T&T LAB - 3
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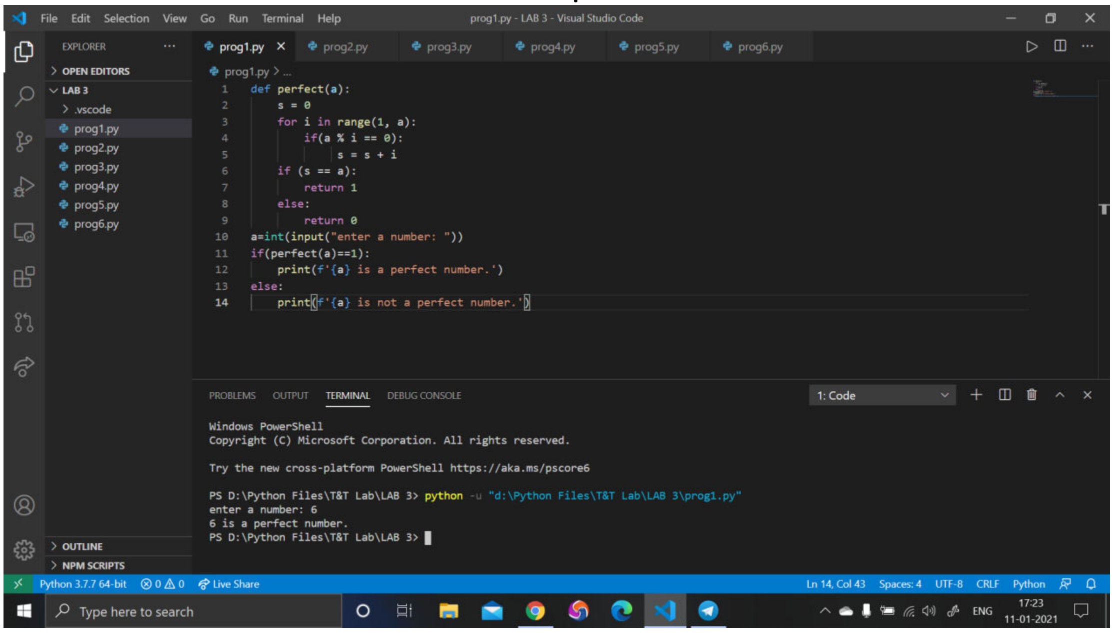
1. WAP to check whether a number is perfect or not.



```python
def perfect(a):
    s = 0
    for i in range(1, a):
        if(a % i == 0):
            s = s + i
    if (s == a):
        return 1
    else:
        return 0
a=int(input("enter a number: "))
if(perfect(a)==1):
    print(f'{a} is a perfect number.')
else:
    print(f'{a} is not a perfect number.')
```

```
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PS D:\Python Files\T&T Lab\LAB 3> python -u "d:\Python Files\T&T Lab\LAB 3\prog1.py"
enter a number: 6
6 is a perfect number.
PS D:\Python Files\T&T Lab\LAB 3>
```
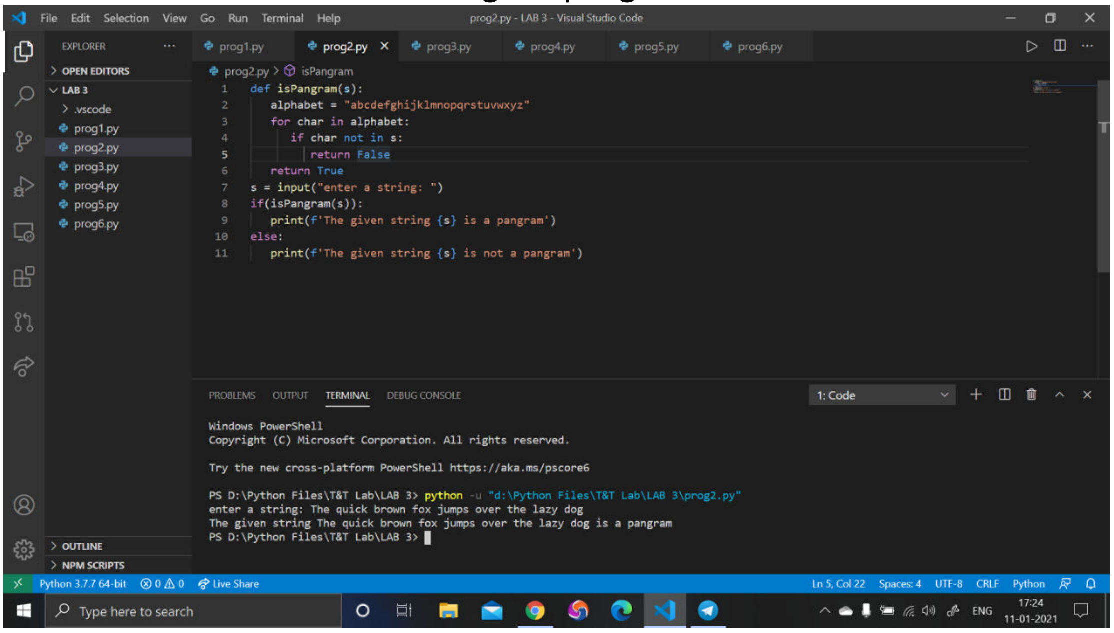

