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Assignment No.: 03(3.1 Concept of Functions in Python)

Assignment Title: Develop programs to learn concept of functions scoping, recursion and list mutability.

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Code:

### 3.1 Functions in Python:

#### 3.1.1 Define a function in python:

```
def my_function():  
    print("Hello from a function")  
#calling a function  
my_function()
```

**or**

```
def squire_function(num):  
    print(num*num)  
n = int(input("Enter a number: "))  
squire_function(n)
```

#### Output:

```
C:\Users\sarvadnya\AppData\Local\Programs\Python\Python39\python.exe  
C:/Users/sarvadnya/PycharmProjects/Ajmca/assignment02.py  
Hello World
```

Process finished with exit code 0

```
C:\Users\sarvadnya\AppData\Local\Programs\Python\Python39\python.exe  
C:/Users/sarvadnya/PycharmProjects/Ajmca/assignment02.py  
Enter the number: 15  
225
```

Process finished with exit code 0

#### 3.1.2 Calling a function:

```
def a_function( string ):  
    "This prints the value of length of string"  
    return len(string)  
  
str = input("Enter a string: ")  
result = a_function( str )
```

**# Calling the function we defined**

```
print( "Length of the string Functions is: ", result)
```

**Output:**

```
C:\Users\sarvadnya\AppData\Local\Programs\Python\Python39\python.exe
C:/Users/sarvadnya/PycharmProjects/Ajmca/assignment02.py
Enter the String: Ajay
Length of the string is: 4
```

Process finished with exit code 0

**3.1.3 return Statement:**

```
def square(num):
    return num**2
```

```
print("With return Statement")
n = int(input("Enter the number: "))
print(square(n))
```

**Output:**

```
C:\Users\sarvadnya\AppData\Local\Programs\Python\Python39\python.exe
C:/Users/sarvadnya/PycharmProjects/Ajmca/assignment02.py
With return Statement
Enter the number: 52
2704
```

Process finished with exit code 0

**3.1.4 The Anonymous Functions**

```
Addition_fun = lambda args1, args2: args1 * args2;
a = int(input("Enter the first number: "))
b = int(input("Enter the second number: "))
print("Values of the function is: ", Addition_fun(a, b))
```

**Output:**

```
C:\Users\sarvadnya\AppData\Local\Programs\Python\Python39\python.exe
C:/Users/sarvadnya/PycharmProjects/Ajmca/assignment02.py
Enter the first number: 20
Enter the second number: 30
Values of the function is: 600
```

Process finished with exit code 0

**3.1.5 Passing a List as an Argument**

```
def my_function(fruits):  
    for x in fruits:  
        print(x)  
fruits_List = ["apple", "banana", "cherry"]  
my_function(fruits_List)
```

**Output:**

C:\Users\sarvadnya\AppData\Local\Programs\Python\Python39\python.exe

C:/Users/sarvadnya/PycharmProjects/Ajmca/assignment02.py

apple

banana

cherry

Process finished with exit code 0