There are no secrets to success. It is the result of preparation, hard work, and learning from failure.

Colin Powel

**Homework 06**

[Loop, Nested Loop]

**Note:** It is assumed that all tasks should be solved using loop.

**Task 1:**
Write a program to calculate sum of first ten positive numbers. In output show numbers separated by + sign and finally show = sign and sum:

1+2+3+4+5+6+7+8+9+10=55 [Hint: Use \b to erase last + sign]

**Task 2:**
Write a program to show numbers 1 to with an increment of 0.1, use DecimalFormat to show output like?

1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2.0

**Task 3:**
Write a program to input a sentence and display position of spaces in sentence like:

Space 1 at position: 4
Space 2 at position: 11
...

**Task 4:**
Write a program to calculate factorial of any number. Show output like if number is 5 print:

5 * 4 * 3 * 2 * 1 = 120 [Hint: use \b to erase last *]

**Task 5:**
Write a program to input numbers from user and print their sum. Say user to enter any positive number and enter -1 to terminate. Inside loop write print statement and input statement. Check if input is -1 terminate loop otherwise calculate count and sum and show output like:

Enter Positive Number or -1 to quit: 12
Enter Positive Number or -1 to quit: 13
Enter Positive Number or -1 to quit: 2
Enter Positive Number or -1 to quit: -1
You entered 3 numbers Sum is : 27

**Task 6:**
Write a program to show output as given on right hand side. Use nested loop

<table>
<thead>
<tr>
<th></th>
<th>1 2 1</th>
<th>3 2 1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4 3 2 1</td>
<td>5 4 3 2 1</td>
</tr>
</tbody>
</table>
Task 7:
Write a program to show output as given on right hand side. Use nested loop

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

Task 8:
Write a program to calculate factorial of 3 to 6 using nested loop. Show output like

3! = 6
4! = 24
5! = 120
6! = 720

-------------------------------- BEST of LUCK ------------------------------------