

Practical Workbook
Introduction To Data Science



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Lab # 4

Data Structure

Task 1. Write a Python script to add a key to a dictionary. [Go to the editor](#)

Sample Dictionary : {0: 10, 1: 20}

Expected Result : {0: 10, 1: 20, 2: 30}

Code:

```
# TASK 01

dic = {'Name': 'Salman', 'Department': 'CS'}
print('Original Dictionary: ',dic)
dic['Batch'] = '9th'
print('After Update: ',dic) |
```

Original Dictionary: {'Name': 'Salman', 'Department': 'CS'}
After Update: {'Name': 'Salman', 'Department': 'CS', 'Batch': '9th'}

Task 2. Write a Python program to create a lambda function that adds 15 to a given number passed in as an argument, also create a lambda function that multiplies argument x with argument y and print the result. [Go to the editor](#)

Sample Output:

25

48

Code:

```
# TASK 02

x = lambda y : y + 15
print(x(17))
z = lambda a, b : a * b
print(z(10, 3)) |
```

32
30

Task 3. Write a Python program to sum all the items in a list.

Code:

```
# TASK 03

l = [9,10,1,8]
sum = 0
for i in l:
    sum+=i
print('Sum of List elements is: ',sum) |

Sum of List elements is:  28
```

Task 4. Write a Python program to get the largest number from a list

Code:

```
# TASK 04

# Method 01
list1 = [1,3,9,2,6]
print('Largest number in list1 is ',max(list1))

# Method 02
list2 = [10,11,4,14,2,1]
m = list2[0]
for i in list2:
    if i > m:
        m = i
print('Largest number in list2 is ',m)

Largest number in list1 is  9
Largest number in list2 is  14
```

Task 5. Write a Python program to create a tuple

Code:

```
# Task 05  
t = (1,2,3,4,5)  
print('This is our tuple: ',t) |  
  
This is our tuple: (1, 2, 3, 4, 5)
```

Task 6. Write a Python program to check whether an element exists within a tuple.

Code:

```
# Task 06  
t2 = (10,5,6,2,1,'Salman','Haris')  
print(3 in t2)  
print('Salman' in t2) |  
  
False  
True
```