2. WAP to check whether a string is a pangram or not.



```python
def isPangram(s):
    alphabet = "abcdefghijklmnopqrstuvwxyz"
    for char in alphabet:
        if char not in s:
            return False
    return True
s = input("enter a string: ")
if(isPangram(s)):
    print(f'The given string {s} is a pangram')
else:
    print(f'The given string {s} is not a pangram')
```

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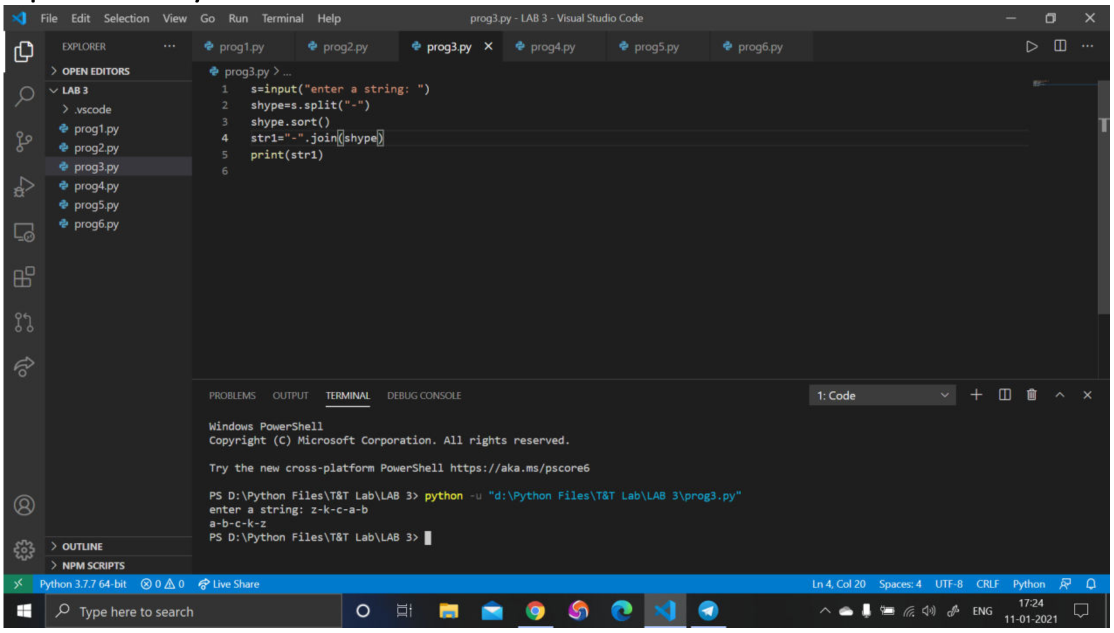
PS D:\Python Files\T&T Lab\LAB 3> python -u "d:\Python Files\T&T Lab\LAB 3\prog2.py"
enter a string: The quick brown fox jumps over the lazy dog
The given string The quick brown fox jumps over the lazy dog is a pangram
PS D:\Python Files\T&T Lab\LAB 3>
```

3. WAP that accepts a hyphen - seperated sequence of words as input and prints the words in a hyphen - seperated sequence after sorting them alphabetically.



