ENGG1330 Computer Programming

2018-19 2nd Semester

Tutorial 4

Deadline: 28/2 23:55

Aims and Objective:

1. Write program with flow control statement (loop)
2. Gain hand-on experience on nested for-loop

1. Write a program which reads a positive integer *n* and out all the factors *k* where *k* is larger than 1 and less than *k*. Use *for-loops* in this program. *(hints: if n is a factor of k, the remainder of n/k should be equal to zero. Which operator in Python will give us the remainder of a division?)*

Case	Input	Output
1	12	2 3 4 6
2	7	
3	-1	Error: Negative number
4	30	2 3 5 6 10 15

2. Modify the program in Q.1 such that it prints the number of factors for a positive input number. You should also handle error cases as shown in the following examples.

Case	Input	Output
1	12	4
2	2	0
3	-3	Error: Negative number

3. Use nested for-loop to generate m x n Times Table, where m and n are two integers inputted by user. You may assume that the first input is m and the second input is n. Each output takes up 5 characters space in width

Case	Input	Output
1	2 2	1 2 2 4
2	5 6	1 2 3 4 5 6 2 4 6 8 10 12 3 6 9 12 15 18 4 8 12 16 20 24 5 10 15 20 25 30

3	5 3	1 2 3 4 5	2 4 6 8 10	3 6 9 12 15					
4	6 8	1 2 3 4 5 6	2 4 6 8 10 12	3 6 9 12 15 18	4 8 12 16 20 24	5 10 15 20 25 30	6 12 18 24 30 36	7 14 21 28 35 42	8 16 24 32 40 48