the solution should be written inside **MinElement** class

Input Format

The first line consists of the value of n.
The next input is the array elements.

Output Format

The output prints the minimum element in the array.

Sample Input

```
5
84 52 12 35 96
```

Sample Output

```
12
```

Sample Input

```
8
12 45 78 23 56 89 96 8
```

Sample Output

```
8
```

Time Limit: - ms Memory Limit: - kb Code Size: - kb

Q2. **FileWriter and FileReader**

Get two input strings and write it to a file using FileWriter. Read the file contents using FileReader and print them.

Question Instructions:

1. The solution code should have its class name as **FileWriting**
2. The main logic for the solution should be written inside **FileWriting** class

Input Format

The input consists of two strings.

Output Format

The output prints the two strings.
Refer sample input and output for formatting specifications.

Sample Input

```
Change the world by being yourself.
Every moment is a fresh beginning.
```

Sample Output

```
Change the world by being yourself.
Every moment is a fresh beginning.
```

Time Limit: - ms Memory Limit: - kb Code Size: - kb

Q3. **Write integer array to a file**
Obtain an integer array and write it to a file. Read the array from the file and print them.

Question Instructions:

1. The solution code should have its class name as **IntegerArray**
2. The main logic for the solution should be written inside **IntegerArray** class

Input Format

The first line of the input consists of the value of n.
Next input is the array elements.

Output Format

The output prints the file contents (array elements) and their sum.

Sample Input

```
5
10 20 30 40 50
```

Sample Output

```
10 20 30 40 50 150
```

Time Limit: - ms Memory Limit: - kb Code Size: - kb

Q4. **Count Number of Digits**
Obtain a String and write it into a file. Read the file contents and print the number digits present in the file.

Question Instructions:

1. The solution code should have its class name as **CountDigits**
2. The main logic for the solution should be written inside **CountDigits** class

Input Format

The input consists of a String.

Output Format

The output print the number of Digits.
Refer to the sample output for formatting specifications.

Sample Input

```
Phone number : 8976578011
```

Sample Output

```
10
```

Time Limit: - ms Memory Limit: - kb Code Size: - kb

Q5. **Count Uppercase and Lowercase Letters**
Obtain a String and write it into a file. Read the file contents and print the number of uppercase and lower case letters present in the file.

Question Instructions:

1. The solution code should have its class name as **CountLetters**
2. The main logic for the solution should be written inside **CountLetters** class

Input Format

The input consists of a String.

Output Format

The output print the number of upper case and lower case letters.
Refer to the sample output for formatting specifications.

Sample Input

Sample Output

```
Welcome to PS!!!
```

```
3
8
```

Time Limit: - ms Memory Limit: - kb Code Size: - kb

Answer Key & Solution

Section 1 - CLASS_EXERCISE_COD

Q1

Test Case

Input

```
5
84  52  12  35  96
```

Output

```
12
```

Weightage - 25

Input

```
8
12  45  78  23  56  89  96  8
```

Output

```
8
```

Weightage - 25

Input

```
5
86  42  37  96  88
```

Output

```
37
```

Weightage - 25

Input

```
10
80  70  50  90  60  20  10  30  40  100
```

Output

```
10
```

Weightage - 25

Sample Input

```
5
84  52  12  35  96
```

Sample Output

```
12
```

Sample Input

```
8
12  45  78  23  56  89  96  8
```

Sample Output

```
8
```

Solution

```
 import java.io.*;
import java.util.*;
import java.io.FileNotFoundException;
import java.io.FileReader;
import java.io.FileWriter;
import java.io.IOException;
 class CreateFile
{
```

```
public static void main(String[] args) throws IOException
{

    int n;
    Scanner sc = new Scanner(System.in);
    n = sc.nextInt();
    int [] arr = new int[n];
    int i;
    for(i=0;i<n;i++) {
        arr[i] = sc.nextInt();
    }
    FileWriter fw=new FileWriter("output.txt");


    for (i = 0; i < n; i++)
        fw.write(arr[i]);
    fw.close();


    FileReader fr=null;
    try
    {
        fr = new FileReader("output.txt");
    }
    catch (FileNotFoundException fe)
    {
        System.out.println("File not found");
    }

    int ch,sum=0;
    int min = 2147483647;
    while ((ch=fr.read())!=-1)  {
        if((int)ch <min)
            min = (int)ch;
        /*System.out.print((int)ch+" ");
        sum += (int)ch;*/
    }
    System.out.println(min);

    fr.close();
  }

}
```

Q2

Test Case

Input	Output
Change the world by being yourself. Every moment is a fresh beginning.	Change the world by being yourself. Every moment is a fresh beginning.

Weightage - 100

Sample Input	Sample Output
Change the world by being yourself. Every moment is a fresh beginning.	Change the world by being yourself. Every moment is a fresh beginning.

