

Python Peer Learning Group Tasks - Try it yourself!

Following are sample exercises for different levels. Try the beginner level first. If you are confident, try the advanced level too :D

Week 2:

- a. Create a program where you will enter a number. If the number is even, the program will print "Wow! That's an even number.". If the number is odd, the program will print, "OK, this is odd!"

Advanced level: Same task but the program prints an error message if you don't enter a number (e.g. strings).

- b. Create a program where you enter your Python grade (0-100) and it tells you which letter grade you received. The letter grades are as follows:

A = 100 - 91

B = 90 - 81

C = 80 - 71

D = 70 - 61

F = 60 - 0

So, if you enter a grade 50, the program will print "F"

Advanced level: Same task but the program prints an error message if the value is not a number OR the value is not within 0-100

- c. Write a program that takes an input string from the user and prints the length of the string.

Slightly advanced level: Print the first and last letter of that string.

Week 3:

- a. Print each letter in: "Lund University" one after the other:

L

u

n

d

U

n

i ... and so on.

Advanced level: Print letter number beside the letter. For example:

L 0

u 1

n 2

...and so on.

- b. Print a triangle like this:

+

+

+

+

+

Hint: Use 2 for loops

Super Advanced Level: Print a christmas tree like this:

```

      *
    * * *
  * * * * *
* * * * * * *
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* * * * * * * * * *
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  * * *
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* * *
```

Week 4:

- a. There are two lists:

List1 = [1, 2, 3, 4, 5]

List2 = [2, 4, 6, 8, 10]

Write a program to find the common numbers in both lists.

Advanced level: List3 = [1,2,4, 5,10]

Write a program to find common numbers between all three lists

- b. List_num = [1,2,3,4,5,6,7,8]

Write a program to add all numbers in the list

Advanced level: Add only even numbers in the list

- c. There are two lists. One with the name of the patient and one with their disease symptoms. Write a program that prints each patient and their disease symptoms one by one.

List_patients = ['Jonny', 'Melisa', 'Jessica', 'Simone', 'Lu', 'Ganesh']

List_symptoms = ['fever', 'knee pain', 'dizziness', 'breathlessness', 'neck soreness', 'chest pain']

The output of your program should look like this:

Jonny has fever

Melisa has knee pain

...and so on

Advanced level: Create a dictionary of patients and their symptoms.

Projects!!

This will really put your skills to the test. You can try these projects out together with other learners.

Project 1:

Create the “Guess the Number” game from our python kick-off session. Try doing it yourself instead of looking at the code in the notebook. If you finished week 4, you most certainly have the skills to program this mini-game :D

Guess the number is a game where the computer chooses a random number. The user then tries to enter his guess. Based on the entry, the computer tells the user whether his guess is higher or lower than the original number. Here are the steps for the game:

1. The computer chooses a random number.
2. We make a guess and enter the number.
3. If we guess right, we WIN!!
4. If we guess wrong, the computer tells us if our guess is higher or lower. We can then guess again.
5. Advanced Level: We get 6 tries.

Hint: to choose a random number between 1 and 50, you can use the following code:

```
import random
computer_num = random.randint(1,50)
```