

Assignment 6

Here's the Java code for each of the problems you specified:

1. Calculate the final grade of a student

```
```java
public class FinalGradeCalculator {

 public static void main(String[] args) {

 // Input

 String studentName = "Alice";

 int assignmentScore = 85;

 int midtermScore = 78;

 int finalExamScore = 92;

 String finalGrade = calculateFinalGrade(assignmentScore, midtermScore, finalExamScore);

 // Output

 System.out.println(studentName + "'s final grade is " + finalGrade + ".");

 }

 public static String calculateFinalGrade(int assignmentScore, int midtermScore, int finalExamScore)
 {

 double finalScore = (assignmentScore * 0.4) + (midtermScore * 0.2) + (finalExamScore * 0.4);

 if (finalScore >= 90) {

 return "A";

 } else if (finalScore >= 80) {

 return "B";

 } else if (finalScore >= 70) {

 return "C";

 } else if (finalScore >= 60) {
```

```

 return "D";
 } else {
 return "F";
 }
}
}
'''

```

### 2. Calculate the mileage of a car

```

'''java
public class MileageCalculator {
 public static void main(String[] args) {
 // Input
 String carModel = "Toyota Camry";
 double distanceTraveled = 300;
 double fuelConsumed = 15;
 double mileage = calculateMileage(distanceTraveled, fuelConsumed);

 // Output
 System.out.println("The mileage of " + carModel + " is " + mileage + " miles per gallon.");
 }

 public static double calculateMileage(double distanceTraveled, double fuelConsumed) {
 return distanceTraveled / fuelConsumed;
 }
}
'''

```

### 3. Calculate the fine for overdue books in a library

```
```java
public class LibraryFineCalculator {
    public static void main(String[] args) {
        // Input
        String bookTitle = "Harry Potter";
        int daysOverdue = 5;
        double finePerDay = 0.50;
        double totalFine = calculateTotalFine(daysOverdue, finePerDay);

        // Output
        System.out.println("The fine for " + bookTitle + " is $" + totalFine + ".");
    }

    public static double calculateTotalFine(int daysOverdue, double finePerDay) {
        return daysOverdue * finePerDay;
    }
}
```
```

You can run these programs in a Java environment to test them with the provided test cases. The expected output should match the descriptions you provided.