20BCE0371

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Qp

VIT
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

School of Computer Science and Engineering (SCOPE)

Winter Semester 2021-22

Java Programming Lab Assessment -5

Course Code	**CSE1007**
Course Name	**Java Programming**
Course Mode	**Embedded Theory and Lab**
Slot and Class Number	**Thoery : B1+TB1** (VL2021220503769) **Lab: L45+L46** (VL2021220503830)
Faculty In-Charge	**Prof. RA K SARAVANAGURU**
No. of Students	**65**
Date and Time	**13-April-2022 (Wednesday) 15:51 – 17:30**

Assessment Number	5	
Total marks	10	
Topic		
Environment	Moodle	
Document Upload	VTOP	
Question	[i] Create a class Student with required schema to store the data items given in .csv [ii] Use java Streams and lambda expression for the following: a. Display details of students who got marks more than 90 b. Display the student with marks who belongs to BCE c. Display the class average for course3	
	Input (data.csv)	data.csv regno,course1,course2,course3 20BCE0001,55,66,77 20BCI0002,66,77,88 20BCB0003,77,88,99 20BCE0004,40,50,60

Data.csv

data.csv

```
1  20BCE0001,55,66,77
2  20BCI0002,66,77,88
3  20BCB0003,77,88,99
4  20BCE0004,40,50,60
```

Student.java

Student.java

```java
import java.lang.String;


public class Student
{
    String regno;
    int m1;
    int m2;
    int m3;

    public void printDet()
    {

            String s = regno + " "+Integer.toString(m1)+" "+Integer.toString(m2)+" "+Integer.toString(m3
            System.out.println(s);

    }
}

```

```java
import java.lang.String;


public class Student
{
    String regno;
    int m1;
    int m2;
    int m3;

    public void printDet()
    {

            String s = regno + " "+Integer.toString(m1)+"
"+Integer.toString(m2)+" "+Integer.toString(m3);
            System.out.println(s);

    }
}
```

App.java

```java
import java.util.List;
import java.util.ArrayList;
import java.io.BufferedReader;
import java.io.FileReader;
import java.io.IOException;
import java.lang.String;

public class App
{
    public static void main (String[] args)
    {
        List<Student> data = new ArrayList();

        try
        {
            String line;
            String splitc = ",";
            BufferedReader input = new BufferedReader(new FileReader("data.csv"));

            while((line = input.readLine()) != null)
            {
                String[] dat = line.split(splitc);
                Student temp = new Student();
                temp.regno = dat[0];
                temp.m1 = Integer.parseInt(dat[1]);
                temp.m2 = Integer.parseInt(dat[2]);
                temp.m3= Integer.parseInt(dat[3]);
                data.add(temp);

            }
        }
            catch(Exception e)
            {
                System.out.println(e.getMessage());
            }
```

```
36
37
38
39              data.stream().filter(y->y.m1>90 || y.m2>90 || y.m3>90).forEach(y->y.printDet());
40              System.out.println();
41              data.stream().filter(x->x.regno.contains("BCE")).forEach(y->y.printDet());
42              System.out.println();
43          /*      List<Integer> c3 = new ArrayList();
44              for(Student stud : data)
45              {
46                  c3.add(stud.m3);
47              }
48              int sum = c3.stream().reduce(0,(subt,x)->subt+x);
49              float avg = sum/data.size()*/
50
51
52              int av =data.stream().mapToInt((x)->x.m3).reduce(0,(subt,x)->x+subt);
53              System.out.println("Average Marks for course 3 is :");
54              System.out.println(av/data.size());
55      }
56  }
```

```java
import java.util.List;
import java.util.ArrayList;
import java.io.BufferedReader;
import java.io.FileReader;
import java.io.IOException;
import java.lang.String;

public class App   {
    public static void main(String[] args) {
        List<Student> data = new ArrayList<>();

        try {
            String line;
            String splitc = ",";
            BufferedReader input = new BufferedReader(new
FileReader("data.csv"));

            while ((line = input.readLine()) != null) {
                String[] dat = line.split(splitc);
                Student temp = new Student();
                temp.regno = dat[0];
                temp.m1 = Integer.parseInt(dat[1]);
                temp.m2 = Integer.parseInt(dat[2]);
                temp.m3 = Integer.parseInt(dat[3]);
                data.add(temp);

            }
        } catch (Exception e) {
            System.out.println(e.getMessage());
        }
```

```
        data.stream().filter(y -> y.m1 > 90 || y.m2 > 90 || y.m3 > 90).forEach(y
-> y.printDet());
        System.out.println();
        data.stream().filter(x -> x.regno.contains("BCE")).forEach(y ->
y.printDet());
        System.out.println();
       /*      List<Integer> c3 = new ArrayList();
             for(Student stud : data)
             {
                 c3.add(stud.m3);
             }
             int sum = c3.stream().reduce(0,(subt,x)->subt+x);
             float avg = sum/data.size()*/


        int av = data.stream().mapToInt((x) -> x.m3).reduce(0, (subt, x) -> x +
subt);
        System.out.println("Average Marks for course 3 is :");
        System.out.println(av / data.size());
    }
}
```

Output :

```
20BCB0003 77 88 99

20BCE0001 55 66 77
20BCE0004 40 50 60

Average Marks for course 3 is :
81
PS F:\sem4\JAVA\Assesment5\Assessment-5>
```