# Worksheet – 2.4

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**Branch:** BE-CSE (LEET)
**Section/Group:** 809/A
**Semester:** 4th
**Date of Performance:** 06/04/2022
**Subject Name:** Programming in Python Lab
**Subject Code:** 20CSP-259

## 1. Aim/Overview of the practical:

I. Write a Python program to replace last value of tuples in a list.
II. Write a Python program to remove an empty tuple(s) from a list of tuples.
III. Write a Python program calculate the product, multiplying all the numbers of a given tuple.
IV. Write a Python program to convert a tuple of string values to a tuple of integer values.
V. Write a Python program to check if a specified element presents in a tuple of tuples.

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

I. Write a Python program to replace last value of tuples in a list.
II. Write a Python program to remove an empty tuple(s) from a list of tuples.
III. Write a Python program calculate the product, multiplying all the numbers of a given tuple.
IV. Write a Python program to convert a tuple of string values to a tuple of integer values.
V. Write a Python program to check if a specified element presents in a tuple of tuples.

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

**I.** Write a Python program to replace last value of tuples in a list.

**Source Code:**

```
list_tup = []
item=[]
n = int(input("Enter number of Size of List: "))
for i in range(0, n):
    print("Enter {}th tuple in list.".format(i+1))
    tn = int(input('Enter the Tuple Size: '))
    for j in range(0,tn):
        ele = int(input())
        item.append(ele)
    list_tup.append(tuple(item))
    item=[]
print('Given List of Tuples are: ',list_tup)
replacement=int(input('Enter the number for last tuple item: '))
print('Last item Replaced list of Tuples are: ',[t[:-1] + (replacement,) for t in list_tup])
```

**II.** Write a Python program to remove an empty tuple(s) from a list of tuples.

**Source Code:**

```
def removet(li):
    li=[ num for num in li if num]
    return li

# Static list of tuples
li=[ (), ('Studytonight', '1', '2'), (), ('3', '4', '5', '6') ]
print('Given list of Tuples are: ',li)
print('After Removing Empty Tuples: ',removet(li))
```

**III.** Write a Python program calculate the product, multiplying all the numbers of a given tuple.

**Source Code:**

```
def mutiple_tuple(nums):
    temp = list(nums)
    product = 1
    for x in temp:
        product *= x
    return product

item=[]
n = int(input("Enter number of elements : "))
for i in range(0, n):
    print("Enter {}th elements of Tuples: ".format(i))
    ele = int(input())
    item.append(ele)
nums=tuple(item)
print ("Original Tuple: ")
print(nums)
print("Product - multiplying all the numbers of the given tuple:",mutiple_tuple(nums))
```

**IV.** Write a Python program to convert a tuple of string values to a tuple of integer values.

**Source Code:**

```
def tuple_int_converter(tuple_str):
    int_item=[]
    for x in tuple_str:
        int_item.append(int(x))
    result=tuple(int_item)
    return result
```

```
item=[]
n = int(input("Enter number of elements : "))
for i in range(0, n):
    print("Enter {}th elements of Tuples: ".format(i))
    ele = str(input())
    item.append(ele)
tuple_str=tuple(item)

print("\nOriginal tuple with  String values:")
print(tuple_str)

print("\nNew tuple with integer values:")
print(tuple_int_converter(tuple_str))
```