```python
s=input("enter a string: ")
shype=s.split("-")
shype.sort()
str1="-".join(shype)
print(str1)
```

```
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PS D:\Python Files\T&T Lab\LAB 3> python -u "d:\Python Files\T&T Lab\LAB 3\prog3.py"
enter a string: z-k-c-a-b
a-b-c-k-z
PS D:\Python Files\T&T Lab\LAB 3>
```
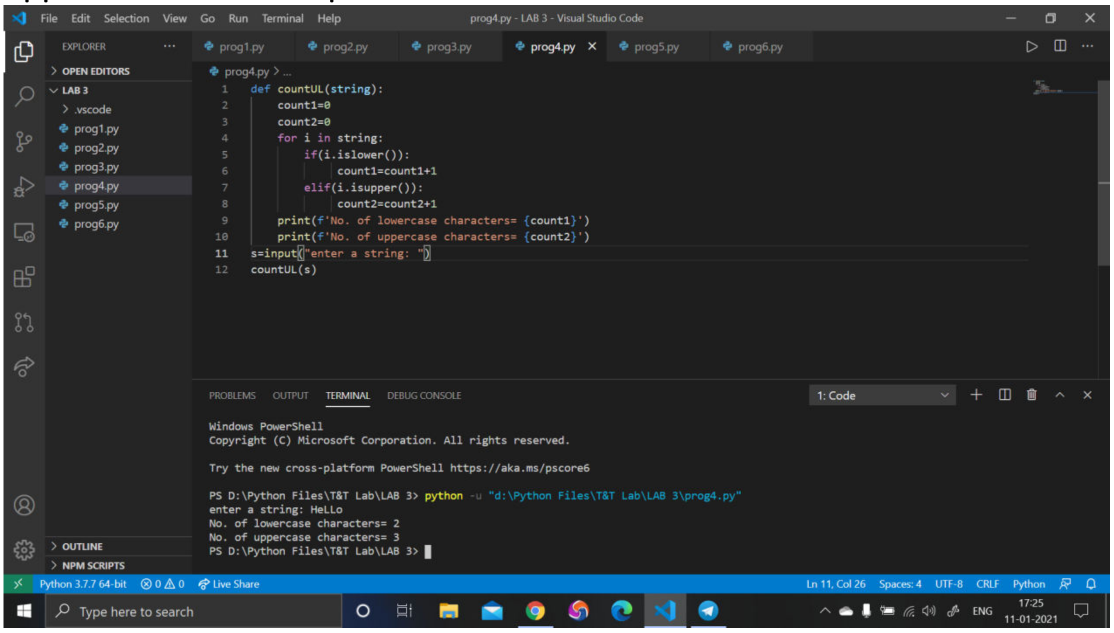

4. WAP that accepts a string and counts the number of lowercase and uppercase characters present in it.



```python
def countUL(string):
    count1=0
    count2=0
    for i in string:
        if(i.islower()):
            count1=count1+1
        elif(i.isupper()):
            count2=count2+1
    print(f'No. of lowercase characters= {count1}')
    print(f'No. of uppercase characters= {count2}')
s=input("enter a string: ")
countUL(s)
```

```
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PS D:\Python Files\T&T Lab\LAB 3> python -u "d:\Python Files\T&T Lab\LAB 3\prog4.py"
enter a string: HeLLo
No. of lowercase characters= 2
No. of uppercase characters= 3
PS D:\Python Files\T&T Lab\LAB 3>
```
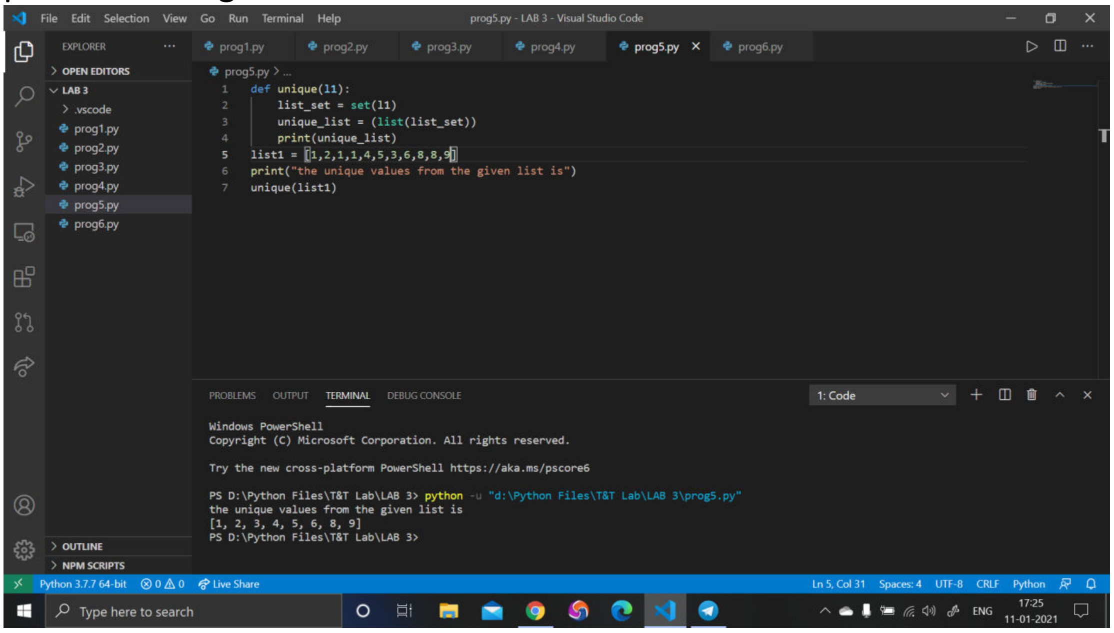

5. WAP that takes a list and returns a new list having the unique elements present in the given list.



