Indian Institute of Information Technology (IIIT) Pune

Python Lab.

3rd Semester

Academic Session 2024-2025

Lab - 2

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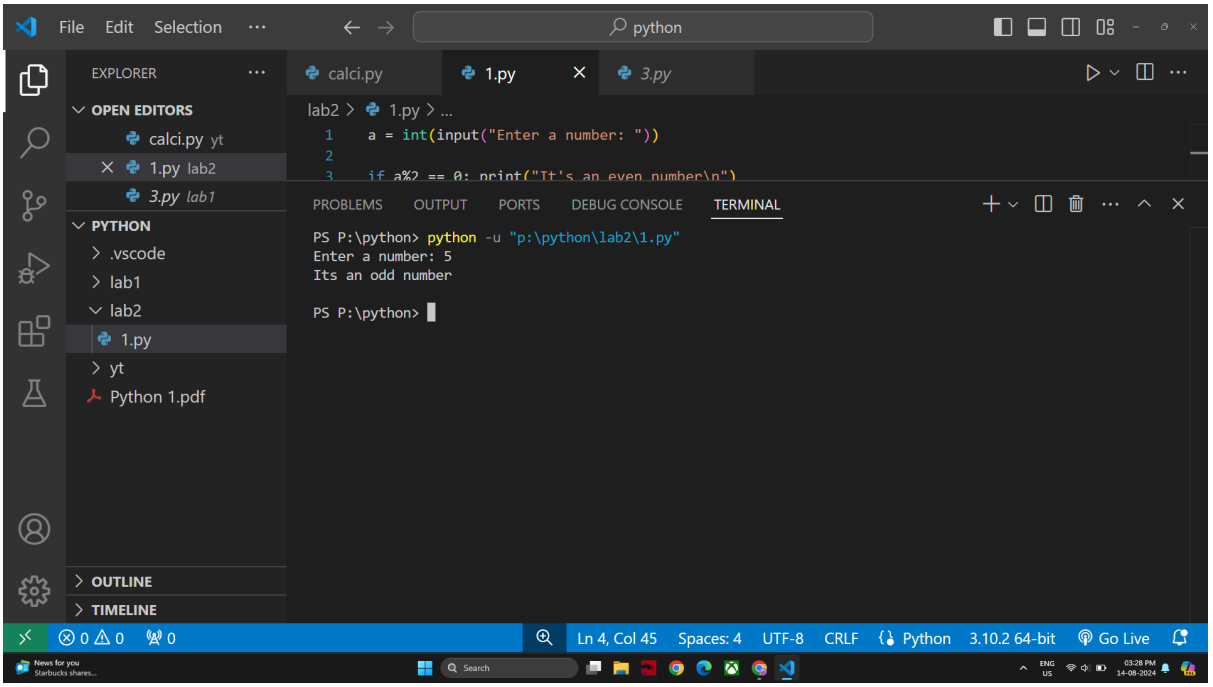
‘Group 4’

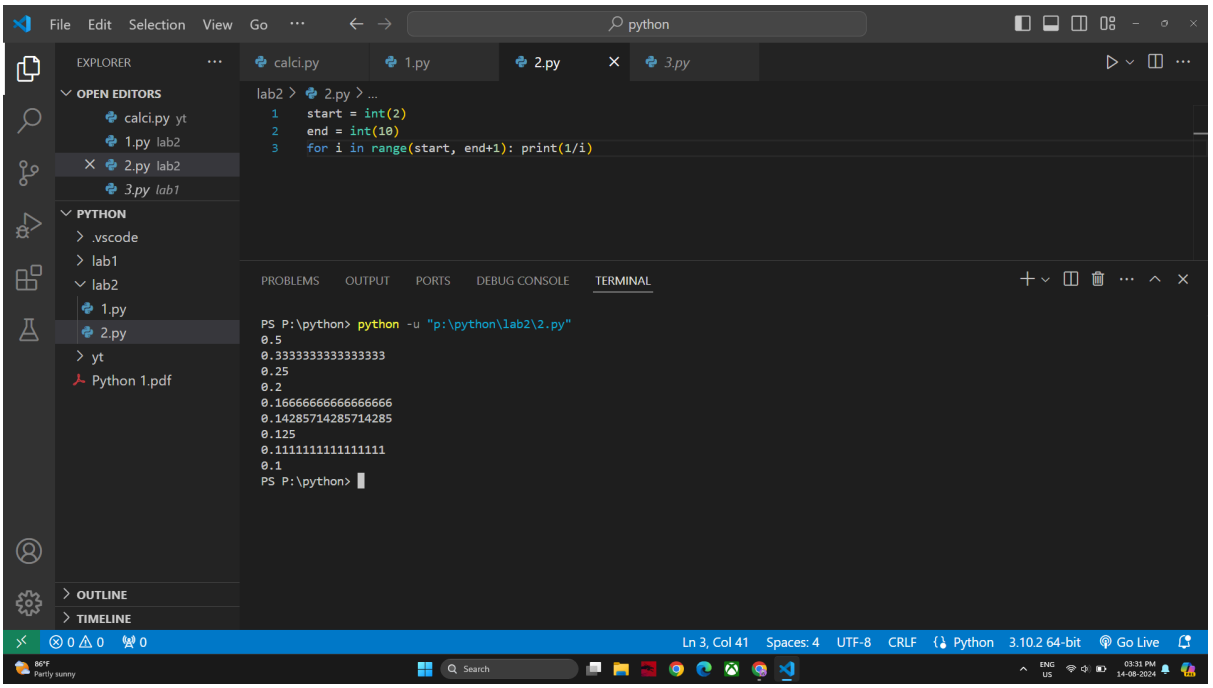
1) Write a Program for checking whether the given number is an even number or not.

```
a = int(input("Enter a number: "))

if a%2 == 0: print("It's an even number\n")
elif a%2 == 1: print("It's an odd number\n")
```



