Honor Code:

For all programming assignments, you must write comments at the top of each file which include the following information:

/*
THIS CODE IS MY OWN WORK. IT WAS WRITTEN WITHOUT CONSULTING CODE WRITTEN BY OTHER STUDENTS OR MATERIALS OTHER THAN THIS SEMESTER'S COURSE MATERIALS. _Your_Name_Here_
*/

Homework submission
Submit (Truncator.java, Verifier.java and Sorter.java) by Feb. 25th at the beginning of class.
Using the terminal, turn in your homework:
Put all three files in the folder CS170 or a subfolder (perhaps CS170/hw3/)
You can create a folder by running the following command (1 line per step):

1) mkdir~/cs170/hw3

2) copy your files to the folder /home/yourNetID/cs170/hw3 (the one you have just created in step 1)

Using the terminal, run:

3) cd ~/cs170/ or cd ~/cs170/hw3 (depending on where you stored your 3 files)

4) /home/cs170002/turnin-hw Truncator.java hw3a

5) /home/cs170002/turnin-hwVerifier.javahw3b

6) /home/cs170002/turnin-hwSorter.javahw3c

You can submit each of the files as many times as you wish; only the last submitted version will be graded.
**Problem 1: Truncator (20 pts)**
Create a Java program and name it Truncator.java.
This program reads a string from the keyboard, if its length is more than 5,
truncates it by extracting the last 5 characters (a substring of the original one). If its length is less than or equal to 5, print the string directly.

Example:
Enter a string = Hello Output = Hello
Enter a string = computer Output = puter

// the length of "Hello" is 5
// the length of "computer" is 8

Hints:
You can determine the length of a string:

http://www.mathcs.emory.edu/~cheung/Courses/170/Syllabus/05/string1.html

It is possible to get a substring:

http://www.mathcs.emory.edu/~cheung/Courses/170/Syllabus/05/string1.html

**Problem 2: Calendar Verifier (40 pts)**
Create a Java program and name it Verifier.java.
This program reads a string from the keyboard, the format of which is MM/DD/YYYY.
First, check if MM is legal or not. If MM is not between 1 and 12, print "illegal month!". If MM is a value between 1 and 12, check if DD is bigger than the number of days in this month or not. If it is bigger than what it could be, print "illegal day!", otherwise, print "correct".

<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>Days</td>
<td>31</td>
<td>28</td>
<td>31</td>
<td>30</td>
<td>31</td>
<td>30</td>
<td>31</td>
<td>30</td>
<td>31</td>
<td>30</td>
<td>30</td>
<td>31</td>
</tr>
</tbody>
</table>

Example:
Enter a date = 15/03/2001 output = illegal month // since 15 is illegal
Enter a date = 02/30/2001 output = illegal day // since there are only 28 days in February
Enter a date = 01/31/2001 output = correct // since there are 31 days in January

Hints:
Extract substrings from the input string, and then convert them to integers.
You may use "switch" or "if-else if-else" statement to get the number of days in a month.

**Problem 3: Sorter (40 pts)**
Create a Java program and name it Sorter.java.
This program reads three integers from the keyboard, sorts them in descending order.
Example:
Enter the first integer = 12
Enter the second integer = 4
Enter the third integer = 102

Output = 102 12 4

Hints:
You can find examples of finding the maximum of two or three numbers: [http://www.mathcs.emory.edu/~cheung/Courses/170/Syllabus/06/if2.html](http://www.mathcs.emory.edu/~cheung/Courses/170/Syllabus/06/if2.html)