DIGITAL ASSIGNMENT-2

Name- SAM METHUSELAH

Reg No- 19BCE1698

Video URL-
https://drive.google.com/file/d/1gv6eNaxl6tatw4fYv0JzWETbtpG7yidC/view?usp=sharing

Q1)

Code-

da2.java-

```
import java.io.File;
import java.io.FileNotFoundException;
import java.util.*;

class Student1
{
	String name, regno;
	int[] obtainedMarks = new int[3];
	String[] qNumArray = new String[3];
	String[] qTextArray = new String[3];
	int sum = 0;
	Student1(String nm, String regNo)
	{
		this.name = nm;
		this.regno = regNo;
	}

	public void generate(HashMap<String, String> Q)
	{
		boolean b = true;
		int x = (int) (Math.random()*9 + 1);
		int y = (int) (Math.random()*9 + 1);
		int z = (int) (Math.random()*9 + 1);

		while (b)
		{
			if (x!=y && y!=z && x!=z)
			{
				qNumArray[0] = "Q" + x;
```

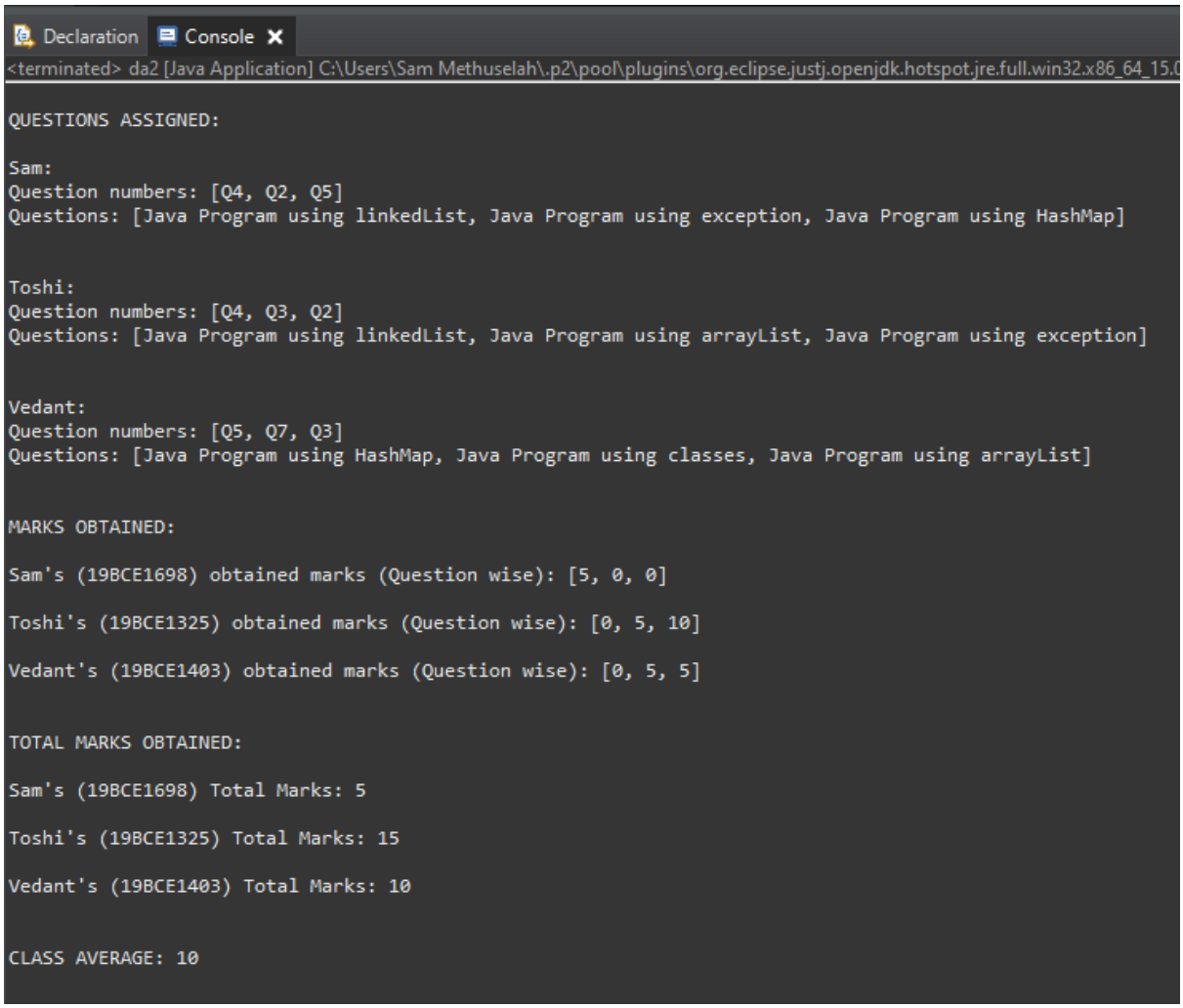
```
                        qNumArray[1] = "Q" + y;
                        qNumArray[2] = "Q" + z;
                        qTextArray[0] = Q.get(qNumArray[0]);
                        qTextArray[1] = Q.get(qNumArray[1]);
                        qTextArray[2] = Q.get(qNumArray[2]);
                        b = false;
                  }
                  else
                  {
                        x = (int) (Math.random()*9 + 1);
                        y = (int) (Math.random()*9 + 1);
                        z = (int) (Math.random()*9 + 1);
                  }
            }
            System.out.println();
            System.out.println(name+":");
            System.out.println("Question numbers: " +
Arrays.toString(qNumArray));
            System.out.println("Questions: " + Arrays.toString(qTextArray));
            System.out.println();
      }

      public void Checking()
      {
            for (int i=0; i<3; i++)
            {
                  String subTitle = qTextArray[i].substring(19);
                  int mainCount = 0, titleCount = 0;
                  try
                  {
                        File myObj = new File("C:\\Users\\Sam
Methuselah\\Desktop\\da2\\" + name + (i+1) + ".txt");
                        Scanner myReader = new Scanner(myObj);
                        while (myReader.hasNextLine())
                        {
                              String data = myReader.nextLine();
                              if (data.contains("main(String[] args)"))
                                    mainCount++;
                              if (data.contains(subTitle))
