Java assignment 2

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PROBLEM STATEMENT:

Write a program to display 5 students record as : Takes full name of students as input and display. Sort the student names in ascending order and Display Students grade as per following rules for grading system:

a. Below 25 - F

b. 25 to 45 - E

c. 45 to 50 - D

d. 50 to 60 - C

e. 60 to 80 - B

f. Above 80 - A

Ask user to enter marks and print the corresponding grade.

Program :-

```
import java.util.*;
class Student
{
    String name;
    int marks;
    char grade;
    Scanner sc = new Scanner(System.in);

    public void getStudent(){
    System.out.println(" Enter Name of Student: ");
    this.name = sc.nextLine();
    System.out.println(" Enter Student Marks: ");
```

```java
        this.marks = Integer.parseInt(sc.nextLine());

    }

    public void calculateGrade(){

        if (this.marks>=80)

        {

            this.grade='A';

        }

        else if (this.marks>60 && this.marks<80)

        {

            this.grade='B';

        }

        else if (this.marks>=50 && this.marks<60)

        {

            this.grade='C';

        }

        else if (this.marks>=45 && this.marks<50)

        {

            this.grade='D';

        }

        else if (this.marks>=25 && this.marks<45)

        {

            this.grade='E';

        }

        else{

            this.grade='F';

        }

    }


    public Student[] studSort(Student[]s)
```

```java
    {
                Student tmp = new Student();
                for (int i = 0; i < s.length; i++)
    {
                for (int j = i+1; j < s.length; j++)
    {
                            if (s[i].marks > s[j].marks)
    {
                                    tmp = s[i];
                                    s[i]=s[j];
                                    s[j]=tmp;
                            }
                    }
                }
        return s;
    }


     public void displayStudent(){
          System.out.println();
          System.out.println(" Name: "+this.name);
          System.out.println(" Marks: "+this.marks);
          System.out.println(" Grade: "+this.grade);
     }


}


public class Ranking
{
     public static void main(String[] args) {
```

```java
Student[] s = new Student[5];

Student s1 = new Student();

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

{

s[i] = new Student();

}


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

{

    s[i].getStudent();

}


System.out.println("\n Student Data Before Sort:- ");


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

{

    s[i].calculateGrade();

    s[i].displayStudent();

}


s = s1.studSort(s);

System.out.println("\n Student Data After Sort:- ");

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

{

    s[i].displayStudent();

}

}

}
```

OUTPUT :

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

<default config>

Start Page ✕ Ranking.java ✕

Source History

1

Output - Ranking (run) ✕

```
run:
 Enter Name of Student:
kaveri
 Enter Student Marks:
99
 Enter Name of Student:
mayuri
 Enter Student Marks:
88
 Enter Name of Student:
swara
 Enter Student Marks:
85
 Enter Name of Student:
shravani
 Enter Student Marks:
70
 Enter Name of Student:
shivani
 Enter Student Marks:
95

 Student Data Before Sort:-

 Name: kaveri
 Marks: 99
 Grade: A

 Name: mayuri
 Marks: 88
 Grade: A

 Name: swara
```

```
1
```

Output - Ranking (run) ×

```
Name: swara
Marks: 85
Grade: A

Name: shravani
Marks: 70
Grade: B

Name: shivani
Marks: 95
Grade: A

Student Data After Sort:-

Name: shravani
Marks: 70
Grade: B

Name: swara
Marks: 85
Grade: A

Name: mayuri
Marks: 88
Grade: A

Name: shivani
Marks: 95
Grade: A

Name: kaveri
Marks: 99
```

Start Page × Ranking.java ×

Source History

1

Output - Ranking (run) ×

```
        Grade: A

        Name: shravani
        Marks: 70
        Grade: B

        Name: shivani
        Marks: 95
        Grade: A

        Student Data After Sort:-

        Name: shravani
        Marks: 70
        Grade: B

        Name: swara
        Marks: 85
        Grade: A

        Name: mayuri
        Marks: 88
        Grade: A

        Name: shivani
        Marks: 95
        Grade: A

        Name: kaveri
        Marks: 99
        Grade: A
        BUILD SUCCESSFUL (total time: 1 minute 13 seconds)
```