

- ③ write a java program to create a class student with members usn, name, marks (6 subjects). Include methods to accept student details & marks, also include a method to calculate the percentage & display appropriate details.

```
import java.util.Scanner;
```

```
class student {  
    private String usn;  
    private String name;  
    private int[] marks;
```

```
    public student (String usn, String name) {  
        this.usn = usn;  
        this.name = name;  
        this.marks = new int[6];  
    }
```

```
    public void acceptDetails() {  
        Scanner s = new Scanner (System.in);  
        System.out.println ("Enter USN:");  
        this.usn = s.nextLine();  
        System.out.println ("Enter Name:");  
        this.name = s.nextLine();
```

```
        for (int i=0; i < marks.length; i++) {  
            System.out.println ("Enter marks for Subject "+  
                (i+1) + ":");
```

```
            this.marks[i] = s.nextInt();  
        }
```

```
    public double calculatePercentage() {  
        int totalmarks = 0;
```

```
        for (int mark : marks) {  
            totalmarks += mark;  
        }
```

```
        return (double) totalmarks / marks.length;  
    }
```

public void displayDetails() {
System.out.println("USN" + this.usn);
System.out.println("Name: " + this.name);

System.out.println("Marks");
for (int i = 0; i < marks.length; i++) {
System.out.println("Subject " + (i+1) + " " + marks[i]);
System.out.println();
System.out.println("percentage " + calculatePercentage() + "%");
} }

public class StudentArrayDemo {
public static void main(String args[]) {
~~System.out.println~~
Scanner s = new Scanner(System.in);
System.out.println("Enter the no of students:");
int numStudents = s.nextInt();

Student[] s = new Student[numStudents];
for (int i = 0; i < numStudents; i++) {
System.out.println("Enter details for student " + (i+1) + " :");
Student[i] = new Student("", "");
Student[i].acceptDetails();
System.out.println("\n details of student:");
for (Student student = Student[i];
student.displayDetails();
System.out.println("\n"); } } }

output:

Enter name : chandru

Enter marks for Subject 1 : 90

Enter marks for Subject 2 : 89

Enter marks for Subject 3 : 99

Enter marks for Subject 4 : 100

Enter marks for Subject 5 : 98

Enter marks for Subject 6 : 89

Details of Student:

USN : 2023BMS02702

Name : Chandru

Marks : Subject 1 : 90

Subject 2 : 89

Subject 3 : 99

Subject 4 : 100

Subject 5 : 98

Subject 6 : 89

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```
import java.util.Scanner;

class Student {
    String USN, name;
    int marks[] = new int[6];
    double percentage;

    // Method to accept student details and marks
    void acceptDetails() {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter USN: ");
        USN = sc.nextLine();
        System.out.print("Enter name: ");
        name = sc.nextLine();
        System.out.println("Enter marks for 6 subjects:");
        for (int i = 0; i < 6; i++) {
            marks[i] = sc.nextInt();
        }
    }

    // Method to calculate percentage
    void calculatePercentage() {
        int totalMarks = 0;
        for (int mark : marks) {
            totalMarks += mark;
        }
        percentage = (double) totalMarks / 600 * 100;
    }

    // Method to display student details
    void displayDetails() {
        System.out.println("USN: " + USN);
        System.out.println("Name: " + name);
        System.out.println("Marks: " + marks[0] + ", " + marks[1] +
            ", " + marks[2] + ", " + marks[3] + ", " + marks[4] + ", " +
            marks[5]);
        System.out.println("Percentage: " + percentage + "%");
    }
}

public class StudentMain {
    public static void main(String[] args) {
        int numStudents;
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter the number of students: ");
    }
}
```

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```
numStudents = sc.nextInt();

Student[] students = new Student[numStudents];

// Accept details for each student
for (int i = 0; i < numStudents; i++) {
    students[i] = new Student();
    students[i].acceptDetails();
    students[i].calculatePercentage();
}

// Display details of all students
System.out.println("\nStudent Details:");
for (Student student : students) {
    student.displayDetails();
    System.out.println();
}

}
```

OUTPUT :

```
Enter the number of students: 2
Enter USN: a101
Enter name: Cathrin
Enter marks for 6 subjects:
90 85 80 95 98 84
Enter USN: a102
Enter name: Saanvi
Enter marks for 6 subjects:
90 95 85 80 70 98
```

```
Student Details:
USN: a101
Name: Cathrin
Marks: 90, 85, 80, 95, 98, 84
Percentage: 88.66666666666667%
```

```
USN: a102
Name: Saanvi
Marks: 90, 95, 85, 80, 70, 98
Percentage: 86.33333333333333%
```