1. Task:

Given a year, write a program that detects whether the year is leap year or not.

Required time: 12 minutes

Example:

2017 is not a leap year.
1900 is a not leap year.
2012 is a leap year.
2000 is a leap year.

Input Format:

The first and only line contains the integer, year.

Validation:

1<=n<=50000

Sample Input:

1989

Sample Output:

1989 is not a leap year.

2. Task:

Given a number, n, write a program that for all non-negative integers i < n, print i^2.

Required time: 8 minutes

Input Format:

The first and only line contains the integer, number.

Validation:

1<=n<=50000

Sample Input:

4

Sample Output:

0
1
4
9

3. Task:

Given a number, n, write a program that for all non-negative integers i < n, print * in separate line.

Required time: 10 minutes

Example:
n = 5
*
**
***
****
*****
n = 1
*

Input Format:

The first and only line contains the integer, number.

Validation:

1<=n<=50

Sample Input:

4

Sample Output:

*
**
***
****

4. Task

Your provided code section should find a meaning of a word from a dictionary containing key/value pairs of word: value.

Required Time: 8 minutes

Input: Take this dictionary into a variable.

{'Passed':'You have practiced at home.', 'Failed': 'You was not serious.',
'Other': 'Write your own meaning.'}

Input Format:

The first and only line contains the string, word.

Validation:

word is string.

Sample Input:

Passed

Sample Output:

You have practiced at home.

5. Task

Your code should calculate the average of first n items of a list.

Required Time: 10 minutes

Input Format:

The first contains a integer, n.
Second line contains the list.

Output Format:

Average of first n items is average.

Validation:

0<=n<length of list.

Sample Input:

3
[10, 25, 3, 11, 88]

Sample Output:

Average of first 3 items is 12.66.

6. Task

Your code should calculate the average mark of students in a dictionary as key/value pairs. Key represents the name of the student, whereas value represents marks from last few exams.

Level: Advance.

Required: Optional

Required Time: 15 minutes

Input Format:

Contains a dictionary of at least 4 key/value pairs.

Output Format:

Average of each key.

Validation:

0<=n<length of list.

Sample Input:

{'Hasan': [10, 5, 20],
'Sakir': [10, 10, 14],
'Hanif': [20, 15, 10],
'Saiful': [20, 20, 20]
}

Sample Output:

Average of Hasan: 11.66
Average of Sakir: 11.34
Average of Hanif: 15
Average of Saiful: 20