

FBT0015 STRUCTURED ALGORITHM & PROGRAMMING LAB EXERCISE WEEK 11

Learning Outcomes

Upon completion of this lab session, learners will be able to:

1. understand the concept of list and tuple
2. understand the concept of function
3. use function in Python program

Activity #1

With the given lists and tuples, write the program.

```
listFoo = [3, 6, 9, 12, 15, 18, 21]
```

```
listFaa= [4, 8, 12, 16, 20, 24, 28]
```

- a. Extract the first 3 elements from listFoo and the last 4 elements from listFaa to be stored as listFum.
- b. Extract the elements at odd index from listFoo and the elements at the even index from listFaa. Then, stored it as listFee.
- c. Removes element at index 4 of listFoo. Add it to the 2nd position and at the end of the listFaa.

Activity #2

Trace the output for the codes below:

```
1. def func_a():
    print('inside func_a')

def func_b(y):
    print('inside func_b')
    return y

def func_c(z):
    print('inside func_c')
    return z()

print(func_a())
print(5+func_b(2))
print(func_c(func_a))
```

```
2. def f(y):
    y=y+3
    x = 1
    x += 1
    print(x)
    print(y)

def g(y):
    print(x)
    print(x+1)

def h(y):
    return x+1

x = 5;f(x)
print('after call 1',x)

g(x);print('after call 2',x)

h(x);print('after call 3',x)
```

```
3. def f(x):
    x = x + 1
    print('in f(x): x = ', x)
    return x

def g(x):
    def h(x):
        x = x+1
        print("in h(x): x = ", x)
    x = x + 1
    print('in g(x): x = ', x)
    h(x)
    return x

x = 3;z = f(x)
print('in main program scope: z = ', z)
print('in main program scope: x = ', x)

x = 3;z = g(x)
print('in main program scope: x = ', x)
print('in main program scope: z = ', z)
```

Activity #3

Write a simple calculator program to perform calculations MULTIPLY, DIVIDE, ADD and SUBTRACT by using function. Create a function named GET_INPUT to retrieve user input on which operation and numbers to be processed by the program.

Note: operation MULTIPLY, DIVIDE, ADD and SUBTRACT could be in 4 different functions or all in 1 function only.

-END OF QUESTION-