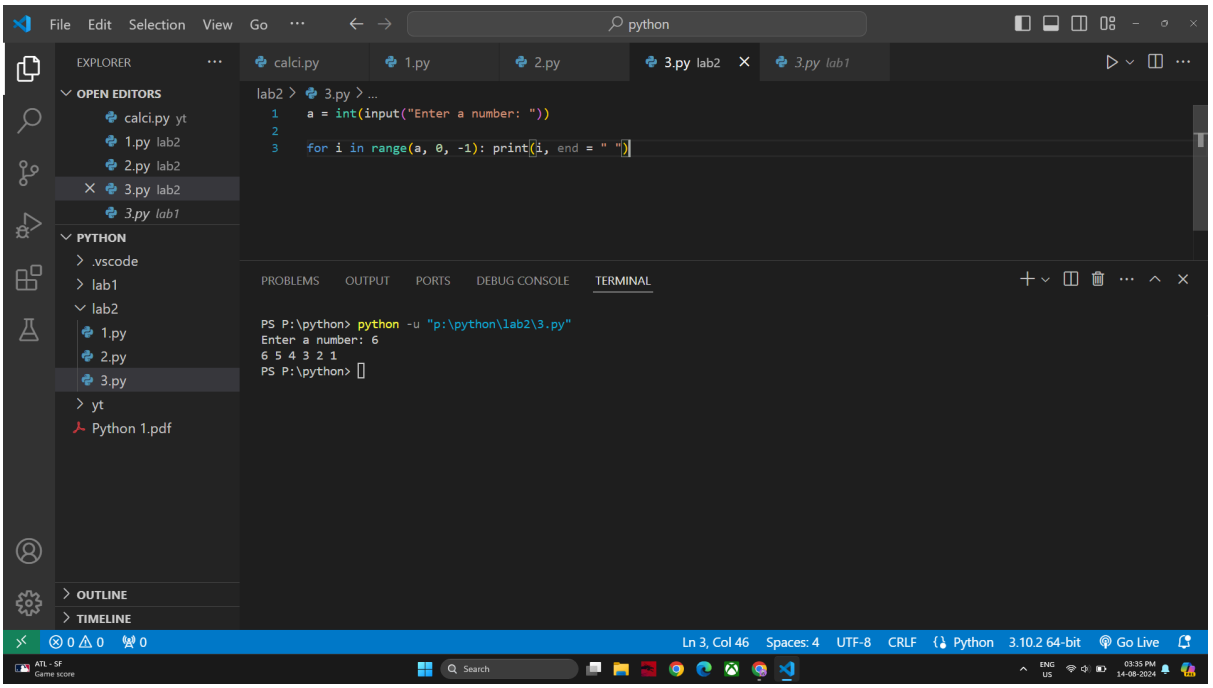
2) Using for loop, write a program that prints out the decimal equivalents of 1/2, 1/3, 1/4, . . . , 1/10.

```
start = int(2)
end = int(10)
for i in range(start, end+1): print(1/i)
```