                                    titleCount++;
                        }
                        if (mainCount != 0 && titleCount != 0)
                              obtainedMarks[i] = 10;
                        else if (mainCount != 0 || titleCount != 0)
                              obtainedMarks[i] = 5;
                        else
                              obtainedMarks[i] = 0;
                        myReader.close();
                  }
                  catch (FileNotFoundException e)
                  {
                        System.out.println("An error occurred!!!");
                        e.printStackTrace();
                  }
            }
      }

      public void show()
      {
```

```
		for (int obtainedMark : obtainedMarks)
		{
			sum = sum + obtainedMark;
		}
		System.out.println(name + "'s (" + regno + ") obtained marks
(Question wise): " + Arrays.toString(obtainedMarks));
		System.out.println();
	}

	public void showTotal()
	{
		System.out.println(name + "'s (" + regno + ") Total Marks: " + sum);
		System.out.println();
	}

	public int returnValue()
	{
		return sum;
	}
}

public class da2
{
	public static void main(String[] args)
	{
		HashMap<String, String> Questions = new HashMap<>();
		Questions.put("Q1", "Java Program using threads");
		Questions.put("Q2", "Java Program using exception");
		Questions.put("Q3", "Java Program using arrayList");
		Questions.put("Q4", "Java Program using linkedList");
		Questions.put("Q5", "Java Program using HashMap");
		Questions.put("Q6", "Java Program using functions");
		Questions.put("Q7", "Java Program using classes");
		Questions.put("Q8", "Java Program using date");
		Questions.put("Q9", "Java Program using RegEx");

		System.out.println("\nQUESTIONS ASSIGNED:");
		Student1 s1 = new Student1("Sam", "19BCE1698");
		s1.generate(Questions);
		s1.Checking();
		Student1 s2 = new Student1("Toshi", "19BCE1325");
		s2.generate(Questions);
		s2.Checking();
		Student1 s3 = new Student1("Vedant", "19BCE1403");
		s3.generate(Questions);
		s3.Checking();
		System.out.println("\nMARKS OBTAINED:\n");
		s1.show();
		s2.show();
		s3.show();
		System.out.println("\nTOTAL MARKS OBTAINED:\n");
		s1.showTotal();
		s2.showTotal();
		s3.showTotal();
		int a = s1.returnValue();
		int b = s2.returnValue();
		int c = s3.returnValue();
		int sum = a + b + c;
		int avg = sum / 3;
```

```
            System.out.println();
            System.out.println("CLASS AVERAGE: " + avg);
        }
}
```