Solution

```
import java.io.*;
import java.util.*;
import java.io.FileNotFoundException;
import java.io.FileReader;
import java.io.FileWriter;
import java.io.IOException;
 class CreateFile
{
    public static void main(String[] args) throws IOException
    {

        String str1,str2;
        Scanner sc = new Scanner(System.in);
         str1 = sc.nextLine();
         str2 = sc.nextLine();
        FileWriter fw=new FileWriter("output.txt");


        for (int i = 0; i < str1.length(); i++)
            fw.write(str1.charAt(i));
        fw.write("\n");

for (int i = 0; i < str2.length(); i++)
    fw.write(str2.charAt(i));


fw.close();
int ch;


FileReader fr=null;
try
{
    fr = new FileReader("output.txt");
}
catch (FileNotFoundException fe)
{
    System.out.println("File not found");
}


while ((ch=fr.read())!=-1)
            System.out.print((char)ch);


        fr.close();
     }

}
```

Q3

Test Case

Input	Output
5 10 20 30 40 50	10 20 30 40 50 150

Weightage - 100

Sample Input

```
5
10  20  30  40  50
```

Sample Output

```
10  20  30  40  50  150
```

Solution

```
 import java.io.*;
import java.util.*;
import java.io.FileNotFoundException;
import java.io.FileReader;
import java.io.FileWriter;
import java.io.IOException;
 class CreateFile
{
    public static void main(String[] args) throws IOException
    {
int n;
Scanner sc = new Scanner(System.in);
n = sc.nextInt();
int [] arr = new int[n];
int i;
for(i=0;i<n;i++) {
    arr[i] = sc.nextInt();
}
FileWriter fw=new FileWriter("output.txt");


for (i = 0; i < n; i++)
    fw.write(arr[i]);
fw.close();


FileReader fr=null;
try
{
    fr = new FileReader("output.txt");
}
catch (FileNotFoundException fe)
{
        System.out.println("File not found");
    }

    int ch,sum=0;
    while ((ch=fr.read())!=-1)  {
        System.out.print((int)ch+" ");
        sum += (int)ch;
    }
    System.out.println(sum);

    fr.close();
 }

}
```

Q4

Test Case

Input

Output

H1i W2hat I345s Y78our Problem?	7

Weightage - 25

Input	Output
My fav Number is 55555555	8

Weightage - 25

Input	Output
AAA 111 BBB 22 CCC 33	7

Weightage - 25

Input	Output
Password : 231415160067	12

Weightage - 25

Sample Input	Sample Output
Phone number : 8976578011	10

Solution

```
import java.io.*;
import java.util.*;
class Sample {
   public static void main(String args[]) throws Exception{
        Scanner sc=new Scanner(System.in);
        FileWriter fw=new FileWriter("output.txt");

        String ch;
        int number=0;

        String s=sc.nextLine();

          fw.write(s);
          fw.close();

          FileReader fr=null;
            try
            {
                fr = new FileReader("output.txt");
            }
            catch (FileNotFoundException fe)
            {
```

```
                System.out.println("File not found");
              }

              Integer i=fr.read();
              Integer eof=-1;
            ch=i.toString();
            while (ch.charAt(0)!=eof.toString().charAt(0))  {

             if (Integer.parseInt(ch) >= '0' && Integer.parseInt(ch) <= '9')
                  number++;


              i=fr.read();
              ch=i.toString();
              }


       System.out.println(number);


    }
}
```

Q5

Test Case

Input	Output
MLA stands for Member of the Legislative Assembly.	6 36

Weightage - 25

Input	Output
Hi I am from Venus.	3 11

Weightage - 25

Input	Output
ECE - Electronics and Communication Engineering	6 35

Weightage - 25

Input	Output
Joe Biden is the President of USA	6 21

Weightage - 25

Sample Input	Sample Output
Welcome to PS!!!	

3
8

Solution

```
 import java.io.*;
import java.util.*;
class Sample {
   public static void main(String args[]) throws Exception{
        Scanner sc=new Scanner(System.in);
        FileWriter fw=new FileWriter("output.txt");

        String ch;
        int upper=0,lower=0,number=0,special=0;

        String s=sc.nextLine();

          fw.write(s);
          fw.close();

FileReader fr=null;
  try
  {
      fr = new FileReader("output.txt");
  }
  catch (FileNotFoundException fe)
  {
      System.out.println("File not found");
  }

  Integer i=fr.read();
  Integer eof=-1;
ch=i.toString();
while (ch.charAt(0)!=eof.toString().charAt(0))  {

  if (Integer.parseInt(ch) >= 'A' && Integer.parseInt(ch) <= 'Z')
      upper++;
  else if (Integer.parseInt(ch) >= 'a' && Integer.parseInt(ch) <= 'z')
      lower++;

  i=fr.read();
            ch=i.toString();
            }


      System.out.println(upper);
      System.out.println(lower);

   }
}
```