

EXPERIMENT-5

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Course: CSA1789 Artificial Intelligence

Q) Write a python program to implement List operations (Nested List, Length, Concatenation, Membership, Iteration, Indexing and Slicing)

Program:

```
print("List operation")
l1=[1,2,3,4]
l2=[5,6,7,8]
print("Nested list:",[l1,l2])
print("length of list 1:",len(l1))
print("Concatenation",l1+l2)
print("Membership of 1 in list 1: ",(1 in l1))
print("Iteration: ",l1*3)
print("3rd index element in l1: ",l1[3])
print("slicing: ",l1[2:])
```

Output:

A screenshot of a Python IDE window titled 'IDLE Shell 3.10.5'. The shell displays the output of a Python script. The output is as follows:

```
>>>
List operation
Nested list: [[1, 2, 3, 4], [5, 6, 7, 8]]
length of list 1: 4
Concatenation [1, 2, 3, 4, 5, 6, 7, 8]
Membership of 1 in list 1: True
Iteration: [1, 2, 3, 4, 1, 2, 3, 4, 1, 2, 3, 4]
3rd index element in l1: 4
slicing: [3, 4]
>>>
```

The IDE window also shows a menu bar with 'File', 'Edit', 'Shell', 'Debug', 'Options', 'Window', and 'Help'. The status bar at the bottom indicates 'Ln: 13 Col: 0' and the system tray shows the date and time as '2:55 PM 2/8/2023'.