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Practical-7

Aim: Write a program using string tuple & dictionaries

7a. Write a program to sort a tuple by its float element.
Sample data: [('item1', '12.20'), ('item2', '15.10'), ('item3', '24.5')]
Expected Output: [('item3', '24.5'), ('item2', '15.10'), ('item1', '12.20')]

7b.Write a program to concatenate following dictionaries to create a new one
Sample Dictionary : dic1={1:10, 2:20} dic2={3:30, 4:40} dic3={5:50,6:60}
Expected Result : {1: 10, 2: 20, 3: 30, 4: 40, 5: 50, 6: 60}

7c. Write a Python script to generate and print a dictionary that contains a number (between 1 and n) in the form (x, x*x).
Sample Dictionary (n = 5) :
Expected Output : {1: 1, 2: 4, 3: 9, 4: 16, 5: 25}

a) *Write a program to sort a tuple by its float element.*

Program:

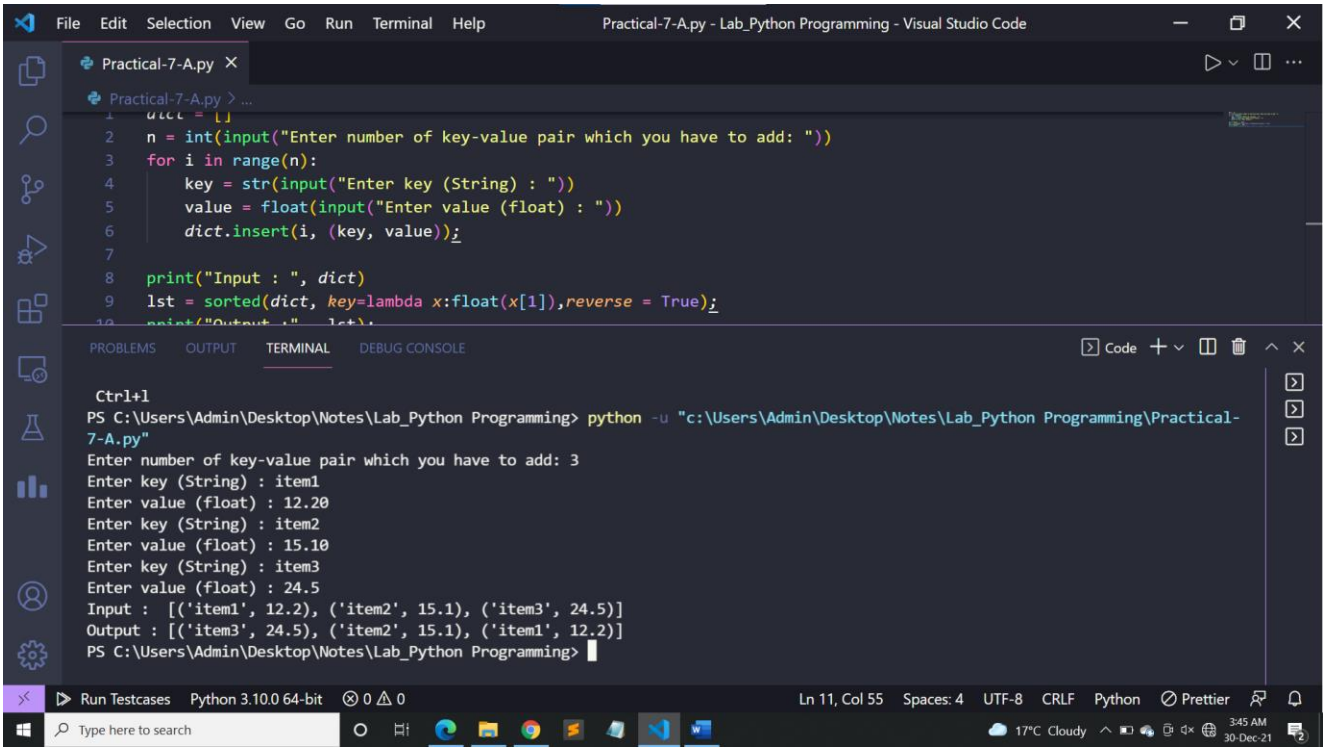
```
dict = []
n = int(input("Enter number of key-value pair which you have to add: "))
for i in range(n):
    key = str(input("Enter key (String) : "))
    value = float(input("Enter value (float) : "))
    dict.insert(i, (key, value));

print("Input : ", dict)
lst = sorted(dict, key=lambda x:float(x[1]),reverse = True);
print("Output :" , lst);
#[('item1', '12.20'), ('item2', '15.10'), ('item3', '24.5')]
```

