American University of Science & Technology

Department of Computer Science

**CSI 311L – Java Programming Lab**

**Spring 2011/2012**

**Lab Work 6**

**Problem1:**

Write a java application to display the following shape:

**Problem 2:**

Write a program to generate 30 random integers between 20 and 80 and store them in a 3-by-10 array “X”. The program should do the following tasks:

* Calculate the sum of rows in “X” and store them in an array “sumOfRows” of size 3.
* Calculate the sum of columns in “X” and store them in an array “sumOfColumns” of size 10.
* Display the contents of the three arrays.
* Find the minimum and maximum values in the array “sumOfColumns” and display them using “printf”.

**Problem 3:**

Write a java application to generate 20 random numbers in the range (1-50) and store them in an array of integers, **A**. The program should output the following: (*Write different methods*)

* The percentage of odd integers in **A**.
* Store in an array **B,** the square root value of each integer in **A**.
* Output the integer with the highest occurrence in **A**.

**Problem 4:**

Write the class definitions and implementations for the following class specifications.

|  |  |
| --- | --- |
| **Bank** | |
| **Attributes** | * code: an integer to identify each bank * name: a String to specify the name of the bank * location: a String to specify the location of the bank * rank: an integer to specify the rank of the bank (1, 2, or 3) * customers: an integer to specify the number of customers * banks: to count the number of banks |
| **Methods** | * Default constructor * Constructor * set methods * get methods * toString: to return information about a Bank |

1. Write a java application to do the following (Use JOptionPane methods):

* Create N objects of class Bank and let the user initialize them
* Display information about banks with rank equal to 1
* Display information about banks with number of customers less than 500