Lab 3

Objectives:
• Practice writing algorithms and programs that use conditional logic.

Preparation: Use variables to output a personalized message
a) Create an application called Vacation that prompts for and inputs an integer representing someone’s age and then suggests an appropriate vacation destination. One of two destinations should be suggested depending on whether person is over 30.

<table>
<thead>
<tr>
<th>Variables</th>
<th>age</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Algorithm</th>
</tr>
</thead>
<tbody>
<tr>
<td>print welcome message</td>
</tr>
<tr>
<td>input age</td>
</tr>
<tr>
<td>if age &gt; 30</td>
</tr>
<tr>
<td>print destination 1 suggestion</td>
</tr>
<tr>
<td>else</td>
</tr>
<tr>
<td>print destination 2 suggestion</td>
</tr>
<tr>
<td>print goodbye message</td>
</tr>
</tbody>
</table>

(“welcome message”, “destination 1 suggestions”, etc... are appropriate strings of your choosing)

b) Submit Vacation.java through blackboard under the assignment “Lab 3 Prep”

Part 1. Write an algorithm for determining the largest (maximum) of three numbers, a, b, c. The largest of the three values should be assigned to the variable max.

Finding max – Algorithm:
2. Write two more alternative algorithms for determining the largest of three numbers, a, b, c. The largest of the three values should be assigned to the variable max.

Finding max – Algorithm 2:

Finding max – Algorithm 3:

3. Implement the above algorithms as a Java programs.
You can start by downloading MaximumVersionX.java
http://www.csc.villanova.edu/~map/1051/f16/examples/MaximumVersionX.java

Modify the code (look for ***) to produce three versions.
Check your work with a classmate – compare algorithms and test each version:

MaximumVersion1.java  Classmate signature: ____________________________
MaximumVersion2.java  Classmate signature: ____________________________
MaximumVersion3.java  Classmate signature: ____________________________
Lab 3 Comments  Name:________________________  Checked: _______

Comments on this lab, please:

What was the most valuable thing you learned in this lab?

What did you like best about this lab?

Was there any particular problem?

Do you have any suggestions for improving this lab as an effective learning experience?