

```
import java.util.Scanner;  
class Student
```

```
{  
    private String USN;  
    private String name;  
    private int sem;
```

```
void getStudentdata()  
{
```

```
    Scanner n = new Scanner(System.in);  
    System.out.println("Enter the USN of the student:");
```

```
    USN = n.next();
```

```
    n.nextLine();
```

```
    System.out.println("Enter the name of student:");
```

```
    name = n.next();
```

```
    n.nextLine();
```

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

```
    sem = n.nextInt();
```

```
}
```

```
void printStudentdata()  
{
```

```
    System.out.println("The name of the student is:"  
                        + name);
```

```
    System.out.println("The USN of the student is:"  
                        + USN);
```

```
    System.out.println("The semester of the student  
                        is:" + sem);
```

```
}
```

```
}
```

```
class Test extends Student
```

```
{  
    private int c[];  
    private int credits[];  
    private int n;
```

```
void setsize(int n)
```

```
{  
    n = n;  
    c = new int[n];  
    credits = new int[n];  
}
```

```
void getCieMarks()
```

```
{  
    Scanner nn = new Scanner(System.in);  
    System.out.println("Enter the credits and cie  
        marks of each subject:");
```

```
    int i;
```

```
    for (i = 0; i < n; i++)
```

```
    {  
        System.out.println("Enter the credits and  
            marks of " + (i + 1) + " subject:");
```

```
        credits[i] = nn.nextInt();
```

```
        c[i] = nn.nextInt();
```

```
    }
```

```
}
```

```
int returnCieMarks(int i)
```

```
{ return c[i]; }
```

```
int returnCredits(int i)
```

```
{ return credits[i]; }
```

```
}
```

```
class Exams extends Test {
```

```
    private int see[];
```

```
    private int n1;
```

```
    void setSize1(int n)  
{
```

```
        n1 = n;
```

```
        see = new int[n1];
```

```
    }
```

```
    void getsee marks()  
{
```

```
        Scanner nn = new Scanner(System.in);
```

```
        System.out.println("Enter the see marks of  
                             each subject:");
```

```
        int i;
```

```
        for (i = 0; i < n1; i++)
```

```
        {
```

```
            System.out.println("Enter the see marks  
                                of " + (i + 1) + " subjects:");
```

```
            see[i] = nn.nextInt();
```

```
        }
```

```
    }
```

```
    int return see marks (int i)
```

```
    {
```

```
        return see[i];
```

```
    }
```

```
}
```



class Result extends Exams

```
{  
    private double result;  
    private int n;
```

Result()

```
{  
    Scanner nn = new Scanner(System.in);  
    getstudentdata();  
    System.out.println("Enter number of subjects:");  
    int i = nn.nextInt();
```

```
    n = i;
```

```
    setsize(i);
```

```
    setsize2(i);
```

```
    setsize marks(i);
```

```
    setsize marks(i);
```

```
}
```

void calculateResult()

```
{  
    result = 0;
```

```
    double temp = 0;
```

```
    double totalCredits = 0;
```

```
    for(int i = 0; i < n; i++)
```

```
{
```

```
    temp = temp + returnCie marks(i);
```

```
    temp = temp + (returnCie marks(i)/2);
```

```
    totalCredits = totalCredits + returnCredits(i);
```

```
    result = result + (temp * returnCredits(i)/100);
```

```
    temp = 0;
```

```
}
```

```

        result = (result / total credits) * 100;
    }
    void printResult(int i)
    {
        System.out.println("GPA of the student " + (i+1) +
                             " is: " + result);
    }
}

```

```

public class Inherit2
{
    public static void main(String args[])
    {
        Scanner nn = new Scanner(System.in);
        System.out.println("Enter the number of
                           students:");
        int n = nn.nextInt();
        Result[] r = new Result[n];
        for (int i = 0; i < n; i++)
        {
            r[i] = new Result();
            r[i].calculateResult();
        }
        for (int i = 0; i < n; i++)
        {
            r[i].printResult(i);
        }
    }
}

```