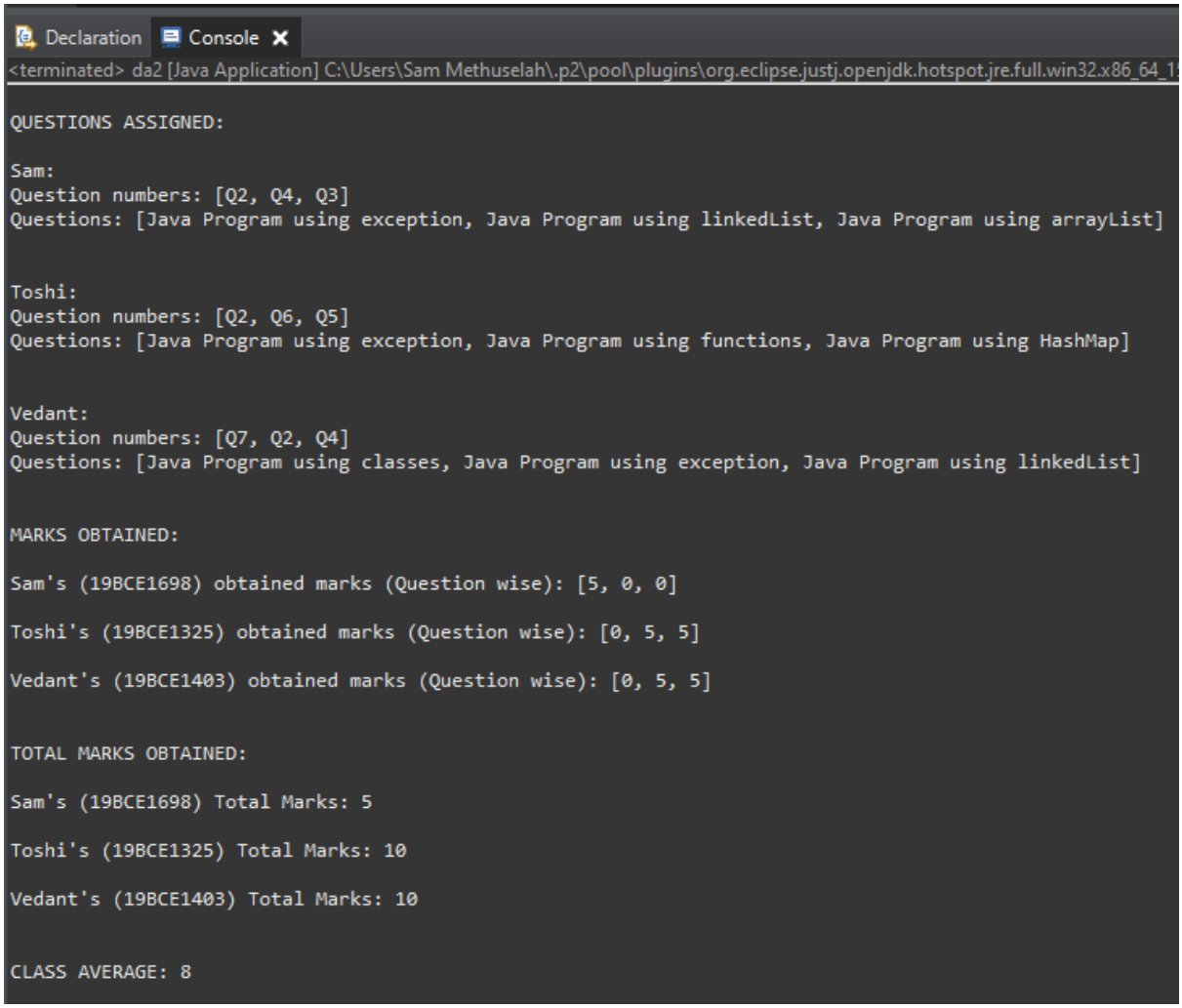
Output-

Execution-1:



P.T.O.->

Execution-2:


Declaration
Console
<terminated> da2 [Java Application] C:\Users\Sam Methuselah\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_1
QUESTIONS ASSIGNED:
Sam:
Question numbers: [Q2, Q4, Q3]
Questions: [Java Program using exception, Java Program using linkedList, Java Program using arrayList]
Toshi:
Question numbers: [Q2, Q6, Q5]
Questions: [Java Program using exception, Java Program using functions, Java Program using HashMap]
Vedant:
Question numbers: [Q7, Q2, Q4]
Questions: [Java Program using classes, Java Program using exception, Java Program using linkedList]
MARKS OBTAINED:
Sam's (19BCE1698) obtained marks (Question wise): [5, 0, 0]
Toshi's (19BCE1325) obtained marks (Question wise): [0, 5, 5]
Vedant's (19BCE1403) obtained marks (Question wise): [0, 5, 5]
TOTAL MARKS OBTAINED:
Sam's (19BCE1698) Total Marks: 5
Toshi's (19BCE1325) Total Marks: 10
Vedant's (19BCE1403) Total Marks: 10
CLASS AVERAGE: 8