

**Question:**

With a given integral number  $n$ , write a program to generate a dictionary that contains  $(i, i*i)$  such that  $i$  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}

**Question:**

Write a program which takes 2 digits,  $X, Y$  as input and generates a 2-dimensional array. The element value in the  $i$ -th row and  $j$ -th column of the array should be  $i*j$ .

Note:  $i=0,1,.., X-1$ ;  $j=0,1,.., Y-1$ .

Example

Suppose the following inputs are given to the program:

3,5

Then, the output of the program should be:

[[0, 0, 0, 0, 0], [0, 1, 2, 3, 4], [0, 2, 4, 6, 8]]

**Question:**

Write a program, which will find all such numbers between 1000 and 3000 (both included) such that each digit of the number is an even number.

Example

Suppose the input is 2000 to 2004, the output should be (comma separated):

2000, 2002, 2004

**Question:**

Use a list comprehension to square each odd number in a list. The list is input by a sequence of comma-separated numbers.

Suppose the following input is supplied to the program:

1,2,3,4,5,6,7,8,9

Then, the output should be:

1,3,5,7,9