1. Please write a program which accepts basic mathematic expression from console and print the evaluation result.

Example:

If the following string is given as input to the program:

35+3

Then, the output of the program should be:

38

2. Write a method which can calculate square value of number

3. Define a function that can accept an integer number as input and print the "It is an even number" if the number is even, otherwise print "It is an odd number".

4. Define a function which can generate a list where the values are square of numbers between 1 and 20 (both included). Then the function needs to print the last 5 elements in the list.

5. Write program using following instructions:

The user should be able to enter a series of numbers, and the program should print the average of these numbers. You can use floating point number variables, or store the input in a list.

Also expand the program to print the mean, median and mode averages.

6. Write a program that computes the net amount of a bank account based a transaction log from console input. The transaction log format is shown as following:

D 100

W 200

D means deposit while W means withdrawal.

Suppose the following input is supplied to the program:

D 300

D 300

W 200

D 100

Then, the output should be:

500

7. You are required to write a program to sort the (name, age, height) tuples by ascending order where name is string, age and height are numbers. The tuples are input by console. The sort criteria is:

1: Sort based on name;

2: Then sort based on age;

3: Then sort by score.

The priority is that name > age > score.

If the following tuples are given as input to the program:

Tom,19,80

John,20,90

Jony,17,91

Jony,17,93

Json,21,85

Then, the output of the program should be:

[('John', '20', '90'), ('Jony', '17', '91'), ('Jony', '17', '93'), ('Json', '21', '85'), ('Tom', '19', '80')]