

1. Write a Python program to check whether the given IP Address is Valid or not.

What is an IP (Internet Protocol) Address ?

Every computer connected to the Internet is identified by a unique four-part string, known as its Internet Protocol (IP) address.

Consider IP's (0.0.0.0 to 999.999.999.999) as valid

Input: 255.255.255.255

Output: Valid

Input: 255 (or) 255.255 (or) 255.255.1 (or) 6.255.3 (or) 3.24.729.829.999

Output: Invalid

Note: Use the following code and explore the functions available in the “re” module.

```
import re
def validateIPAddress(hostip):
    # complete the code below
    # pass #comment this line after code is implemented

hostIP = input("enter ip: ")
validateIPAddress(hostIP)
```

2. Given an array of integers, return indices of the two numbers such that they add up to a specific target.

You may assume that each input would have *exactly* one solution, and you may not use the *same* element twice.

Example:

Given nums = [2, 7, 11, 15], target = 9,

Because nums[0] + nums[1] = 2 + 7 = 9,
return [0, 1].

Note: use the following code

```
def twoSum(nums, target):

    # complete the code below

    pass #comment this line after code is implemented

print(twoSum([[2, 7, 11, 15]], 9)) #output: [0,1]
print(twoSum([3,3], 6)) #output: [0,1]
```

3. Write a Python program to generate all the prime numbers less than number(n).

Input: 10

Output: 2,3,5,7

Input: 20

Output: 2,3,5,7,11,13,17,19

Note: use the prime number function built in previous exercise