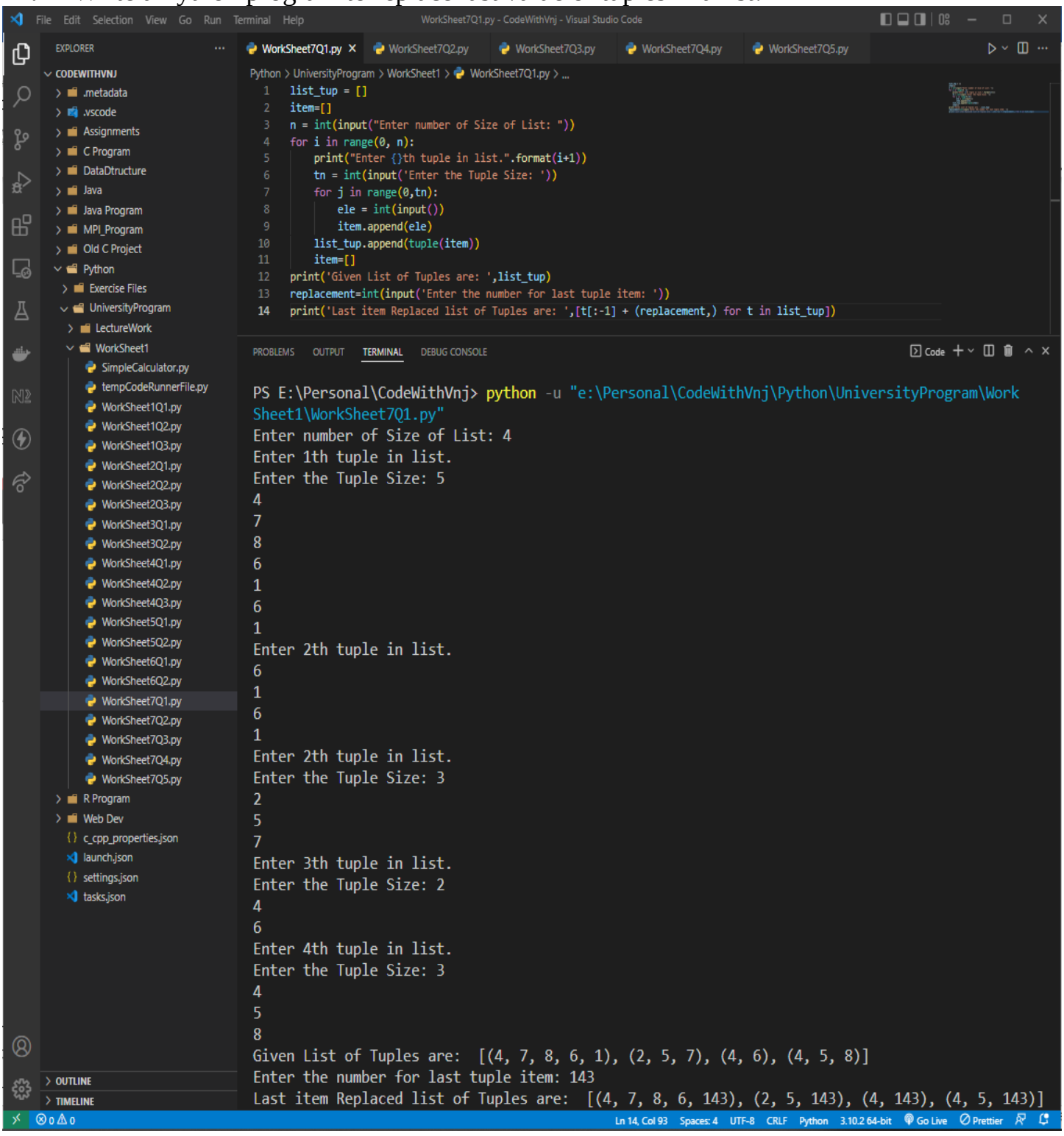
**V.** Write a Python program to check if a specified element presents in a tuple of tuples.

