

Python Logical Programs:

Q. How to delete all duplicate elements from given list and display unique elements list?

```
lst = [1,9,11,13,1,9,11,13,4,6,9]
```

```
print(list(set(lst)))
```

Output:

```
[1, 4, 6, 9, 11, 13]
```

Q2. How to replace given sub string in main string?

```
main_str = 'Python Learner'
```

```
result = main_str.replace('Learner','Developer')
```

```
print(main_str)
```

```
print(result)
```

Output:

```
Python Learner
```

```
Python Developer
```

Q3. How to filter all even ,odd numbers from given main list in to a separate lists ?

```
lst = [20,30,11,13,18,1,3,7,8,4,6,9]
```

```
even_list = []
```

```
odd_list = []
```

```
for i in lst:
```

```
    if i%2==0:
```

```
        even_list.append(i)
```

```
    else:
```

```
    odd_list.append(i)
print('Even numbers list :',even_list)
print('Odd numbers list :',odd_list)
```

Output:

```
Even numbers list : [20, 30, 18, 8, 4, 6]
Odd numbers list : [11, 13, 1, 3, 7, 9]
```

Q4. How to find even nubers list from given main list using filter()?

```
lst = [1,2,3,4,5,6,7,8,9,10]
even_numbers = list(filter(lambda x : x%2==0, lst))
print(even_numbers)
```

Output:

```
[2, 4, 6, 8, 10]
```

Q5. How to display given number table ?

```
def table_fun(n):
    for i in range(1,11):
        print(n,'*',i,'=', n*i)
n = int(input('Enter any number : '))
table_fun(n)
```

Output:

```
Enter any number : 3
```

```
3 * 1 = 3
```

```
3 * 2 = 6
```

```
3 * 3 = 9
```

$$3 * 4 = 12$$

$$3 * 5 = 15$$

$$3 * 6 = 18$$

$$3 * 7 = 21$$

$$3 * 8 = 24$$

$$3 * 9 = 27$$

$$3 * 10 = 30$$

Q5. Write a function to find given string is a palindrom or not ?

```
def isPalindrom(s):
```

```
    if s.lower() == s[::-1].lower():
```

```
        print('Yes','s,' is a Palindrom')
```

```
    else:
```

```
        print('No','s,' is not a Palindrom')
```

```
s = input("Enter any value :")
```

```
isPalindrom(s)
```

Output:

Enter any value : madam

Yes, madam is a Palindrom

Enter any value : Srinivas

No, Srinivas is not a Palindrom

Q6. How to find reverse value for given input value with out using slicing or reversed()?

```
s = input("Enter any value :")
```

```
s1 = ""
```

```
for i in s:
```

```
    s1 = i + s1
```

```
print(s,'reverse value is ',s1)
```

Output:

Enter any value :python

python reverse value is nohtyp

Using slicing:

```
s = input("Enter any value :")
```

```
print(s[::-1])
```

Using reversed():

```
input_str = input("Enter any value :")
```

```
reverse_str = "".join(reversed(input_str))
```

```
print(reverse_str)
```

Q7. Write a function to find the Factorial value of a given number ?

```
def factorial(n):
```

```
    fact = 1
```

```
    i = 1
```

```
    while i <= n:
```

```
        fact = fact * i
```

```
        i = i+1
```

```
print("The Factorial of ",n," is : ", fact)
n = int(input('Enter any number :'))
factorial(n)
```

Output:

Enter any number :5

The Factorial of 5 is : 120

Q8. How to find the given range of Fibonasi sequence values and its total sum also?

```
start_number = int(input("Enter starting number :"))
end_number = int(input("Enter ending number :"))
def fib(n):
    if n < 2:
        return n
    return fib(n-2) + fib(n-1)
x = list(map(fib, range(start_number,end_number)))
y = sum(list(map(fib, range(start_number,end_number))))
print('The list of Fibonasi sequence numbers are :',x)
print('The total Sum of Fibonasi sequence numbers are :',y)
```

Output:

Enter starting number :0

Enter ending number :6

The list of Fibonasi sequence numbers are : [0, 1, 1, 2, 3, 5]

The total Sum of Fibonasi sequence numbers are : 12

Q9. How to display given list of values like bellow.

```
input_list = [20,50,30,70,40,60,10]
```

```
output_list = [70,10,60,20,50,30,40]
```

code:

```
lst1 = [20,50,30,70,40,60,10]
```

```
lst2 = sorted(lst1, reverse=True) # [70,60,50,40,30,20,10]
```

```
x = []
```

```
a = 0
```

```
while a < len(lst2): # 0 < 7
```

```
    for i in lst2:
```

```
        if i is min(lst2):
```

```
            x.append(i)
```

```
            lst2.remove(i)
```

```
        elif i is max(lst2):
```

```
            x.append(i)
```

```
            lst2.remove(i)
```

```
print('The output is :',x)
```

Output:

```
The output is : [70,10,60,20,50,30,40]
```

Q10. How to display given string format data as 'aaaabbbcccddddee' as 'a4b3c3d4e2' format?

```
a = 'aaaabbbcccddddee'
```

```
dict = {}
```

```
for i in a:
```

```

if i in dict:
    dict[i] = dict[i]+1
else:
    dict[i] = 1
print(dict) # {'a': 4, 'b': 3, 'c': 3, 'd': 4, 'e': 2}
list_keys = sorted(dict.keys())
print(list_keys)
for key in list_keys:
    print('%s%d' % (key,dict[key]),end='')

```

Output:

```
{'a': 4, 'b': 3, 'c': 3, 'd': 4, 'e': 2}
```

```
['a', 'b', 'c', 'd', 'e']
```

```
a4b3c3d4e2
```

Q11. How to translate all vowels into given numbers respectively from given main string?

(for example, a-->1 , e-->2 , i-->3, o-->4, u-->5)

```

vewels = "aeiou"
numbers = "12345"
transilate_vewels_into_numbers = str.maketrans(vewels, numbers)
str = "this is string example....wow!!!"
print (str.translate(transilate_vewels_into_numbers))

```

Output:

```
=====
```

```
th3s 3s str3ng 2x1mpl2....w4w!!!
```