

## WEEK7-PROGRAMS

### PROGRAM-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 name:");

        name=z.next();

        System.out.println("Enter semester:");

        sem=z.nextInt();

    }

}

class Test extends Student {

    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) attained  
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 l,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 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);
}
}
}
```