**Source Code:**

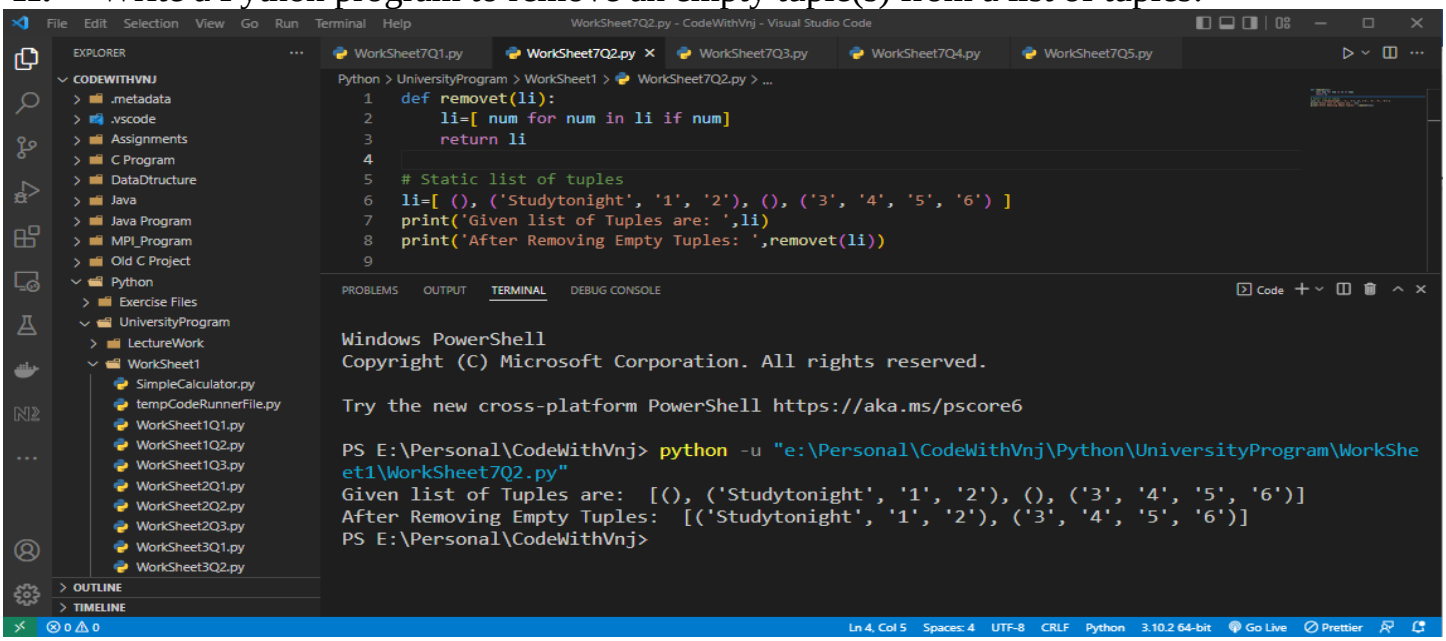
```
# Static tuples
my_tuple = (('Mon',10),('Tue',8),('Wed',8),('Thu',5))

print("Given tuple: ",my_tuple)
inputype=input('Do you want to search string (y/n): ')

if inputype=='y':
    key=input('Enter the Element want to search: ')
else:
    key=int(input('Enter the Element want to search: '))

if any(key in i for i in my_tuple):
  print("present")
else :
  print("Not present")
```

