27/10/2020

WEEK-7 PROGRAMS

1]

```
import java.util.*;
class Student {
    String usn;
    String name;
    int sem;
    void details()
    {
        Scanner z = new Scanner (System.in);
        System.out.println ("Enter student details");
        System.out.println ("Enter USN: ");
        usn = z.next();
        System.out.println ("Enter Semester: ");
        sem = z.nextInt();
    }
}
class Test extends Students {
    int credits[];
    int cie[];
    int t;
    void accept()
    {
        Scanner s = new Scanner (System.in);
        System.out.println ("Enter the number of subjects: ");
        t = s.nextInt();
        credits = new int [t];
        cie = new int [t];
```

```
System.out.println("Enter credits and cie marks (out of 50) obtained
    by the student in each subject");

for (int i=0;i<t;i++)
 {
  credits[i]=s.nextInt();
  cie[i]=s.nextInt();
 }
}
}

class Exam extends Test {
  int see[];
  void read()
  {
    Scanner a=new Scanner(System.in);
    see=new int[t];
    System.out.println("Enter SEE marks of student in each
                        subject (out of 100)");

      for (int i=0;i<t;i++)
      {
        see[i]=a.nextInt();
      }
    }
  }
  class Result extends Exam {
      int marks[];
      double calculate()
      {
        marks=new int[t];
        int tcp=0,tc=0;
        for (int i=0;i<t;i++)
```

```
{
    tc= tc+credits[i];
    marks[i]= cie[i]+ see[i]/2;
    if (marks[i]>=50)
    {
        tcp= tcp+ ((( marks[i]/10)+1)* credits[i]);
    }
    else if (marks[i]>=40 && marks[i]<50)
    {
        tcp= tcp+(4*credits[i]);
    }
    }
    return (double) tcp/tc;
    }
}
class Main{
    public static void main (String args[])
    {
        Scanner ss= new Scanner (System.in);
        System.out.println("Enter the number of students");
        int n=ss.nextInt();
        Student a[]= new Student[n];
        Test b[]= new Test[n];
        Exam c[]= new Exam[n];
        Result d[]= new Result[n];
        for (int i=0; i<n;i++)
        {
            a[i]= new Student();
            a[i].details();
            b[i]= new Test();
            b[i].accept();
```

```
        c[i] = new Exam();
        c[i].read();
        d[i] = new Result();
        System.out.println("SGPA of Student "+(i+1)+" is :"+
                           d[i].calculate());
    }
  }
}
```

PROGRAM-2

```
import java.util.*;
abstract class PLAYER
{
 String name;
 int matches_played;
 double average;
 abstract void cal_average(String i, int m, int n);
}
class BATSMAN extends PLAYER
{
 int runs_scored;
 void cal_average(String x, int y, int z)
 {
  name = x;
  matches_played = y;
  runs_scored = z;
  average = (double)runs_scored / matches_played;
  System.out.println("the average runs scored by "+name+
    " is "+average);
 }
}
```

```
class BOWLER extends PLAYER
{
 int runs_given;
 void cal_average (String a, int b, int c)
 {
  name = a;
  matches_played = b;
  runs_given = c;
  average = (double) runs_given / matches_played;
  System.out.println ("The average runs given by "+name+" is
   "+average);
 }
}
class PLAYERMAIN1
{
public static void main (String args[])
{
  int m, n, i;
 Scanner ss = new Scanner (System.in);
 System.out.println ("Enter the number of Batsman and
      bowlers respectively");
  m = ss.nextInt();
  n = ss.nextInt();
  BATSMAN BA[] = new BATSMAN [m];
  for (i=0; i<m; i++)
  {
   BA [i] = new BATSMAN ();
   System.out.println ("Enter the name, number of matches
      played, and number of runs scored by Batsman
       " + (i+1) + " : ");
   BA [i].name = ss.next();
   BA [i].matches_played = ss.nextInt();
   BA [i].runs_scored = ss.nextInt();
  }
```

```
BOWLER Bo[] = new BOWLER [n];
for (i=0; i<n; i++)
{
Bo[i] = new BOWLER ();
System.out.println ("Enter name, number of matches played,
        and number of runs given by Bowler "+(i+1)+":");

Bo[i].name = ss.next ();
Bo[i].matches_played = ss.nextInt();
Bo[i].runs_given = ss.nextInt();
}
for (i=0; i<m; i++)
{
BA[i].cal_average (BA[i].name, BA[i].matches_played,
                BA[i].runs_scored);
}
for(i=0; i<n; i++)
{
Bo[i].cal_average (Bo[i].name, Bo[i].matches_played,
                Bo[i].runs_given);
}
}
}
```