```python
def unique(l1):
    list_set = set(l1)
    unique_list = (list(list_set))
    print(unique_list)
list1 = [1,2,1,1,4,5,3,6,8,8,9]
print("the unique values from the given list is")
unique(list1)
```

```
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PS D:\Python Files\T&T Lab\LAB 3> python -u "d:\Python Files\T&T Lab\LAB 3\prog5.py"
the unique values from the given list is
[1, 2, 3, 4, 5, 6, 8, 9]
PS D:\Python Files\T&T Lab\LAB 3>
```
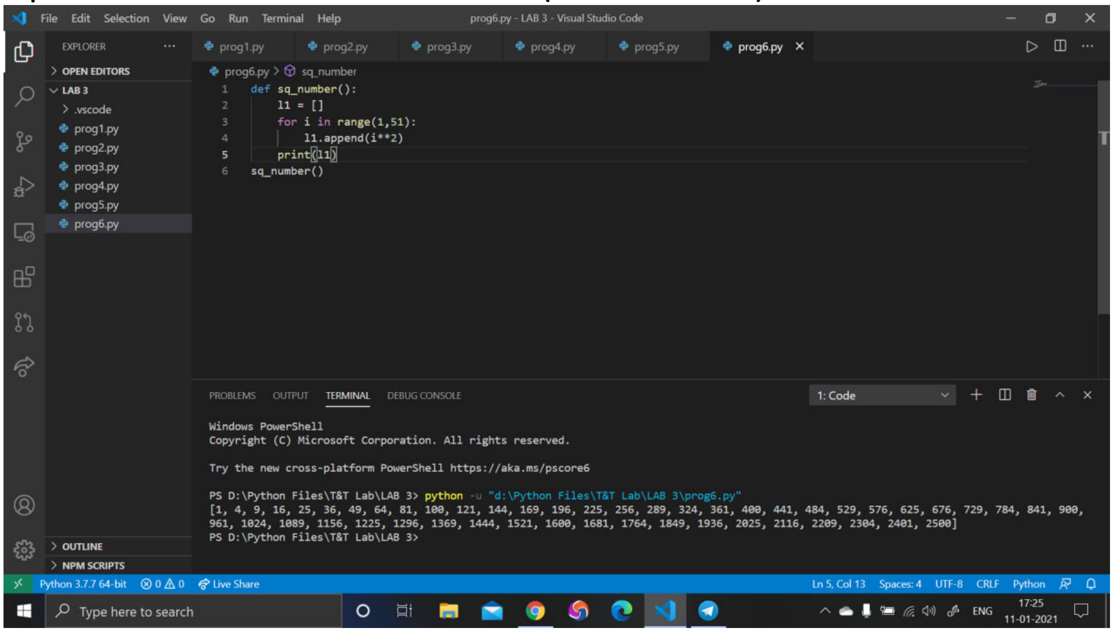

6. WAP to print and create a list of integers where the values are the square of numbers between 1 to 50 (both included).



```python
def sq_number():
    l1 = []
    for i in range(1,51):
        l1.append(i**2)
    print(l1)
sq_number()
```

```
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PS D:\Python Files\T&T Lab\LAB 3> python -u "d:\Python Files\T&T Lab\LAB 3\prog6.py"
[1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144, 169, 196, 225, 256, 289, 324, 361, 400, 441, 484, 529, 576, 625, 676, 729, 784, 841, 900,
961, 1024, 1089, 1156, 1225, 1296, 1369, 1444, 1521, 1600, 1681, 1764, 1849, 1936, 2025, 2116, 2209, 2304, 2401, 2500]
PS D:\Python Files\T&T Lab\LAB 3>
```