## 4. Result/Output/Writing Summary:

**I.** Write a Python program to replace last value of tuples in a list.



**II.** Write a Python program to remove an empty tuple(s) from a list of tuples.



```
def removet(li):
    li=[ num for num in li if num]
    return li

# Static list of tuples
li=[ (), ('Studytonight', '1', '2'), (), ('3', '4', '5', '6') ]
print('Given list of Tuples are: ',li)
print('After Removing Empty Tuples: ',removet(li))
```

```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS E:\Personal\CodeWithVnj> python -u "e:\Personal\CodeWithVnj\Python\UniversityProgram\WorkSheet1\WorkSheet7Q2.py"
Given list of Tuples are:  [(), ('Studytonight', '1', '2'), (), ('3', '4', '5', '6')]
After Removing Empty Tuples:  [('Studytonight', '1', '2'), ('3', '4', '5', '6')]
PS E:\Personal\CodeWithVnj>
```
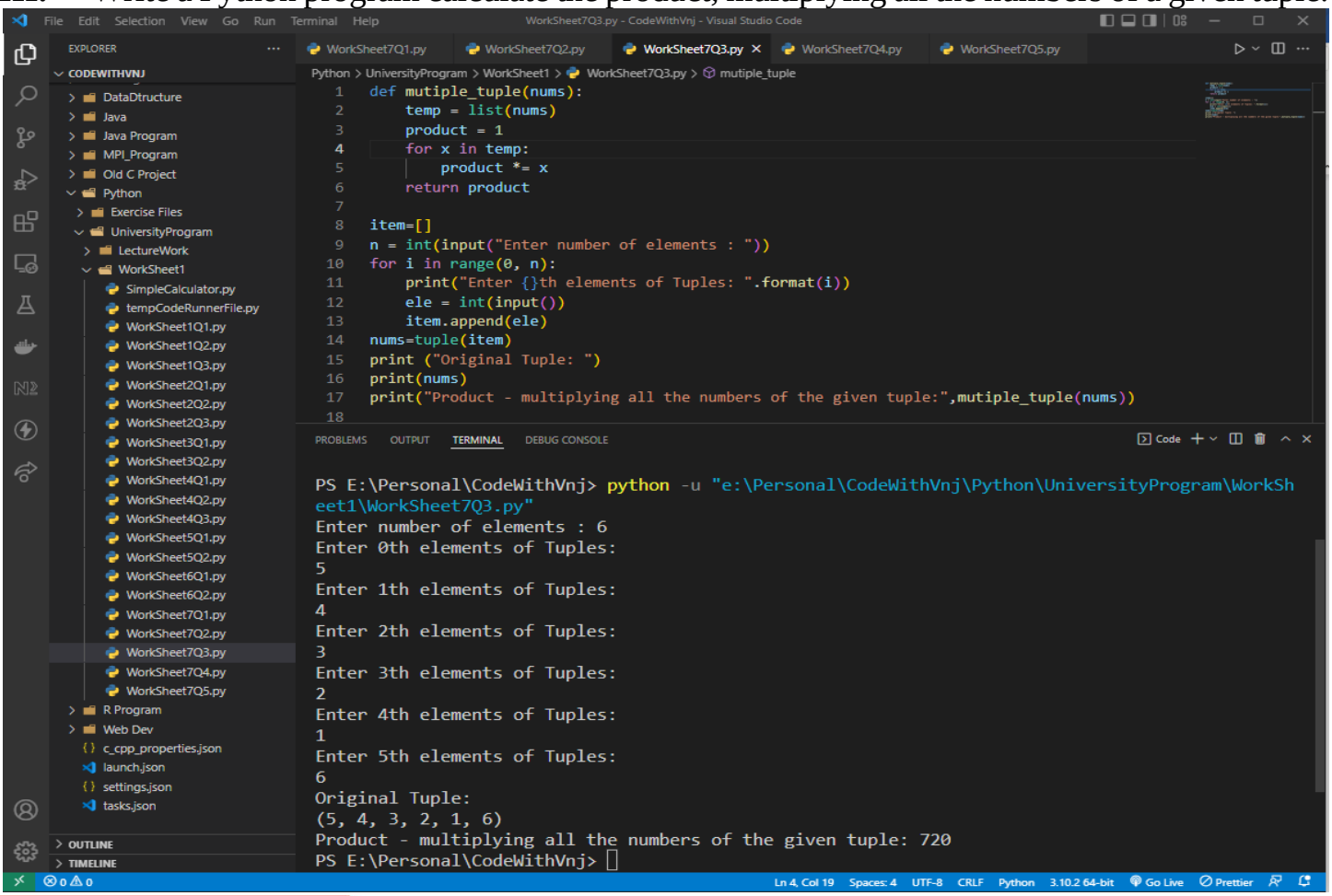
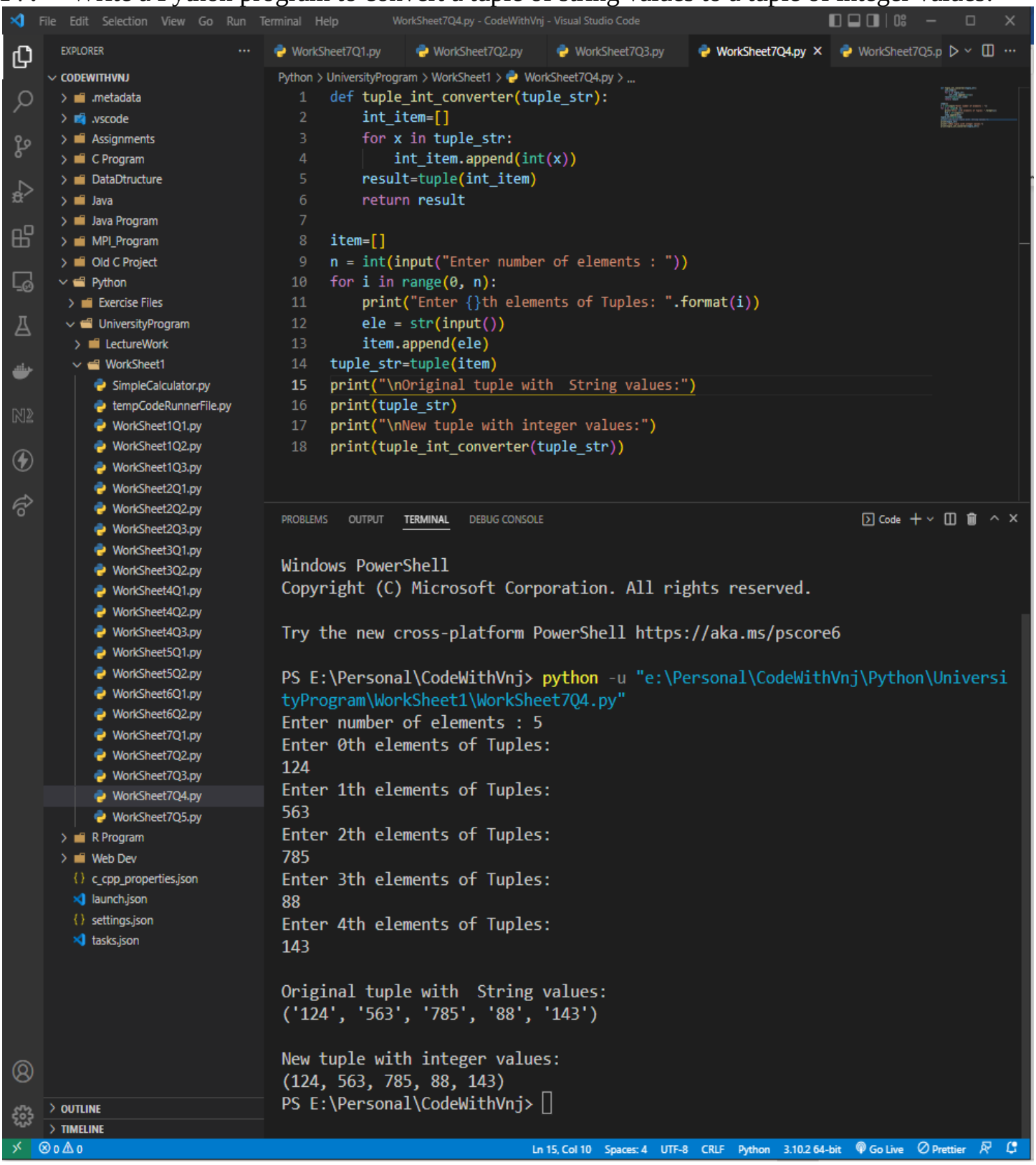