- Output:

```
Enter number of key-value pair which you have to add: 3
Enter key (String) : item1
Enter value (float) : 12.20
Enter key (String) : item2
Enter value (float) : 15.10
Enter key (String) : item3
Enter value (float) : 24.5
Input :  [('item1', 12.2), ('item2', 15.1), ('item3', 24.5)]
Output : [('item3', 24.5), ('item2', 15.1), ('item1', 12.2)]
```

- Screenshot:



b) *Write a program to concatenate following dictionaries to create a new one*

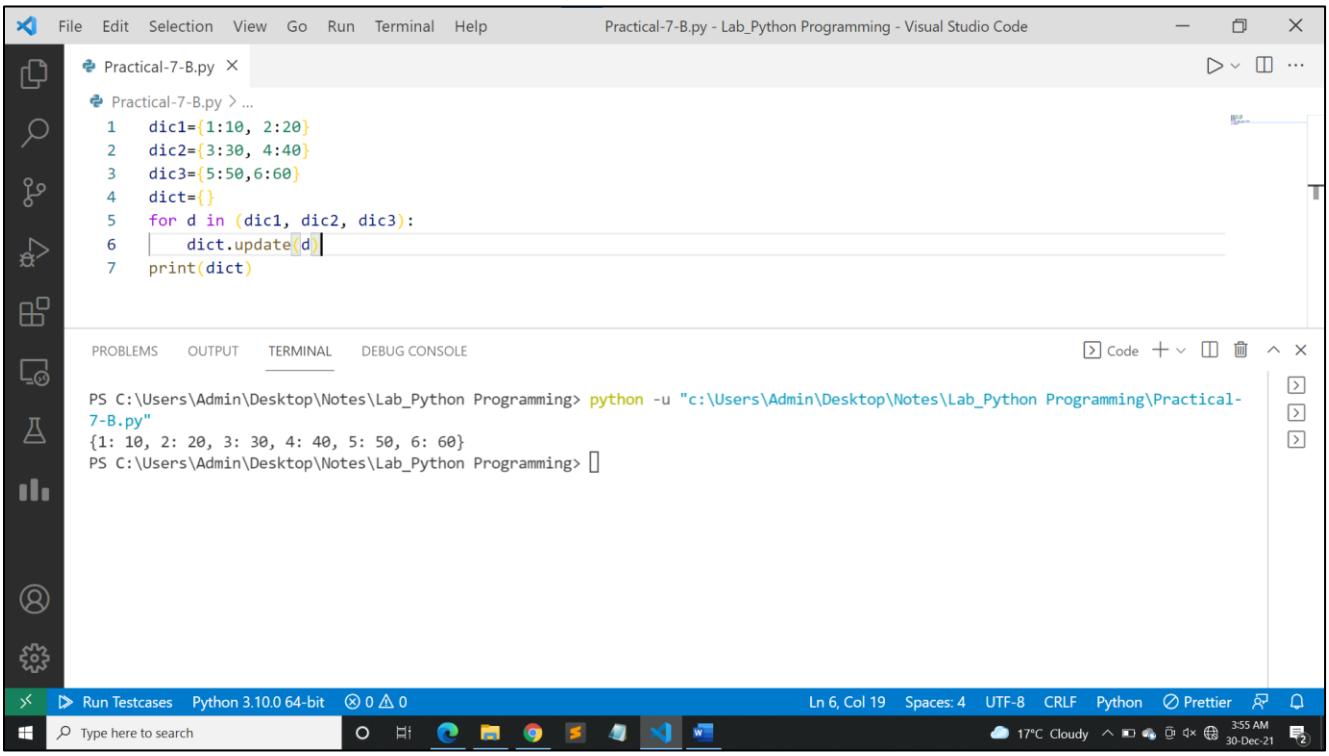
Program:

```
dic1={1:10, 2:20}
dic2={3:30, 4:40}
dic3={5:50,6:60}
dict={}
for d in (dic1, dic2, dic3):
    dict.update(d)
print(dict)
```

