



Comsats University Islamabad
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Information Security

Lab Task 2a

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Activity 1 Accept two lists from user and display their join.

```
print("Enter 4 values for list one : ")

list1=[]

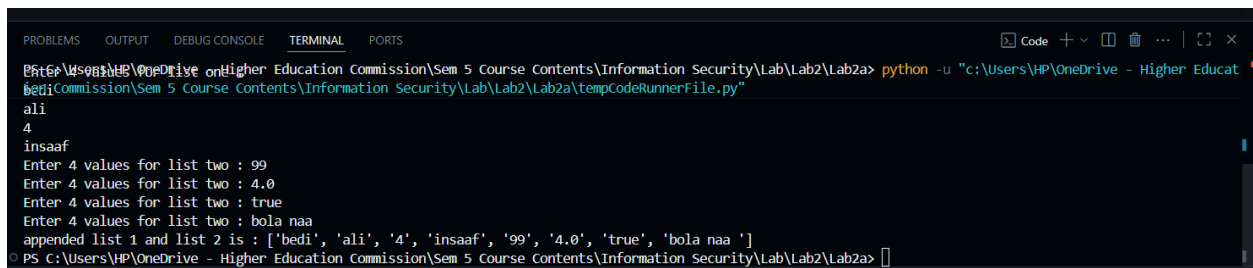
for i in range(0,4):
    list1.append((input()))

list2=[]

for i in range(0,4):
    list2.append((input("Enter 4 values for list two : ")))

print(f"appended list 1 and list 2 is : {list1+list2}")
```

Output:



```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
Python 3.10.6
PS C:\Users\HP\OneDrive - Higher Education Commission\Sem 5 Course Contents\Information Security\Lab\Lab2\Lab2a> python -u "c:\Users\HP\OneDrive - Higher Education Commission\Sem 5 Course Contents\Information Security\Lab\Lab2\Lab2a\tempCodeRunnerFile.py"
Enter 4 values for list one : ali
4
insaaf
Enter 4 values for list two : 99
Enter 4 values for list two : 4.0
Enter 4 values for list two : true
Enter 4 values for list two : bola naa
appended list 1 and list 2 is : ['bedi', 'ali', '4', 'insaaf', '99', '4.0', 'true', 'bola naa']
PS C:\Users\HP\OneDrive - Higher Education Commission\Sem 5 Course Contents\Information Security\Lab\Lab2\Lab2a>
```

Activity 2: A palindrome is a string which is same read forward or backwards. For example: "dad" is the same in forward or reverse direction. Another example is "aibohphobia" which literally means, an irritable fear of palindromes. Write a function in python that receives a string and returns True if that string is a palindrome and False otherwise. Remember that difference between upper and lower case characters are ignored during this determination.

```
def palindrome(word):
    return word == word[::-1]

print(palindrome("madam"))
```

Activity 3:

Imagine two matrices given in the form of 2D lists as under; $a = \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix}$ $b = \begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \end{bmatrix}$ Write a python code that finds another matrix/2D list that is a product of a and b , i.e., $C=a*b$

```
list1=[[12,34,23],
        [3,5,4],
        [87,73,32]]

list2=[[12,343,43],
        [3,5,5],
        [1,4,2]]

list3=[[ ],[ ],[ ]]

for i in range(len(list1)):
    for j in range(len(list1[i])):
        list3[i].append(list1[i][j]*list2[i][j])

print(list3)
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

PS C:\Users\HP\OneDrive - Higher Education Commission\Sem 5 Course Contents\Information Security\Lab\Lab2\Lab2a> python -u "C:\Users\HP\OneDrive - Higher Education Commission\Sem 5 Course Contents\Information Security\Lab\Lab2\Lab2a\tempCodeRunnerFile.py"

[[144, 11662, 989], [9, 25, 20], [87, 292, 64]]

PS C:\Users\HP\OneDrive - Higher Education Commission\Sem 5 Course Contents\Information Security\Lab\Lab2\Lab2a> █

Lab Task 1:

Create two lists based on the user values. Merge both the lists and display in sorted order. A if marks

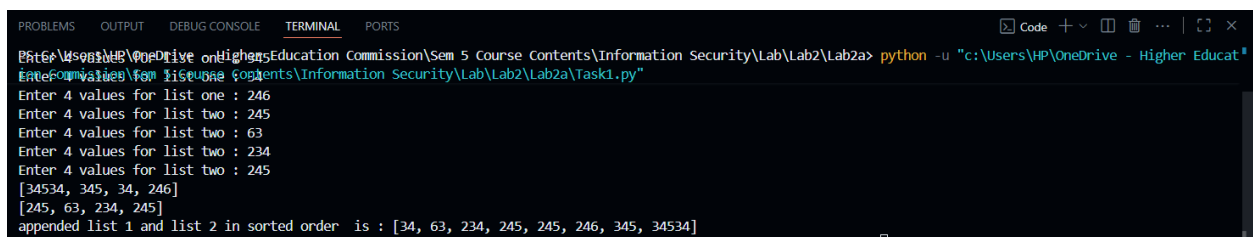
```
list1=[]
list2=[]
for i in range(0,4):
    list1.append(int((input("Enter 4 values for
list one : "))))

for i in range(0,4):
    list2.append(int((input("Enter 4 values for
list two : "))))

print(list1)
print(list2)

list3=list1+list2
list3.sort()

print(f"appended list 1 and list 2 in sorted
order is : {list3}")
```



```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
C:\Users\HP\OneDrive - Higher Education Commission\Sem 5 Course Contents\Information Security\Lab\Lab2\Lab2a> python -u "c:\Users\HP\OneDrive - Higher Education Commission\Sem 5 Course Contents\Information Security\Lab\Lab2\Lab2a\Task1.py"
Enter 4 values for list one : 246
Enter 4 values for list two : 245
Enter 4 values for list two : 63
Enter 4 values for list two : 234
Enter 4 values for list two : 245
[34534, 345, 34, 246]
[245, 63, 234, 245]
appended list 1 and list 2 in sorted order is : [34, 63, 234, 245, 245, 246, 345, 34534]
```

Lab Task 2:

Repeat the above activity to find the smallest and largest element of the list. (Suppose all the elements are integer values)

```
list=[1,45,25,78,34,23,90,11,10]

# using builtin methods

print(f"max value in the list is : {max(list)}")
print(f"min value in the list is : {min(list)}")

# without using builtin methods
max=list[0]
min=list[0]
for i in list:
    if i>max:
        max=i
    if i<min:
        min=i

print(f"max value in the list is : {max}")
print(f"min value in the list is : {min}")
```

