Honor Code: All submissions should include a comment statement near the top of the program of the form:

```java
/* THIS CODE IS MY OWN WORK, IT WAS WRITTEN WITHOUT CONSULTING
 * A TUTOR OR CODE WRITTEN BY OTHER STUDENTS - YOUR NAME
 */
```

Cases of apparent plagiarism or collusion will be referred to the Honor Council.

Preparation: To disallow other students from reading your homework programs, you must save your file(s) in a directory inside your cs170 directory. If you follow the below commands, your work will be protected.

1. Create a directory called hw4 directory inside your cs170 project directory to save your hw4 files.
   ```
   mkdir ~/cs170/hw4
   ```

2. You must use ~/cs170/hw4 directory as your current directory when editing any program files for hw4. Change your current directory to your newly created hw4 directory:
   ```
   cd ~/cs170/hw4
   ```

3. You can now run gedit to edit your programs:
   ```
   gedit yourProgramName.java &
   ```

The name yourProgramName is the name of the Java program (and also the name of the class!).

1. (60 pts) Write a program named AutoInsurance to determine the cost of an automobile insurance based on driver’s age and the number of accidents that the driver has had.
   - The basic insurance charge is $500. There is a surcharge of $100 if the driver is under 25 and an additional surcharge for accidents:

<table>
<thead>
<tr>
<th># of accidents</th>
<th>Accident Surcharge</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td>2</td>
<td>125</td>
</tr>
<tr>
<td>3</td>
<td>225</td>
</tr>
<tr>
<td>4</td>
<td>375</td>
</tr>
<tr>
<td>5 or more</td>
<td>575</td>
</tr>
</tbody>
</table>

   - Your program should take two command line arguments for driver’s age and number of accidents respectively.

   **Sample output:**
Your program output should resemble the following:

```java
>>> java AutoInsurance 22 2
Age: 22
Number of accidents: 2
The insurance charge: 725

>>> java AutoInsurance 25 3
Age: 25
Number of accidents: 3
The insurance charge: 725
```

2. (40 pts) Write a program named `NextDay`. Your program should:
   - Take one command line argument, which contains a date in the format of YYYY/MM/DD.
   - Check the validity of the input date. Print “Invalid month!” if the month is invalid, “Invalid day!” if the day is invalid. You can find the number of days for each month in the table below:

<table>
<thead>
<tr>
<th>Month</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td># of Days</td>
<td>31</td>
<td>28/29</td>
<td>31</td>
<td>30</td>
<td>31</td>
<td>30</td>
<td>31</td>
<td>31</td>
<td>30</td>
<td>31</td>
<td>30</td>
<td>31</td>
</tr>
</tbody>
</table>

   Note: February has 28 days in regular years but 29 days in leap years.
   - Print the date of the next day in the format of YYYY/MM/DD if the input date is valid.

**Sample output:**
Your program output should resemble the following:

```java
>>> java NextDay 2014/02/01
This day is: 2014/02/01
The next day is: 2014/02/02

>>> java NextDay 2014/02/29
This day is: 2014/02/29
Invalid day!

>>> java NextDay 2012/02/29
This day is: 2012/02/29
The next day is: 2012/03/01
```
>>> java NextDay 2014/13/28
This day is: 2014/13/28
Invalid month!

>>> java NextDay 2012/12/31
This day is: 2012/12/31
The next day is: 2013/01/01

Submission:
• Submit your work using the following commands. You need to be in your ~/cs170/hw4 directory when you issue them.
  ◦ /home/cs170001/turnin AutoInsurance.java hw4a
  ◦ /home/cs170001/turnin NextDay.java hw4b
• Your homework is not turned unless the above commands are successful (you will get a "success" message when turn in was successful).