Output:

```
{1: 10, 2: 20, 3: 30, 4: 40, 5: 50, 6: 60}
```

Screenshot:



c) *Write a Python script to generate and print a dictionary that contains a number (between 1 and n) in the form (x, x*x)*

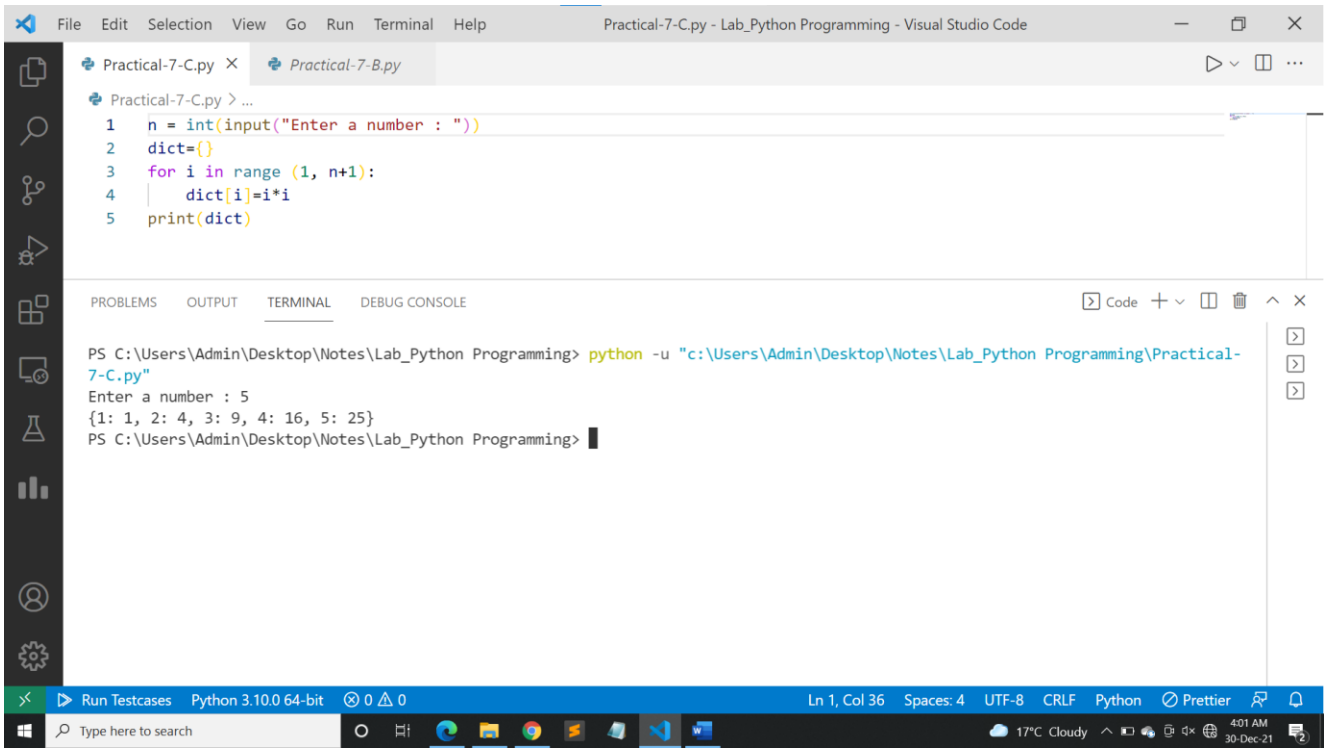
Program:

```
n = int(input("Enter a number : "))
dict={}
for i in range (1, n+1):
    dict[i]=i*i
print(dict)
```

Output:

```
Enter a number : 5
{1: 1, 2: 4, 3: 9, 4: 16, 5: 25}
```

Screenshot:



Result: I have studied Dictionaries in Python and successfully performed practical-7.