Python Programs

1. Check whether the number is prime or not:

```
num = 1
if num > 1:
   for i in range(2, int(num/2)+1):
      if (num % i) == 0:
         print(num, "is not a prime number")
         break
   else:
      print(num, "is a prime number")
else:
   print(num, "is not a prime number")
```

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2. Calculate the length of a string and check if it is a palindrome:

```
def isPalindrome(string):
   return string == string[::-1]

string = input("Enter string:")
count = 0
for i in string:
   count = count + 1
print("Length of the string is:")
print(count)

ans = isPalindrome(string)
if ans:
   print("Yes")
else:
   print("No")
```

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3. Count the number of words in a sentence:

```
import re
test_string = input("Enter string:")
print("The original string is : " + test_string)
res = len(re.findall(r'\\w+', test_string))
print("The number of words in string are : " + str(res))
```

4. Sum all the numbers in a list:

```
total = 0
list1 = [11, 5, 17, 18, 23]
for ele in range(0, len(list1)):
    total = total + list1[ele]
print("Sum of all elements in given list: ", total)
```

5. Store phone numbers of persons in a dictionary and display requested number:

```
def print_menu():
    print('1. Print Phone Numbers')
    print('2. Add a Phone Number')
    print('3. Lookup a Phone Number')
    print('4. Quit')
    print()

numbers = {}
menu_choice = 0
print_menu()
while menu_choice != 4:
    menu_choice = int(input("Type in a number (1-4): "))
    if menu_choice == 1:
        print("Telephone Numbers:")
        for x in numbers.keys():
            print("Name: ", x, "\\tNumber:", numbers[x])
        print()
    elif menu_choice == 2:
        print("Add Name and Number")
        name = input("Name: ")
        phone = input("Number: ")
        numbers[name] = phone
    elif menu_choice == 3:
        print("Lookup Number")
        name = input("Name: ")
        if name in numbers:
            print("The number is", numbers[name])
        else:
            print(name, "was not found")
    elif menu_choice != 4:
        print_menu()
```

6. Copy the contents of only odd lines from one file to another:

```
inputFile = "Exampletextfile.txt"
readFile = open(inputFile, "r")
outputFile = "PrintOddLines.txt"
writeFile = open(outputFile, "w")
ReadFileLines = readFile.readlines()

for excelLineIndex in range(0, len(ReadFileLines)):
    if(excelLineIndex % 2 == 0):
        writeFile.write(ReadFileLines[excelLineIndex])
        print(ReadFileLines[excelLineIndex])

writeFile.close()
readFile.close()
```

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7. Check if the number is even or odd using a user-defined function:

```
def find_Evenodd(num):
    if(num % 2 == 0):
        print(num, "Is an even")
    else:
        print(num, "is an odd")

num = int(input("Enter a number for check odd or even: "))
find_Evenodd(num)
```

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8. Count the occurrence of all characters present in a string:

```
inp_str = "VVCE is Autonomous"
out = {x : inp_str.count(x) for x in set(inp_str)}
print("Occurrence of all characters in sentence is :\\n" + str(out))
```