

## Wk7extr1 - Notepad

File Edit Format View Help

```
import java.util.Scanner;
class Student{
    String USN,name;
    int sem;
    Scanner sc = new Scanner(System.in);
    void setStuDetails(){
        System.out.println("Enter USN of Student: ");
        this.USN = sc.nextInt();
        System.out.println("Enter Name of Student: ");
        this.name = sc.next();
        System.out.println("Enter Semester of Student: ");
        this.sem = sc.nextInt();
    }
    void getStuDetails(){
        System.out.println("USN: " + this.USN);
        System.out.println("Name: " + this.name);
        System.out.println("Semester: " + this.sem);
    }
}

class Test extends Student{
    double cieMarks[] = new double[5];
    int credits[] = new int[5];
    int totalCredits = 0;
    void setCieDetails(){
        for(int i=0;i<cieMarks.length;i++){
            System.out.println("Enter CIE marks(Out of 50) in course" + (i+1) + ": ");
            cieMarks[i] = sc.nextDouble();
            System.out.println("Enter credits of course" + (i+1) + ": ");
            credits[i] = sc.nextInt();
            totalCredits += credits[i];
        }
    }
}

class Exam extends Test{
    double seeMarks[] = new double[5];
    double totalMarks[] = new double[5];
    int totCredits = super.totalCredits;
    void setSeeDetails(){
        for(int i=0;i<cieMarks.length;i++){
```

## Wk7extr1 - Notepad

File Edit Format View Help

```
int totCredits = super.totalCredits;
void setSeeDetails(){
    for(int i=0;i<cieMarks.length;i++){
        System.out.println("Enter SEE marks(100) in course" + (i+1) + ": ");
        seeMarks[i] = sc.nextDouble()/2;
    }
    calcTotalMarks();
}
void calcTotalMarks(){
    for(int i=0;i<5;i++){
        totalMarks[i] = cieMarks[i] + seeMarks[i];
    }
}

class Result extends Exam{
    char grades[] = new char[5];
    double sgpa = 0;
    int points[] = new int[5];
    void calcSGPA(){
        for(int i = 0;i<5;i++){
            if(totalMarks[i] > 100){
                System.out.println("Error: Marks are above 100");
                return;
            }else if(totalMarks[i] >= 90){
                points[i] = 10;
            }else if(totalMarks[i] >= 80){
                points[i] = 9;
            }else if(totalMarks[i] >= 70){
                points[i] = 8;
            }else if(totalMarks[i] >= 60){
                points[i] = 7;
            }else if(totalMarks[i] >= 50){
                points[i] = 5;
            }else if(totalMarks[i] >= 40){
                points[i] = 4;
            }else{
                points[i] = 0;
            }

            sgpa += (points[i]*credits[i]);
        }
    }
}
```

# Wk7extr1 - Notepad

File Edit Format View Help

```
        }else{
            points[i] = 0;
        }

        sgpa += (points[i]*credits[i]);
    }

void calcGrade(){
    for(int i = 0;i<5;i++){
        if(totalMarks[i] > 100){
            System.out.println("Error: Marks are above 100");
            return;
        }else if(totalMarks[i] >= 90){
            grades[i] = 'S';
        }else if(totalMarks[i] >= 80){
            grades[i] = 'A';
        }else if(totalMarks[i] >= 70){
            grades[i] = 'B';
        }else if(totalMarks[i] >= 60){
            grades[i] = 'C';
        }else if(totalMarks[i] >= 50){
            grades[i] = 'D';
        }else if(totalMarks[i] >= 40){
            grades[i] = 'E';
        }else{
            grades[i] = 'F';
        }
    }

    void getSGPA(){
        System.out.format("SGPA is %.2f\n",(sgpa/totalCredits));
    }

    void getGrades(){
        for(int i=0;i<5;i++)
            System.out.println("Subject "+(i+1)+": " + grades[i]);
    }

public class Wk7extr1{
```



Type here to search



## Wk7extr1 - Notepad

File Edit Format View Help

```
        }else if(totalMarks[i] >= 50){
            grades[i] = 'D';
        }else if(totalMarks[i] >= 40){
            grades[i] = 'E';
        }else{
            grades[i] = 'F';
        }
    }

    void getSGPA(){
        System.out.format("SGPA is %.2f\n", (sgpa/totalCredits));
    }

    void getGrades(){
        for(int i=0;i<5;i++)
            System.out.println("subject "+(i+1)+": " + grades[i]);
    }
}

public class Wk7extr1{
    public static void main(String[] args) {
        int n = 0;
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter number of students");
        n = sc.nextInt();
        Result results[] = new Result[n];
        for(int i=0;i<n;i++){
            results[i] = new Result();
            results[i].setStuDetails();
            results[i].setCieDetails();
            results[i].setSeeDetails();
            results[i].calcSGPA();
            results[i].calcGrade();
        }
        for(int i=0;i<n;i++){
            results[i].getStuDetails();           I
            results[i].getSGPA();
            results[i].getGrades();
        }
    }
}
```

