# Python exercises:

Level 0

1. Write a code to display sum and average of two numbers. The average should be displayed as a whole number (no decimal places) after calculation.
2. Given a tuple in Python, print the reverse of this tuple

input:

tuple\_x = (10, 20, 30, 40, 50)

expected output:

(50, 40, 30, 20, 10)

1. Write a Python program to test whether a given letter is a vowel or not.
2. Given a string, display only those characters which are present at the even index.
3. Replace all spaces in a string with an underscore.
4. Given 2 strings, stra and strb, create a new string by appending strb in the middle of stra
5. Given a huge string, display only the first 25% (aprox) of character.

For example, if string is “greater good”, then the output should be “gre”.

1. Take two lists and write a program that returns a list containing only the elements that are common between the two lists (without duplicates).
2. Given two lists create a third list by picking an odd-index element from the first list and even index elements from the second.
3. Given the following lists:

a = [10, 20, 30, [10, 20, 30, [100, 200, 400], 40, 50], 40, 50]

b = [55, 65, 75]

Create a list c using a and b such that, list c looks like:

[10, 20, 30, [10, 20, 30, [100, 200, 400, 55, 65, 75], 40, 50], 40, 50]

Level 1:

1. Write a program that prints out all the elements of the list (list of numbers) that are less than 5
2. Given a number check if it is even or odd, if it’s divisible by ten then display a different message.
3. Given a starting number as 4 and ending number as 9, iterate over the range of numbers and print the sum of current number and previous number at every iteration
4. Given a list of numbers, iterate it and print only those numbers which are divisible of 10
5. Given a list of integers, find if the first & last elements of the list are same.
6. Write a code to print the following pattern using a loop:

1

1. 2

1 2 3

1 2 3 4

1 2 3 4 5

1. Write a code to check if a given year is leap year or not.
2. Given a string, count the number of upper case & lower-case characters. For example, given a string like “QuaLCoMM”, the output should be: 5 upper & 3 lower
3. Given a list of numbers, if the size of list is odd, then display the center most number. If the size of list is even then display average of the two numbers at the center.
4. Iterate a given list and count the occurrence of each element and create a dictionary to show the count of each element

Level 2:

1. Iterate over a list and count the occurrence of each element. Create a dictionary to show the count of each element
2. Given a list of integers, remove all duplicates and put them in a tuple (only duplicates). Find the minimum, maximum, sum and average of all numbers in that list.
3. A bank has options for recurring deposit with an yearly interest rate of 8% cumulatively. Create a function which takes the deposit amount, and number of years (n) as an input. The function would return the amount cumulated at the end of ‘n’ years.
4. Write a code to extract all values from a multi-level nested dictionary. It should work for any level and should display only values and not keys.
5. Given a list of strings, traverse through the list and if it comes across a string called as “reverse”, print the reverse of the list up to whatever has been traversed.

For example, input:

lista = [‘the’, ‘greater’, ‘good’, ‘is’, ‘reverse’, ‘of’, ‘what’, ‘exists’]

output:

[‘is’, ‘good’, ‘greater’, the’]