TUTORIAL EXERCISE 1

1. Write a program which accepts a sequence of comma-separated numbers from console and generate a list and a tuple which contains every number.
Suppose the following input is supplied to the program:
34,67,55,33,12,98
Then, the output should be:
['34', '67', '55', '33', '12', '98']
('34', '67', '55', '33', '12', '98')

2. With a given integral number n, write a program to generate a dictionary that contains (i, i*i) such that is an integral number between 1 and n (both included). and then the program should print the dictionary.
Suppose the following input is supplied to the program:
       8
Then, the output should be:
       {1: 1, 2: 4, 3: 9, 4: 16, 5: 25, 6: 36, 7: 49, 8: 64}

Hints:
       In case of input data being supplied to the question, it should be assumed to be a console input.

3. Write a program which will find all such numbers which are divisible by 7 but are not a multiple of 5, between 2000 and 3200 (both included).
The numbers obtained should be printed in a comma-separated sequence on a single line.
Hints:
Consider use range(#begin, #end) method

4. Write a program that calculates and prints the value according to the given formula:
Q = Square root of [(2 * C * D)/H]
Following are the fixed values of C and H:
C is 50. H is 30.
D is the variable whose values should be input to your program in a comma-separated sequence.
Example
Let us assume the following comma separated input sequence is given to the program:
100,150,180
The output of the program should be:
18,22,24

Hints:
If the output received is in decimal form, it should be rounded off to its nearest value (for example, if the output received is 26.0, it should be printed as 26)
In case of input data being supplied to the question, it should be assumed to be a console input.

5. Write a program that accepts a comma separated sequence of words as input and prints the words in a comma-separated sequence after sorting them alphabetically.
Suppose the following input is supplied to the program:
without,hello,bag,world
Then, the output should be:
bag,hello,without,world

Hints:
In case of input data being supplied to the question, it should be assumed to be a console input.

6. Given the marks of five subjects, you have to calculate and print the average of the total marks.
Input:
Marks of different subjects in new line.
Output:
output the average number
Example:
Input:
24
21
35
41
52

Output:
34.6

7. you will be provided with the number of rows i.e. r and columns i.e. c as the input and your job is to create a matrix of size rxc. Also, the matrix should have elements starting from 1 to rxc with an increment of one in row manner.
Example:
if r = 2 and c = 3
then the output is

1 2 3
4 5 6

8. 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