# CS410 INTRODUCTION TO COMP SCI APPLIC

Assignment 8 - Rental

**Problem**

A car rental agency has four classifications of vehicle that it rents out with associated costs shown in the table below:

| Class | Abbreviation | Vehicle Charge | Cost per mile |
|---|---|---|---|
| Compact | C | $60 per day if more than 3 days<br>$150 flat charge otherwise | 10 cents |
| Midsize | M | $70 per day if more than 3 days<br>$180 flat charge otherwise | 15 cents |
| Truck/SUV | T | $80 per day if more than 2 days<br>$140 flat charge otherwise | 20 cents |
| Other | O | $120 per day if more than 2 days<br>$200 flat charge otherwise | 25 cents |

A rental charge is calculated as the sum of the vehicle charge and mileage charge. Concessions – military, senior, student, disabled etc - get a discount of 5% off everything.

Write a program called **Rental** that inputs the class of vehicle (letter abbreviation), the number of days rented, miles traveled and whether the renter has a concession (Y/N). The program then prints the vehicle charge, the mileage charge, the discount and the final price.

**Notes**

1. Your program should use **char** variables not **String**s for input. There is no **Scanner** input for reading a **char** so use **nextLine()** to input a single character as a **String** and use the methods **toUpperCase()** and **charAt(0)** to convert to an uppercase **char**.

2. Your program must do a check on character input so that the abbreviation is one of the four possible letters and the concession input is Y or N.

3. Use **final**s for all 12 money values shown in the table. Make sure you use those names in your code. Properly comment, indent and line up your program.

4. You can assume that the number of days and miles traveled are entered as positive integers.

**Turning in the Assignment**

1. When you have finished, run your program using the test data below (4 separate runs). Enter the strings exactly as shown.

| Class | Days | Miles | Concession |
|---|---|---|---|
| X  w  C (one at a time) | 3 | 231 | Y |
| m | 5 | 1234 | X ? N    (one at a time) |
| T | 2 | 888 | y |
| o | 4 | 91 | n |

2. Take a screenshot (or two). Upload screenshot(s),  two printouts and upload the **Rental.java** and **Rental.class** files to Canvas.

   **Due Date: start of class on 3/17**