

## Worksheet – 2.2

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**Branch:** BE-CSE (LEET)

**Section/Group:** 809/A

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**Subject Name:** Programming in Python Lab

**Subject Code:** 20CSP-259

### 1. Aim/Overview of the practical:

- I. Write a Python program to get a list, sorted in increasing order.
- II. Write a Python program to print a specified list after removing the 0th, 4th and 5th elements, Sample List: ['Red', 'Green', 'White', 'Black', 'Pink', 'Yellow'], Expected Output: ['Green', 'White', 'Black'].

### 2. Task to be done/ Which logistics used:

- I. Write a Python program to get a list, sorted in increasing order.
- II. Write a Python program to print a specified list after removing the 0th, 4th and 5th elements, Sample List: ['Red', 'Green', 'White', 'Black', 'Pink', 'Yellow'], Expected Output: ['Green', 'White', 'Black'].

### 3. Steps for experiment/practical/Code:

- I. Write a Python program to get a list, sorted in increasing order.

#### Source Code:

```
def last(n):  
    return n[-1]  
  
def sort(tuples):  
    return sorted(tuples, key=last)  
  
list_tup = []  
item=[]  
n = int(input("Enter number of elements : "))  
for i in range(0, n):  
    print("Enter { }th of Tuples 2 elements: ".format(i+1))  
    for j in range(0,2):  
        ele = int(input())
```

```
item.append(ele)
list_tup.append(tuple(item))
item=[]
print("Sorted:")
print(sort(list_tup))
```

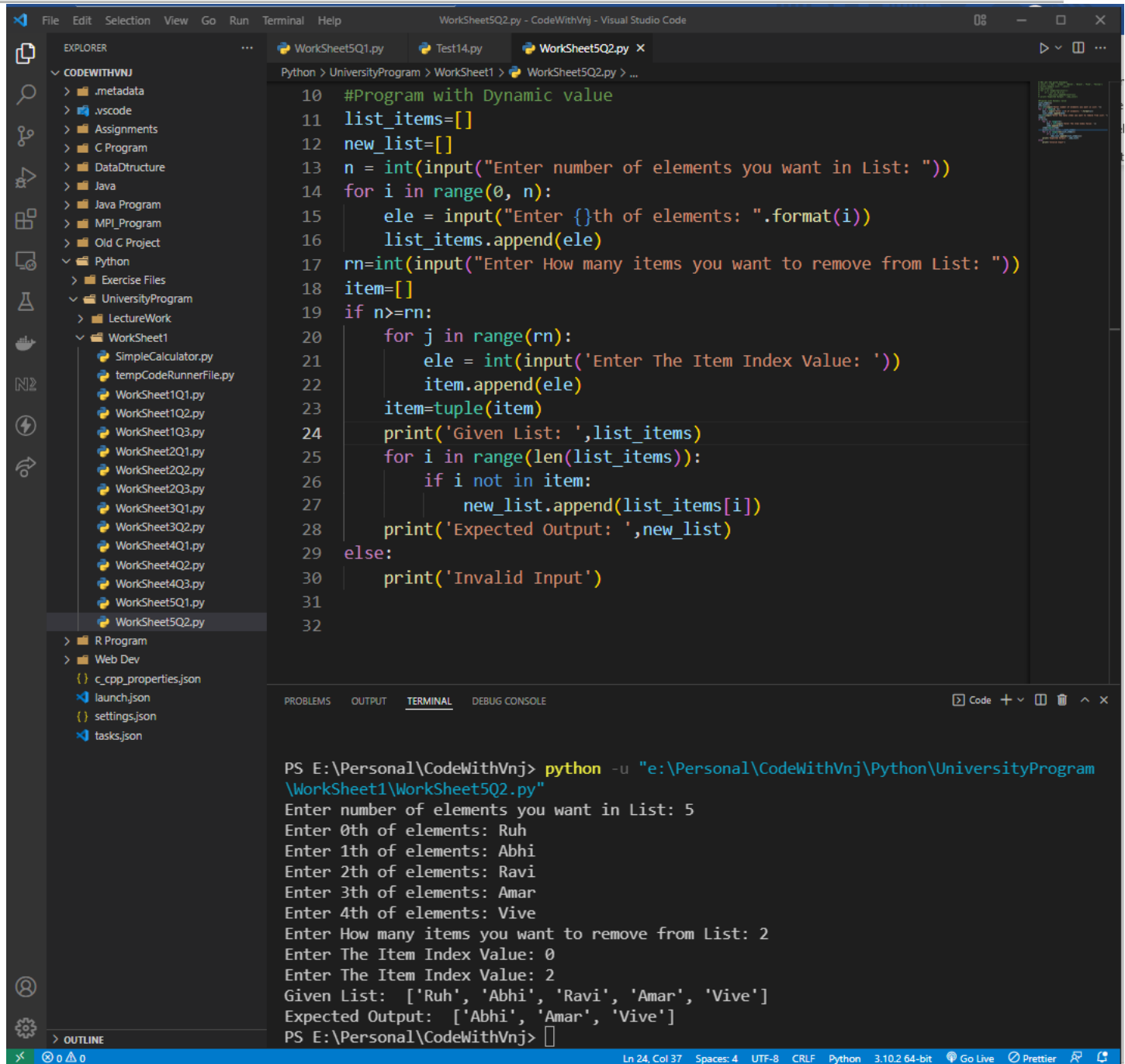
- II.** Write a Python program to print a specified list after removing the 0th, 4th and 5th elements, Sample List: ['Red', 'Green', 'White', 'Black', 'Pink', 'Yellow'], Expected Output: ['Green', 'White', 'Black'].