C:\WINDOWS\system32\cmd.exe

```
C:\Users\AKSHAY RASTOGI\Desktop\java prog>java Wk7extr1
Enter number of students
2
Enter USN of Student:
123
Enter Name of Student:
Ram
Enter Semester of Student:
3
Enter CIE marks(Out of 50) in course1:
34
Enter credits of course1:
2
Enter CIE marks(Out of 50) in course2:
35
Enter credits of course2:
3
Enter CIE marks(Out of 50) in course3:
45
Enter credits of course3:
3
Enter CIE marks(Out of 50) in course4:
44
Enter credits of course4:
2
Enter CIE marks(Out of 50) in course5:
34
Enter credits of course5:
3
Enter SEE marks(100) in course1:
45
Enter SEE marks(100) in course2:
88
Enter SEE marks(100) in course3:
```

88

Enter SEE marks(100) in course3:

67

Enter SEE marks(100) in course4:

77

Enter SEE marks(100) in course5:

56

Enter USN of Student:

321

Enter Name of Student:

Uday

Enter Semester of Student:

3

Enter CIE marks(Out of 50) in course1:

34

Enter credits of course1:

3

Enter CIE marks(Out of 50) in course2:

23

Enter credits of course2:

4

Enter CIE marks(Out of 50) in course3:

2

Enter credits of course3:

3

Enter CIE marks(Out of 50) in course4:

45

Enter credits of course4:

2

Enter CIE marks(Out of 50) in course5:

45

Enter credits of course5:

44

Enter SEE marks(100) in course1:



Type here to search



Enter credits of course5:

44

Enter SEE marks(100) in course1:

89

Enter SEE marks(100) in course2:

89

Enter SEE marks(100) in course3:

68

Enter SEE marks(100) in course4:

56

Enter SEE marks(100) in course5:

8

**USN:** 123

**Name:** Ram

**Semester:** 3

**SGPA is** 7.46

**Subject 1:** D

**Subject 2:** B

**Subject 3:** B

**Subject 4:** A

**Subject 5:** C

**USN:** 321

**Name:** Uday

**Semester:** 3

**SGPA is** 4.36

**Subject 1:** B

**Subject 2:** C

**Subject 3:** F

**Subject 4:** B

**Subject 5:** E

C:\Users\AKSHAY RASTOGI\Desktop\java prog>



Type here to search



## Week 7 (Extra Programs)

1) import java.util.Scanner;

class Student {

String USN, name;

int sem;

Scanner sc = new Scanner(System.in);

void setStuDetails() {

System.out.println("Enter the USN of Student :");

this.USN = sc.nextInt();

System.out.println("Enter name of Student :");

this.name = sc.next();

System.out.println("Enter Semester of Student :");

this.sem = sc.nextInt();

}

void ~~get~~ getStuDetails() {

System.out.println("USN : " + this.USN);

System.out.println("Name : " + this.name);

System.out.println("Semester : " + this.sem);

}

}

class Test extends Student {

double ciemarks [] = new double [5];

int credits [] = new int [5];

int totalCredits = 0;

void setCiemarkDetails () {

for (int i = 0; i < ciemarks.length; i++) {

System.out.println ("Enter IE marks (out of 50) in course " + (i + 1) + ": ");

ciemarks [i] = sc.nextDouble();

System.out.println ("Enter Credits of course " + (i + 1) + ": ");

credits [i] = sc.nextInt();

totalCredits += credits [i];

}

}

}

class Exam extends Test {

double sscemarks [] = new double [5];

double totalMarks [] = new double [5];

int totCredits = super.totalCredits;

void setSscDetails () {

for (int i = 0; i < ciemarks.length; i++) {

System.out.println ("Enter SEE marks (out of 100) in course " + (i + 1) + ": ");

sscemarks [i] = sc.nextDouble() / 2

}

calcTotalMarks () {

for (int i = 0; i < 5; i++) {

totalMarks [i] = ciemarks [i] + sscemarks [i];

