Lab 5

Name :- Aryan Dilipbhai Langhanoja

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Enrollment No :- 92200133030

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

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

Task 1:- List Inside Tuple and Tuple Inside List

Python Code:
```python
tuple1 = (2,'ABC',3+4j,[1,6.78,True],False)
tuple2 = (1,'def',[1,6.78,True],False)
print(tuple1 + tuple2)
print(tuple1[3] + tuple2[2])
list1 = [1,3.45,True,5+6j,1]
list1.remove(1)
list1.clear()
print(list1)
list2 = [1,2,3,'Aryan',True,3+5j,1,False]
print(list2.count(0))
list3 = [1,2,(1,2),(1,2)]
print(list3.count((1,2)))
list2.reverse()
print(list2)
list4 = [5,4,1,2,4]
list4.sort(reverse=True)
print(list4)
list4.sort()
print(list4)
```

Output:
```
PS D:\Aryan\Semester - 3\Programming With Python\Lab Manual\Lab -5>  d:;
b -5'; & 'D:\python.exe' 'c:\Users\abc\.vscode\extensions\ms-python.pytho
y\launcher' '53371' '--' 'D:\Aryan\Semester - 3\Programming With Python\L
(2, 'ABC', (3+4j), [1, 6.78, True], False, 1, 'def', [1, 6.78, True], Fal
[1, 6.78, True, 1, 6.78, True]
[]
1
2
[False, 1, (3+5j), True, 'Aryan', 3, 2, 1]
[5, 4, 4, 2, 1]
[1, 2, 4, 4, 5]
PS D:\Aryan\Semester - 3\Programming With Python\Lab Manual\Lab -5>
```

Task 2:- Making Tuple of maximum and minimum of a Tuple

Python Code:

```
tuple3 = (5,20,3,7,6,8)
list3 = list(tuple3)
list3.sort()
anslist = [list3[0] , list3[len(list3)-1]]
anstuple = tuple(anslist)
print(anstuple)
```

Output:

```
PS D:\Aryan\Semester - 3\Programming With Python\Lab Manual\Lab -5>  d:;
b -5'; & 'D:\python.exe' 'c:\Users\abc\.vscode\extensions\ms-python.pytho
y\launcher' '53339' '--' 'D:\Aryan\Semester - 3\Programming With Python\L
(3, 20)
```

Task 3:- Finding the Highest Frequency in theTuple

Python Code:

```
inputtuple = (2,4,5,6,2,3,4,4,7)
inputlist = list(inputtuple)
inputlist.sort()
freqlist                                                                =
[inputlist.count(inputlist[0]),inputlist.count(inputlist[1]),inputlist.count(inputlist[2]),inputlist.
count(inputlist[3]),inputlist.count(inputlist[4]),inputlist.count(inputlist[5]),inputlist.count(inp
utlist[6]),inputlist.count(inputlist[7]),inputlist.count(inputlist[8])]
freqlist.sort()
print(freqlist[len(freqlist) - 1])
```

Output:

```
PS D:\Aryan\Semester - 3\Programming With Python\Lab Manual\Lab -5>  d:;
b -5'; & 'D:\python.exe' 'c:\Users\abc\.vscode\extensions\ms-python.pytho
y\launcher' '53426' '--' 'D:\Aryan\Semester - 3\Programming With Python\L
3
PS D:\Aryan\Semester - 3\Programming With Python\Lab Manual\Lab -5>
```

Task 4:- Demonstrate The Usage Of Dictionary

Python Code:

```python
D1 = {'Mango' : 150 , 'Grapes' : 250}
print(D1)
print(D1.get('Mango'))
print(D1.keys())
print(D1.values())
print(D1.items())
```

Output:

```
PS D:\Aryan\Semester - 3\Programming With Python\Lab Manual\Lab -5>  d:;
b -5'; & 'D:\python.exe' 'c:\Users\abc\.vscode\extensions\ms-python.pyth
y\launcher' '53439' '--' 'D:\Aryan\Semester - 3\Programming With Python\
{'Mango': 150, 'Grapes': 250}
150
dict_keys(['Mango', 'Grapes'])
dict_values([150, 250])
dict_items([('Mango', 150), ('Grapes', 250)])
PS D:\Aryan\Semester - 3\Programming With Python\Lab Manual\Lab -5>
```

Task 5:- Demonstrate The Usage Of Sets

Python Code:

```python
set1 = {1,7,8,9,7,6,5,3,4,1,1,9,7,6}
set1.add(0)
print(set1)
```

Output:

```
PS D:\Aryan\Semester - 3\Programming With Python\Lab Manual\Lab -5>  d:;
b -5'; & 'D:\python.exe' 'c:\Users\abc\.vscode\extensions\ms-python.pyth
y\launcher' '53490' '--' 'D:\Aryan\Semester - 3\Programming With Python\
{0, 1, 3, 4, 5, 6, 7, 8, 9}
PS D:\Aryan\Semester - 3\Programming With Python\Lab Manual\Lab -5>
```

Task 6:- Joining The Characters Of Tuples

Python Code:

```python
tup2 = ("I" , "C", "T")
print(''.join(tup2))
```

Output:-

```
ICT
```