Define three functions fun(), disp() and msg(). Store them in a list and call them one by one in a loop.

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24BIT167 - VANDITA NAWANI

AIM : To implement various operations on functions in Python, includin
and defining of a functions like map(), reduce(), lambda()

System Configration : Operating system: Windows 11, Google Colab

Theory : Function is a block where computation is treated as mathemati
functions, avoiding changing state and mutuable data.

```
def fun():
    print("This is fun()")

def disp():
    print("This is disp()")

def msg():
    print("This is msg()")

func_list = [fun, disp, msg]

for f in func_list:
    f()
```

```
This is fun()
This is disp()
This is msg()
```

Suppose there are two lists, one containing numbers from 1 to 6, and other containing numbers from 6 to 1. Write a program to obtain a list that contains elements obtained by adding

```
list1 = [1, 2, 3, 4, 5, 6]
list2 = [6, 5, 4, 3, 2, 1]

result = list(map(lambda x, y: x + y, list1, list2))
print("Sum of elements:", result)
```

```
Sum of elements: [7, 7, 7, 7, 7, 7]
```

Generate the list of 10 different random numbers between -15 and 15. Create a new list by obtaining square of all numbers in a list

```
import random

nums = random.sample(range(-15, 16), 10)
squares = [x * x for x in nums]

print("Random numbers:", nums)
print("Squares:", squares)
```

```
Random numbers: [-13, 0, 2, 4, -8, 8, 6, 7, 3, -10]
Squares: [169, 0, 4, 16, 64, 64, 36, 49, 9, 100]
```

Consider the following list: lst = ['madam','Python',"malayalam",12321] Write a program to print those strings which are palindromes.

```
lst = ['madam', 'Python', 'malayalam', 12321]

for item in lst:
    item_str = str(item)
    if item_str == item_str[::-1]:
        print("Palindrome:", item_str)
```

```
Palindrome: madam
Palindrome: malayalam
Palindrome: 12321
```

A list contains names of Faculty Members. Write a program to filter out those names whose length is more than 8 characters.

```
faculty = ["Dr. Sharma", "Anupam", "Christopher", "Zara", "Meenakshi"]

long_names = list(filter(lambda name: len(name) > 8, faculty))
print("Names longer than 8 characters:", long_names)
```

⮑ Names longer than 8 characters: ['Dr. Sharma', 'Christopher', 'Meenakshi']