# Function Lab Sheet - 2

## 1.Keyword argument

Define a function in Python Introduce , providing their name, age, and profession as arguments.

## 2.Default argument

WAP to define and utilize a Python function named introduce to print out information about individuals, including their name, age, and profession, with an optional default value for the profession parameter.

## 3. What is Error in this code and how can we correct this code?

```
def pythagoras(a,b):
  return square(a) + square(b)
c2 = pythagoras(3,4)

def square(x):
  return x * x

print("c2 = ", c2)
```

## 4.What is the output of this code and tell a variable “lang “ is in  local or global scope?

```
def local():
   lang = "Python"
   print(lang)
local()
```

## 5.What is the output of this code and tell a variable “lang “ and “name”  is in  local or global scope?

```
name = "Suyash"
def test():
   print(name)
   lang = "Python"
   print(lang)
test()
print(name)
```

**6.What is Error in this code and how can we correct this code?**

```
def test():
  lang = "Python"
  print(lang)
test()
print(lang)
```

**7.What is Error in this code and how can we correct this code?**

```
name = "Suyash"
print(name)
def fun():
  print(name)
  name = "Chaudhary"
  lang = "Python"
  print(lang)
fun()
print(name)
```

**8.What is the output of this code?**

```
name = "Suyash"
print(name)
def test():
 global name
 print(name)
 name = "Chaudhary"
 print(name)
test()
print(name)
```

**9.What is the output of this code?**

```
name  = "abc"
print(name)

def fun1():
  name = "def"
  print(name)

print(name)
fun1()

def fun2():
  global name
  name = "ghi"
  print(name)
```

```
print(name)
fun2()
print(name)
```

## 10.What is the output of this code?

```
def fun1():
  name = "Suyash"
  def fun2():
     name = "Chaudhary"
  fun2()
  print(name)
fun1()
```

## 11.What is the output of this code?

```
def fun1():
  name = "Suyash"
  def fun2():
     nonlocal name
     name = "Chaudhary"
  fun2()
  print(name)
fun1()
```

## 12.Square of that integer using a lambda function

You want to create a Python program that takes an integer input, calculates the square of that integer using a lambda function, and then prints the result.

Input :

a= 4

Output:

16

## 13.Odd and Even No

Write a Python program that performs the following tasks:

- Accepts an integer input from the user and stores it in a variable num.
- Defines a lambda function even_odd_No that takes one parameter num and returns "even" if num is even, otherwise it returns "odd".

- Calls the lambda function even_odd_No with the input num and prints the result.

Provide the Python code to implement the above requirements.

## 14.Max of two No.

Write a Python program that defines a lambda function called Max that takes two parameters a and b, and returns the maximum of the two values. Then, call the lambda function Max with the values 1 and 2, and print the result obtained from the call in a single line of code.

## 15.Max of three No.

Create a Python program that accomplishes the following tasks:

- Define a lambda function max_of_three that takes three parameters a, b, and c, and returns the maximum of the three values.
- Call the lambda function max_of_three with three integer values.
- Print the result obtained from calling the lambda function.

NOTE:- Try to Solve this question with if-else.

## 16.Filter Even No

Write a Python program that defines a function fun(a) which takes an integer a as input and returns True if a is even, otherwise it returns False. Then, create a list called sequence containing integers and floating-point numbers. Use the filter() function along with the fun function to filter out the even numbers from the sequence list, and store the filtered values in a new list called filtered. Finally, print the filtered list.

## 17.Filter Even No with lambda fucntion

Create a Python program that accomplishes the following tasks:

- Define a list arr containing integer values.
- Use the filter() function with a lambda function to filter out the even numbers from the list arr.
- Store the filtered values in a variable ans.
- Print the ans list.

## 18.Filter Numbers Greater Than 60

Write a single line of Python code that accepts a list of integer values from the user, filters out the numbers greater than 60 using the filter() function with a lambda function, and stores the filtered values in a variable ans. Print the ans list.

## 18.Add 10 to Each Element of a List Using Map and Lambda Function

Create a Python program that accomplishes the following tasks:

- Define a list arr containing integer values.
- Use the map() function with a lambda function to add 10 to each element of the list arr.
- Store the modified values in a variable ans.
- Print the ans list.

## 19.Convert Names to Lowercase Using Map and Lambda Function

Create a Python program that accomplishes the following tasks:

- Define a list names containing string values.
- Use the map() function with a lambda function to convert each name in the list names to lowercase.
- Store the modified names in a variable result.
- Print the result list.

## 20.Python Program Using map, filter, and lambda Functions

Write a Python program that utilizes the map, filter, and lambda functions to achieve the following objectives:

- Use map to convert a list of integers to their corresponding squares.
- Use filter to keep only the squared numbers that are multiples of a specific number.