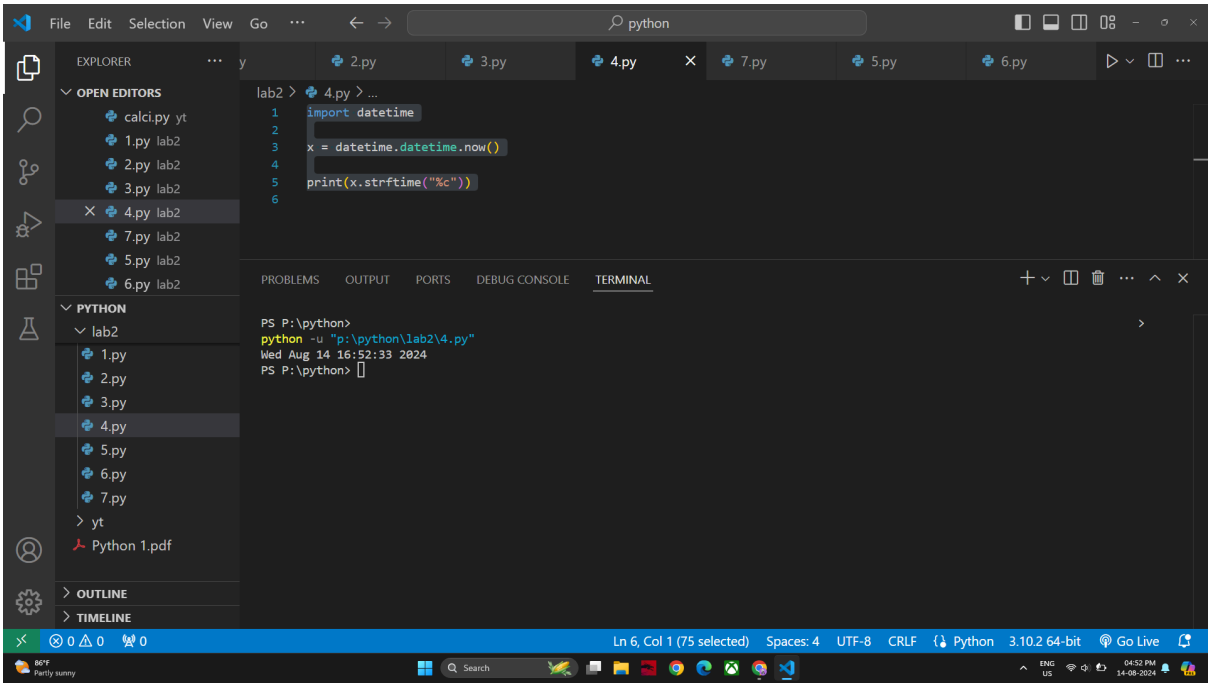
3) Write a program using a while loop that asks the user for a number, and prints a countdown from that number to zero.

```
a = int(input("Enter a number: "))

for i in range(a, 0, -1): print(i, end = " ")
```



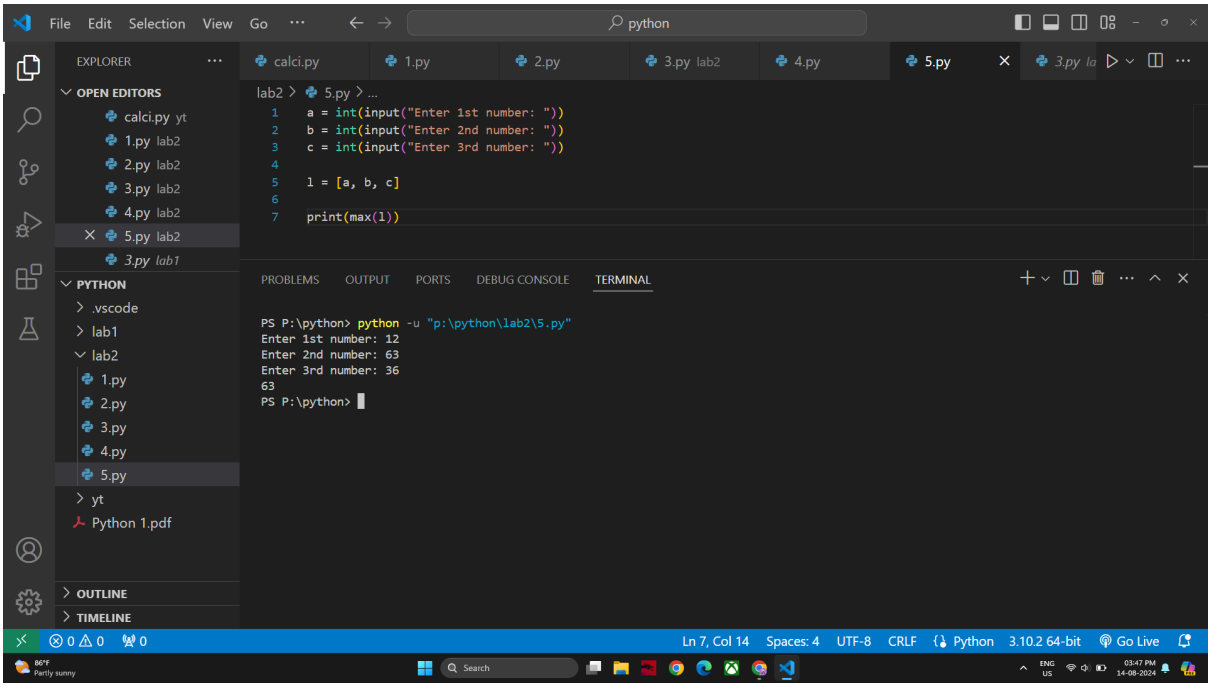
4) Write a python script to print the current date in the following format “Mon August 12 02:26:23 IST 2024”.

```
import datetime

x = datetime.datetime.now()

print(x.strftime("%c"))
```



