Assignment name: CourseGrades Mastery Project - Chapter 9
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Reflection Log

Create instance variables and array (Shown below)

```
public int StudentNum = 3;  // Number of students
public int Quizzes = 5;      // Number of quizzes per student
private int[][] grades;      // array to store student grades
```

Create method to initialize the grades array with student numbers and quiz numbers (Shown below)

```
public void getStudent() {
    grades = new int[StudentNum][Quizzes];  // Initialize the array
```

Loop through each quiz to calculate the sum of grades for the student (Shown below)

```
for (int i = 0; i < grades[0].length; i++) {
    sum += grades[stuNum - 1][i];
}
```

Calculate the average grade for each student (Shown below)

```
int stuAvg = sum / grades[0].length;
return stuAvg;
```

Create a method to calculate the average grade for a test (Shown below)

```
public double testAvg(int testNum) {
    int sum = 0;
    double avg = 0;

    // Loop through each student to calculate the sum of grades for the specified test
    for (int i = 0; i < grades.length; i++) {
        sum += grades[i][testNum - 1];
    }

    // Calculate the average grade for the test
    avg = (double)sum / grades.length;
    return avg;
}
```

Begin main method and create instance of CourseGRades class (Shown below)

```
public static void main(String[] args) {
    Scanner userinput = new Scanner(System.in);
    CourseGrades student = new CourseGrades();  // Create an instance of the CourseGrades class
```

Initialize grades array (Shown below)

```
student.getStudent();
```

Collect the grades for each student and each quiz (Shown below)

```
for (int i = 0; i < student.StudentNum; i++) {
    for (int x = 0; x < student.Quizzes; x++) {
        System.out.print("Enter the " + (i + 1) + " student grade: ");
        student.grades[i][x] = userinput.nextInt();
    }
}
```

Display the grades for each student (Shown below)

```
System.out.println("Here are the student grades: ");
for (int i = 0; i < student.StudentNum; i++) {
    System.out.print("Student number: " + (i + 1) + " | ");
    for (int x = 0; x < student.Quizzes; x++) {
        System.out.print(student.grades[i][x] + " ");
    }
    System.out.println(" ");
}
```

Prompt user to choose between getting the student average or getting the test average (Shown below)

```
System.out.println("1. Get the student average.");
System.out.println("2. Get the test average.");
```

Use switch case statement to print something depending on users input (Shown below)

```
switch (userchoose) {
    case 1:
        System.out.print("Enter the student number you want to find the average: ");
        int stu = userinput.nextInt();  // Get student number
        double average = student.studentAvg(stu);  // Calculate student average
        System.out.print("The average of the " + stu + " student is: " + average);
        break;
    case 2:
        System.out.print("Enter the test you want to find the average: ");
        int test = userinput.nextInt();  // Get test number
        average = student.testAvg(test);  // Calculate test average
        System.out.print("The average of the " + test + " test is: " + average);
        break;
}
```