**Source Code:**

```
#As per the given Exasmple
color = ['Red', 'Green', 'White', 'Black', 'Pink', 'Yellow']
print('Sample List: ',color)
new_color=[]
for i in range(len(color)):
    if i not in (0,4,5):
        new_color.append(color[i])
print('Expected Output: ',new_color)
```

```
#Program with Dynamic value
list_items=[]
new_list=[]
n = int(input("Enter number of elements you want in List: "))
for i in range(0, n):
    ele = input("Enter { }th of elements: ".format(i))
    list_items.append(ele)
rn=int(input("Enter How many items you want to remove from List: "))
item=[]
if n>=rn:
    for j in range(rn):
        ele = int(input('Enter The Item Index Value: '))
        item.append(ele)
    item=tuple(item)
print('Given List: ',list_items)
```





```

10 #Program with Dynamic value
11 list_items=[]
12 new_list=[]
13 n = int(input("Enter number of elements you want in List: "))
14 for i in range(0, n):
15     ele = input("Enter {}th of elements: ".format(i))
16     list_items.append(ele)
17 rn=int(input("Enter How many items you want to remove from List: "))
18 item=[]
19 if n>=rn:
20     for j in range(rn):
21         ele = int(input('Enter The Item Index Value: '))
22         item.append(ele)
23         item=tuple(item)
24     print('Given List: ',list_items)
25     for i in range(len(list_items)):
26         if i not in item:
27             new_list.append(list_items[i])
28     print('Expected Output: ',new_list)
29 else:
30     print('Invalid Input')
31
32

