

**HOMEWORK 2**  
**(submit a single .py file)**

- 1) Find the cross product of the following vector defined as a tuple:

$a = (3, 2, 3)$  and  $b = (7, 5, 1)$

- 2) Write a script that asks the user for three numbers. Each time the user inputs the number, convert the input value to an integer using the floor() method. Each integer must be appended to a list. For example:

Enter the value: 34.2

Enter the value: 20.0

Enter the value: 1

The list contains 34, 20, 1

- 3) Write a script to reverse the order of characters in the given sentence

sentence = 'My name is Binil Starly'

The output should be:

ylratS liniB si eman yM

- 4) Write a program to check whether a given substring is present in the given string and number of times it appears.

Input Text:

The world is round. We live in it. But perhaps the world is flat!

Enter Search Text:

perhaps

Output

The number of times 'perhaps' appears is: 1

- 5) Take two lists, say for example the two lists below:

$a = [1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89]$

$b = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 78, 21]$

and write a script that returns a list that contains only the elements that are common between the lists (without duplicates). Make sure your program works on two lists of different sizes.

- 6) A user has two standard dices. Each dice has values from 1 through 6. The user throws each set of 2 dices 3 times. Simulate this action using a Python script wherein the script randomly picks integers for the dices. For the three throws, print the values that appear on the dices and the total sum of the scores obtained (total of 6 values ( 2 dices x 3 throws). (Do not use For Loops).