PSG COLLEGE OF TECHNOLOGY
DEPARTMENT OF COMPUTER APPLICATIONS
23MX26 - Java Programming Laboratory
Hands-on Worksheet 1

1. Given two numbers, return true if the sum of both numbers is less than 100. Otherwise return false.

lessThan100 (22, 15) ➡ true // 22 + 15 = 37

lessThan100 (83, 34) ➡ false // 83 + 34 = 117

lessThan100 (3, 77) ➡ true

2. Define a function that takes three integer values as formal arguments and returns "YOU WIN" if the third formal argument value is between first and second arguments (both included). In the other case it returns "YOU LOSE". Also check that second argument should not be lesser than the first argument. If so continue, else display relevant error message.

3. The health visitor at a school is going to measure the heights of all pupils. For each class he makes a statistics giving the number of pupils of each height and the average height. Make a Java program that helps the health visitor making the statistics.

Example:

In a class with 20 pupils the heights of the individual pupils, in centimeters, are:
175, 167, 160, 164, 183, 187, 188, 179, 176, 175,
169, 175, 176, 178, 165, 160, 173, 165, 187, 178.
The program should read in all the numbers and make a table like this:

Height	Number of pupils
160	*2*
164	*1*
165	*2*
167	*1*
...	*...*
...	*...*
188	*1*

Average Height 174.0

4. Doctor says a man should weigh 106 pounds for the first 5 feet of height, plus 7 pounds for every inch above that; a woman should weigh 100 pounds for the first 5 feet of height, plus 6 pounds for every inch above that. Write a program that determines how much an individual person should weigh. Here's what your program might look like in action:

Sample Output:
Type 1 if you are female and 2 if male: How tall are you?
Number of feet : 5
Number of inches : 10
You should weigh 160 pounds

Type 1 if you are female and 2 if male: How tall are you?
Number of feet : 6
Number of inches : 0

You should weigh 190 pounds

5. Write a program that reads a sequence of integer values and determines whether it is a decreasing sequence. A decreasing sequence is one where each value is greater than or equal to the next element in the sequence. The program will first read the number of values to process followed by the values in the sequence. The program will print the message "Decreasing" for a decreasing sequence and "Non-Decreasing" otherwise.
For example, here are two decreasing sequences:

Input1:	**90**	**87**	**30**	**0**	**-1**	**-2**
Input2:	**110**	**4**	**0**	**-20**		

The following are non-decreasing sequences:

Input3:	**90**	**100**	**20**	**4**		
Input4:	**30**	**24**	**-2**	**-1**	**8**	**9**

You may assume that the integer sequence will have at least two integer values and no two values will be equal.