Lab 3

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CO1: To write, test, and debug simple Python programs

CO2: To implement Python programs with conditional, loops and functions

Task 3 :

Python Code and Output :

```
tup1 = (1, "a", 1.0, 3+2j)
print(tup1)
print(type(tup1))

print(tup1[0])
print(tup1[-1])
print(tup1[1:4])
print(len(tup1))

#tup1[0] = 10

tup2 = (1,2,3)
tup3 = (4,5,6)

print(tup2 + tup3)
print(tup3 + tup2)

print(tup2 + tup3[::-1])

print(tup3[1:3])
print(tup3[::2])
print(tup3*2)
print(tup2*2 + tup3)

print(min(tup2))
print(min(tup3))
print(max(tup2))
print(max(tup3))
```

```
(1, 'a', 1.0, (3+2j))
<class 'tuple'>
1
(3+2j)
('a', 1.0, (3+2j))
4
(1, 2, 3, 4, 5, 6)
(4, 5, 6, 1, 2, 3)
(1, 2, 3, 6, 5, 4)
(5, 6)
(4, 6)
(4, 5, 6, 4, 5, 6)
(1, 2, 3, 1, 2, 3, 4, 5, 6)
1
4
3
6
```

```
l1 = [1, "a", 2.0, 3+4j]
print(l1)

l1[0] = 10
print(l1)

l1.append(3.14)
print(l1)

l1.pop()
print(l1)


#reverse operations
print(l1[::-1])   #first method
l1.reverse()    #second method
print(l1)


l1.insert(3,"ICT")   # (index value, data to added)
print(l1)
```

```
[1, 'a', 2.0, (3+4j)]
[10, 'a', 2.0, (3+4j)]
[10, 'a', 2.0, (3+4j), 3.14]
[10, 'a', 2.0, (3+4j)]
[(3+4j), 2.0, 'a', 10]
[(3+4j), 2.0, 'a', 10]
[(3+4j), 2.0, 'a', 'ICT', 10]
```

```
# FOR LOOP

for x in range(1,10):
  print(x)

fruit = ["Banana", "Apples", "Mangoes"]
for h in fruit:
  print(h)

num = [1,2,3,4,4,5,5,7]
sum = 0
for g in num:
  sum = sum+g
  print("The sum is : ",sum)
```

```
1
2
3
4
5
6
7
8
9
Banana
Apples
Mangoes
The sum is :  1
The sum is :  3
The sum is :  6
The sum is :  10
The sum is :  14
The sum is :  19
The sum is :  24
The sum is :  31
```

```python
# 1. to write python code to check the given number is prime or not

num = 29

flag = False

if num > 1:
    for i in range(2, num):
        if (num % i) == 0:
            # if factor is found, set flag to True
            flag = True
            # break out of loop
            break

# check if flag is True
if flag:
    print(num, "is not a prime number")
else:
    print(num, "is a prime number")
```

```
29 is a prime number
```

```python
# 2. to write python code to compute factorial of your given number

num = 6
fac = 1
for i in range(1,num):
  fac = fac*num
  num = num - 1
  print(fac)
```

```
6
30
120
360
720
```

```python
# 3. write python code to print all prime numbers with interval as
# starting ending value (20,100)

start = 20
end = 100

print ("The Prime Numbers in the range are: ")
for number in range (start, end + 1):
    if number > 1:
        for i in range (2, number):
            if (number % i) == 0:
                break
        else:
            print (number)
```

```
The Prime Numbers in the range are:
23
29
31
37
41
43
47
53
59
61
67
71
73
79
83
89
97
```

```
# 4. to write python code to print all factorial
#    of given an interval (20,25)

start = 1
end = 5
#fac = 1

print ("The Prime Numbers in the range are: ")
for number in range (start, end + 1):
    fac = fac*end
    end = end - 1
    print(fac)
```

```
The Prime Numbers in the range are:
600
2400
7200
14400
14400
```

```
#  5. To write python code to sum of all odd numbers form (10,100)

start = 10
end = 100
num = 0
for num in range(start + 1, end):
  if(num%2 != 0):
    num = num + start

print(num+end)
```

```
209
```