**III.** Write a Python program calculate the product, multiplying all the numbers of a given tuple.



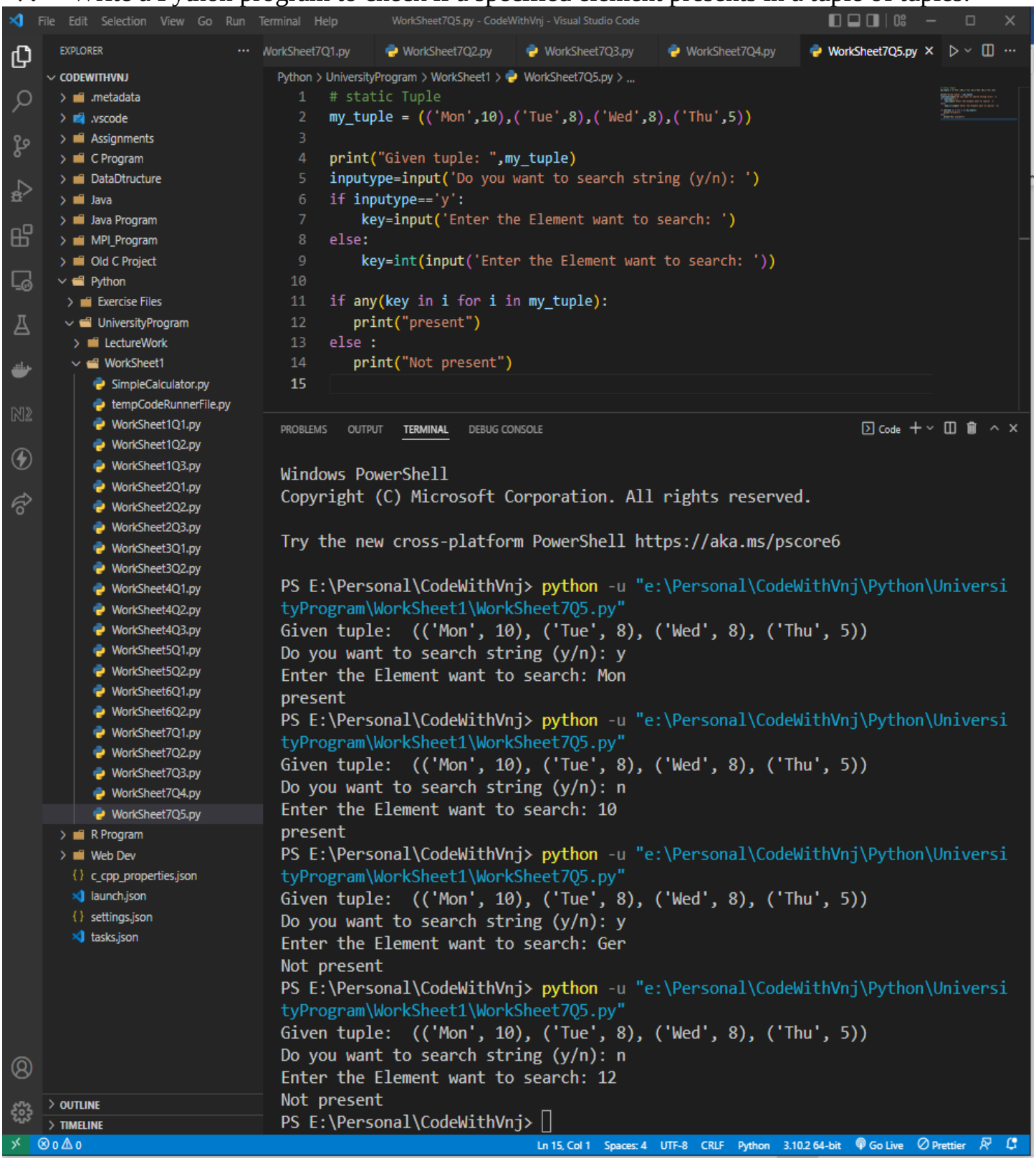
```
def mutiple_tuple(nums):
    temp = list(nums)
    product = 1
    for x in temp:
        product *= x
    return product

item=[]
n = int(input("Enter number of elements : "))
for i in range(0, n):
    print("Enter {}th elements of Tuples: ".format(i))
    ele = int(input())
    item.append(ele)
nums=tuple(item)
print ("Original Tuple: ")
print(nums)
print("Product - multiplying all the numbers of the given tuple:",mutiple_tuple(nums))
```

```
PS E:\Personal\CodeWithVnj> python -u "e:\Personal\CodeWithVnj\Python\UniversityProgram\WorkSheet1\WorkSheet7Q3.py"
Enter number of elements : 6
Enter 0th elements of Tuples:
5
Enter 1th elements of Tuples:
4
Enter 2th elements of Tuples:
3
Enter 3th elements of Tuples:
2
Enter 4th elements of Tuples:
1
Enter 5th elements of Tuples:
6
Original Tuple:
(5, 4, 3, 2, 1, 6)
Product - multiplying all the numbers of the given tuple: 720
PS E:\Personal\CodeWithVnj>
```

**IV.** Write a Python program to convert a tuple of string values to a tuple of integer values.



**V.** Write a Python program to check if a specified element presents in a tuple of tuples.



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

**1.** I have learnt, how to take List as well as Tuple Input from User.

**2.** Learnt to manipulate tuple with their last element.

**3.** Learnt to tuple 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 | | | |