```

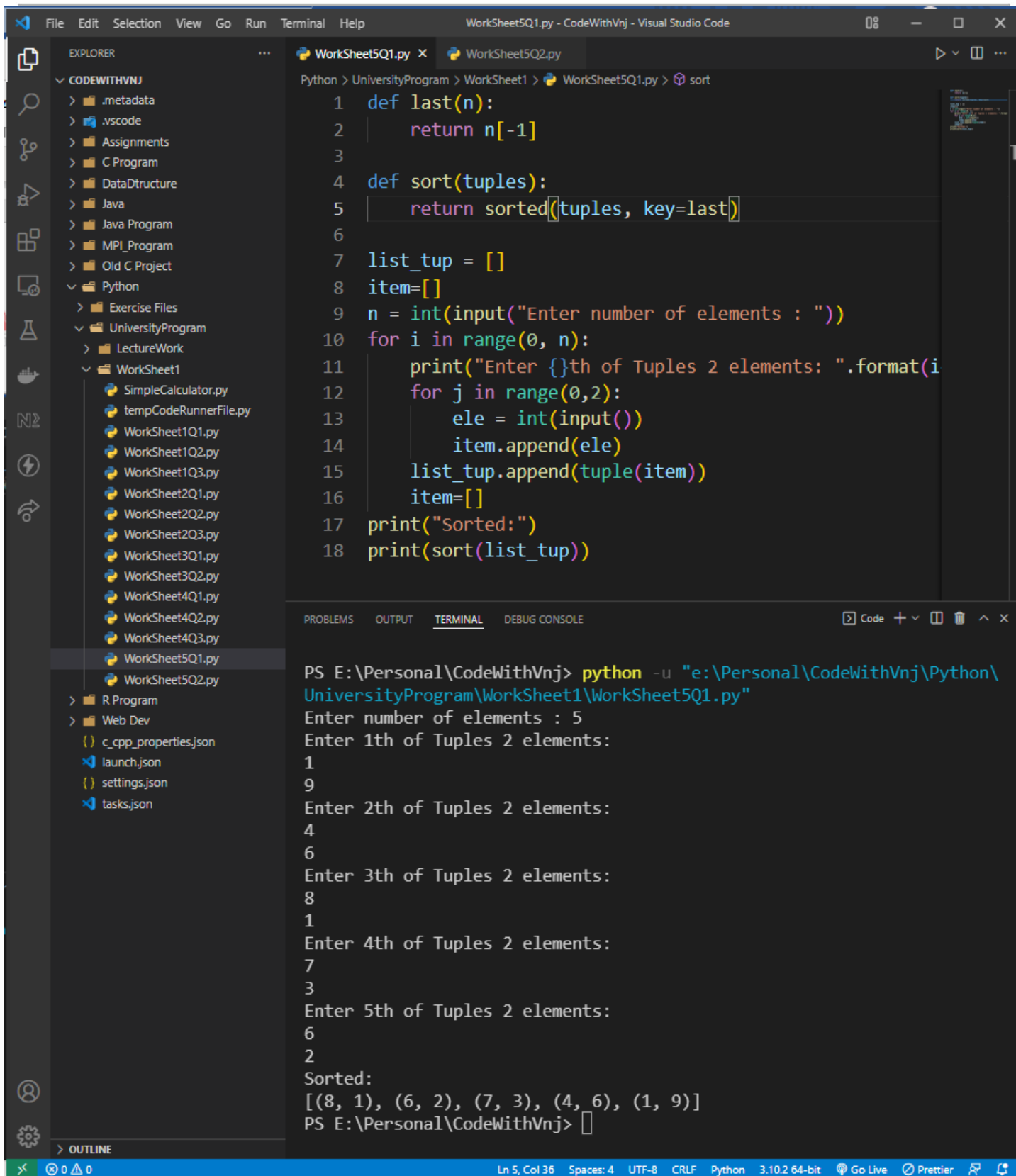
```

PS E:\Personal\CodeWithVnj> python -u "e:\Personal\CodeWithVnj\Python\UniversityProgram\Worksheet1\Worksheet5Q2.py"
Enter number of elements you want in List: 5
Enter 0th of elements: Ruh
Enter 1th of elements: Abhi
Enter 2th of elements: Ravi
Enter 3th of elements: Amar
Enter 4th of elements: Vive
Enter How many items you want to remove from List: 2
Enter The Item Index Value: 0
Enter The Item Index Value: 2
Given List: ['Ruh', 'Abhi', 'Ravi', 'Amar', 'Vive']
Expected Output: ['Abhi', 'Amar', 'Vive']
PS E:\Personal\CodeWithVnj>

```

**I. Write a Python program to get a list, sorted in increasing order.**

**Output:**



The screenshot shows the Visual Studio Code interface with the following components:

- Explorer Panel:** Displays the file structure of the 'CODEWITHVNJ' project, including folders like '.metadata', '.vscode', 'Assignments', 'C Program', 'DataDtructure', 'Java', 'Java Program', 'MPI\_Program', 'Old C Project', 'Python', 'Exercise Files', 'UniversityProgram', 'LectureWork', and 'WorkSheet1'. The 'WorkSheet1' folder is expanded, showing various Python files including 'WorkSheet5Q1.py' and 'WorkSheet5Q2.py'.
- Editor Panel:** Shows the code for 'WorkSheet5Q1.py'. The code defines a 'last' function to return the last element of a list, a 'sort' function to sort a list of tuples using the 'last' function as a key, and a main loop that prompts the user to enter the number of elements and then the elements of the tuples. The sorted list is printed at the end.
- Terminal Panel:** Shows the execution of the script. The prompt 'PS E:\Personal\CodeWithVnj>' is followed by the command 'python -u "e:\Personal\CodeWithVnj\Python\UniversityProgram\WorkSheet1\WorkSheet5Q1.py"'. The output shows the user entering 5, followed by five prompts for 'Enter 1th of Tuples 2 elements:', 'Enter 2th of Tuples 2 elements:', 'Enter 3th of Tuples 2 elements:', 'Enter 4th of Tuples 2 elements:', and 'Enter 5th of Tuples 2 elements:'. The user enters the values 1, 9, 4, 6, and 2 respectively. The final output is 'Sorted: [(8, 1), (6, 2), (7, 3), (4, 6), (1, 9)]'.

**Note:** There is a small Confusion in output part. Because of size of the Screenshot image, I have Arranged 2<sup>nd</sup> Program output first and 1<sup>st</sup> Program output in last.

**Learning outcomes (What I have learnt):**

1. I have learnt, how to take List as well as Tuple Input from User.
2. Learnt to find the sorted tuple with their last element.
3. Learnt to List Manipulation.

**Evaluation Grid (To be created as per the SOP and Assessment guidelines by the faculty):**

Sr. No.	Parameters	Marks Obtained	Maximum Marks
1.			
2.			
3.			
4			