}

}

}

```

class Result extends Exam {
    char grade [] = new char [5];
    double sgpa = 0;
    int points [] = new int [5];
    void calcSGPA () {
        for (int i = 0; i < 5; i++) {
            if (totalMarks [i] > 100) {
                System.out.println ("Error: Marks are above 100");
                return;
            } else if (totalMarks [i] >= 90) {
                points [i] = 10;
            } else if (totalMarks [i] >= 80) {
                points [i] = 9;
            } else if (totalMarks [i] >= 70) {
                points [i] = 8;
            } else if (totalMarks [i] >= 60) {
                points [i] = 7;
            } else if (totalMarks [i] >= 50) {
                points [i] = 6;
            } else if (totalMarks [i] >= 40) {
                points [i] = 5;
            } else {
                points [i] = 0;
            }
            sgpa += (points [i] * credits [i]);
        }
    }
}

```

```

void calcGrade () {
    for (i = 0; i < 5; i++) {
        if (totalMarks [i] > 100) {
            System.out.println ("Error: Marks are above 100");
        }
    }
}

```

return;

else if (totalMarks[i] >= 90) {

grades[i] = "S";

else if (totalMarks[i] >= 80) {

grades[i] = "A";

else if (totalMarks[i] >= 70) {

grades[i] = "B";

else if (totalMarks[i] >= 60) {

grades[i] = "C";

else if (totalMarks[i] >= 50) {

grades[i] = "D";

else if (totalMarks[i] >= 40) {

grades[i] = "E";

else {

grades[i] = "F";

}

}

}

void getSGPA() {

System.out.format("SGPA is %.2f\n", (sgpa/totalCredits));

}

void getGrades() {

for (int i = 0; i < 5; i++) {

System.out.println("Subject" + (i+1) + ":" + grades[i]);

}

}

public class WkText1 {

public static void main(String[] args) {

int n = 0;

Scanner sc = new Scanner(System.in);

System.out.println("Enter the number of students:");

```
n = sc.nextInt();
Result results [] = new Result[n];
for (i = 0 ; i < n ; i++) {
    results [i] = new Result();
    results [i].setStuDetails();
    results [i].SetCieDetails();
    results [i].SetSecDetails();
    results [i].calcSGPA();
    results [i].calcGrade();
}
for (int i = 0 ; i < n ; i++) {
    results [i].getStuDetails();
    results [i].getSGPA();
    results [i].getGrade();
}
```

## Wk7extr2 - Notepad

```
File Edit Format View Help
import java.util.Scanner;
abstract class PLAYER{
    String name;
    int matches_played;
    double average;
    abstract void cal_average(String name,int mp,int r);
}

class BATSMAN extends PLAYER{
    int runs_scored;
    void setRuns_Scored(int runs){
        runs_scored = runs;
    }

    void cal_average(String playerName,int matchesPlayed, int runsScored){
        name = playerName;
        matches_played = matchesPlayed;
        average = (double)runsScored/matchesPlayed;
    }
}

class BOWLER extends PLAYER{
    int runs_given;
    void setRuns_Given(int runs){
        runs_given = runs;
    }

    void cal_average(String playerName,int matchesPlayed, int runsGiven ){
        name = playerName;
        matches_played = matchesPlayed;
        average = (double)runsGiven/matchesPlayed;
    }
}

public class Wk7extr2{
    public static void main(String[] args) {
        int m,n,matches_played,runs;
        String name;
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter number of batsmen: ");
        m = sc.nextInt();
```

Wk7extr2 - Notepad

```
File Edit Format View Help
int m,n,matches_played,runs;
String name;
Scanner sc = new Scanner(System.in);
System.out.println("Enter number of batsmen: ");
m = sc.nextInt();
System.out.println("Enter number of bowlers: ");
n = sc.nextInt();
BATS MAN batsmen[] = new BATS MAN[m];
BOWLER bowlers[] = new BOWLER[n];

for(int i=0;i<batsmen.length;i++){
    System.out.println("Enter name of bastman " + (i+1) + ": ");
    name = sc.next();
    System.out.println("Enter matches played of bastman " + (i+1) + ": ");
    matches_played = sc.nextInt();
    System.out.println("Enter runs scored: ");
    runs = sc.nextInt();
    batsmen[i] = new BATS MAN();
    batsmen[i].cal_average(name, matches_played, runs);
}
for(int i=0;i<bowlers.length;i++){
    System.out.println("Enter name of bowler " + (i+1) + ": ");
    name = sc.next();
    System.out.println("Enter matches played of bowler " + (i+1) + ": ");
    matches_played = sc.nextInt();
    System.out.println("Enter runs given: ");
    runs = sc.nextInt();
    bowlers[i] = new BOWLER();
    bowlers[i].cal_average(name, matches_played, runs);
}
System.out.println("=====DETAILS OF BATS MEN=====");
for(int i=0;i<batsmen.length;i++){
    System.out.format("%s has an average of %.2f\n",batsmen[i].name,batsmen[i].average);
}
System.out.println("=====DETAILS OF BOWLERS=====");
for(int i=0;i<bowlers.length;i++){
    System.out.format("%s has an average of %.2f\n",bowlers[i].name,bowlers[i].average);
}

}
```

