



## (no subject)

1 message

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```
class Student {
    String name;
    int id;
    double[] marks;
    double averageMarks;

    // Constructor Overloading
    Student(String name, int id, double[] marks) {
        this.name = name;
        this.id = id;
        this.marks = marks;
        calculateAverageMarks();
    }

    Student(String name, int id) {
        this.name = name;
        this.id = id;
        this.marks = new double[5]; // Default array of 5 subjects
        this.averageMarks = 0;
    }

    // Function to calculate the average marks
    void calculateAverageMarks() {
        double sum = 0;
        for (int i = 0; i < this.marks.length; i++) {
            sum += this.marks[i];
        }
        this.averageMarks = sum / this.marks.length;
    }

    // Function to find the student with the highest average mark
    static Student findTopStudent(Student[] students) {
        Student topStudent = students[0];
        for (int i = 1; i < students.length; i++) {
            if (students[i].averageMarks > topStudent.averageMarks) {
                topStudent = students[i];
            }
        }
        return topStudent;
    }

    // Display Student Information
    void displayStudentInfo() {
        System.out.println("Student ID: " + this.id);
        System.out.println("Student Name: " + this.name);
        System.out.println("Average Marks: " + this.averageMarks);
    }

    public static void main(String[] args) {
        // Creating Student objects
        Student s1 = new Student("Alice", 1, new double[]{85.0, 92.5, 78.0, 88.0, 90.0});
        Student s2 = new Student("Bob", 2, new double[]{75.0, 82.0, 68.0, 80.0, 85.0});
        Student s3 = new Student("Charlie", 3, new double[]{95.0, 88.5, 92.0, 90.0, 94.0});
        Student s4 = new Student("Diana", 4, new double[]{65.0, 72.0, 70.0, 78.0, 80.0});
        Student s5 = new Student("Eve", 5, new double[]{85.0, 82.5, 88.0, 80.0, 86.0});

        // Calculating the student with the highest average mark
        Student topStudent = Student.findTopStudent(new Student[]{s1, s2, s3, s4, s5});
    }
}
```

```
// Displaying the top student information
System.out.println("Student with the highest average marks:");
topStudent.displayStudentInfo();
}
}
```