C:\

```
C:\Users\AKSHAY RASTOGI\Desktop\java prog>java Wk7extr2
Enter number of batsmen:
2
Enter number of bowlers:
3
Enter name of batsman 1:
Akshay
Enter matches played of batsman 1:
40
Enter runs scored:
2000
Enter name of batsman 2:
Sachin
Enter matches played of batsman 2:
35
Enter runs scored:
1800
Enter name of bowler 1:
Ashwin
Enter matches played of bowler 1:
23
Enter runs given:
189
Enter name of bowler 2:
Rahul
Enter matches played of bowler 2:
5
Enter runs given:
100
Enter name of bowler 3:
Jadeja
Enter matches played of bowler 3:
30
Enter runs given:
599
=====DETAILS OF BATSMEN=====
Akshay has an average of 50.00
Sachin has an average of 51.43
=====DETAILS OF BOWLERS=====
Ashwin has an average of 8.22
Rahul has an average of 20.00
Jadeja has an average of 19.97
```

C:\Users\AKSHAY RASTOGI\Desktop\java prog>

```
2) import java.util.Scanner;  
abstract class Player {  
    String name;  
    int matchesPlayed;  
    double average;  
    abstract void calAverage (String name, int np, int s);  
}  
  
class Batsman extends Player {  
    int runsScored;  
    void setRunsScored (int runs) {  
        runsScored = runs;  
    }  
  
    void calAverage (String playerName, int matchesPlayed, int runsScored)  
    {
```

```

name = playerName;
matchesPlayed = matchesPlayed;
average = (double) runsScored / matchesPlayed;
}
}

```

**BOWLER**  
~~class~~ Bowler extends Player {

```

int runsGiven;
void setRunsGiven(int runs) {
    runsGiven = runs;
}

```

```

void calAverage(String playerName, int matchesPlayed, int runsGiven) {
    name = playerName;
    matchesPlayed = matchesPlayed;
    average = (double) runsGiven / matchesPlayed;
}

```

```

public class WkText2 {
    public static void main(String[] args) {
        int m, n, matchesPlayed, runs;
        String name;
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the number of batsmen : ");
        m = sc.nextInt();
        System.out.println("Enter the number of bowlers : ");
        n = sc.nextInt();
        BATSMAN batsmen[] = new BATSMAN[m];
        BOWLER bowlers[] = new BOWLER[n];
    }
}

```

```

for (int i = 0; i < batsmen.length; i++) {
    System.out.println("Enter the name of batsman " + (i + 1) + ": ");
    name = sc.next();
}

```

```
System.out.println("Enter matches played of batsman " + (i+1) + ":"),  
matches_played = sc.nextInt();  
System.out.println("Enter runs scored : ");  
runs = sc.nextInt();  
batsmen[i] = new BATSMAN();  
batsmen[i].cal_average(name, matches_played, runs);  
}
```

```
for (int i = 0; i < bowlers.length; i++) {  
    System.out.println("Enter name of bowler " + (i+1) + ":" );  
    name = sc.next();  
    System.out.println("Enter the matches played of bowler " + (i+1) + ":" );  
    matches_played = sc.nextInt();  
    System.out.println("Enter the runs given : ");  
    runs = sc.nextInt();  
    bowlers[i] = new BOWLER();  
    bowlers[i].cal_average(name, matches_played, runs);  
}
```

```
System.out.println("==== DETAILS OF BATSMENTN ===");  
for (int i = 0; i < batsmen.length; i++) {  
    System.out.format("%s has an average of %.2f\n", batsmen[i].name, batsmen[i].average);  
}
```

```
System.out.println("==== DETAILS OF BOWLERS ===");  
for (int i = 0; i < bowlers.length; i++) {  
    System.out.format("%s has an average of %.2f\n", bowlers[i].name, bowlers[i].average);  
}
```