5) Write a python program to find largest of three numbers.

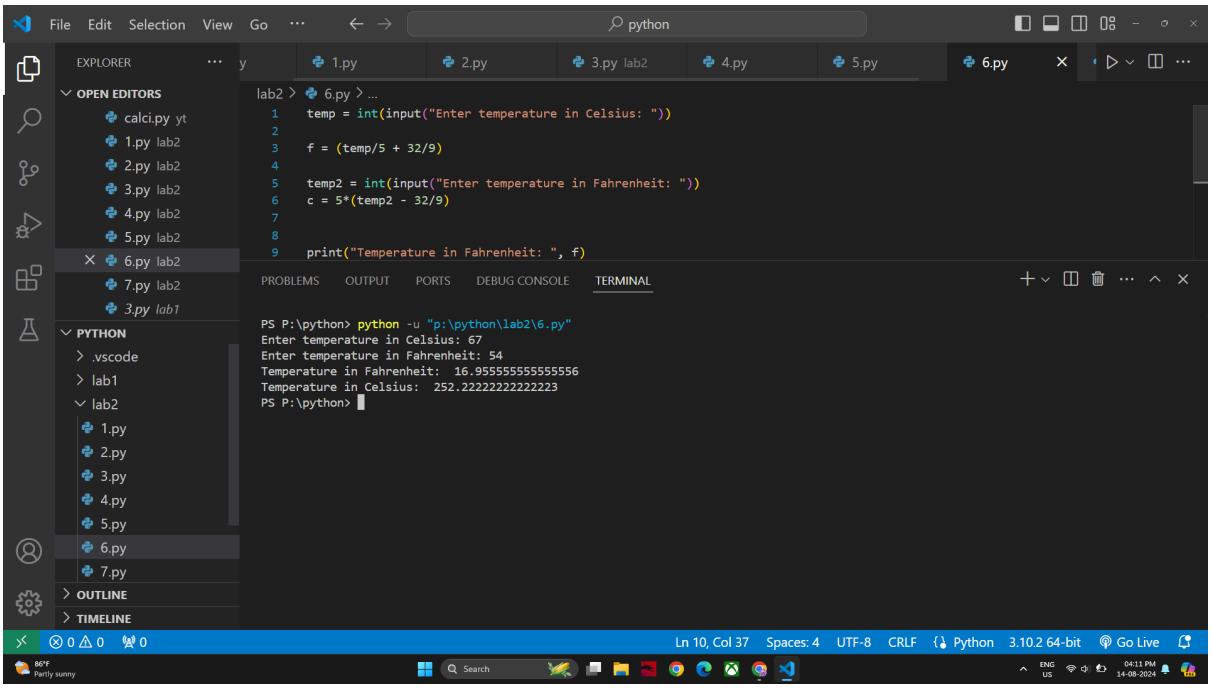
```
a = int(input("Enter 1st number: "))
b = int(input("Enter 2nd number: "))
c = int(input("Enter 3rd number: "))

l = [a, b, c]

print(max(l))
```



6) Write a Python program to convert temperatures to and from Celsius, Fahrenheit. [Formula : c/5 = f-32/9]

```
temp = int(input("Enter temperature in Celsius: "))

f = (temp/5 + 32/9)

temp2 = int(input("Enter temperature in Fahrenheit: "))
c = 5*(temp2 - 32/9)
```

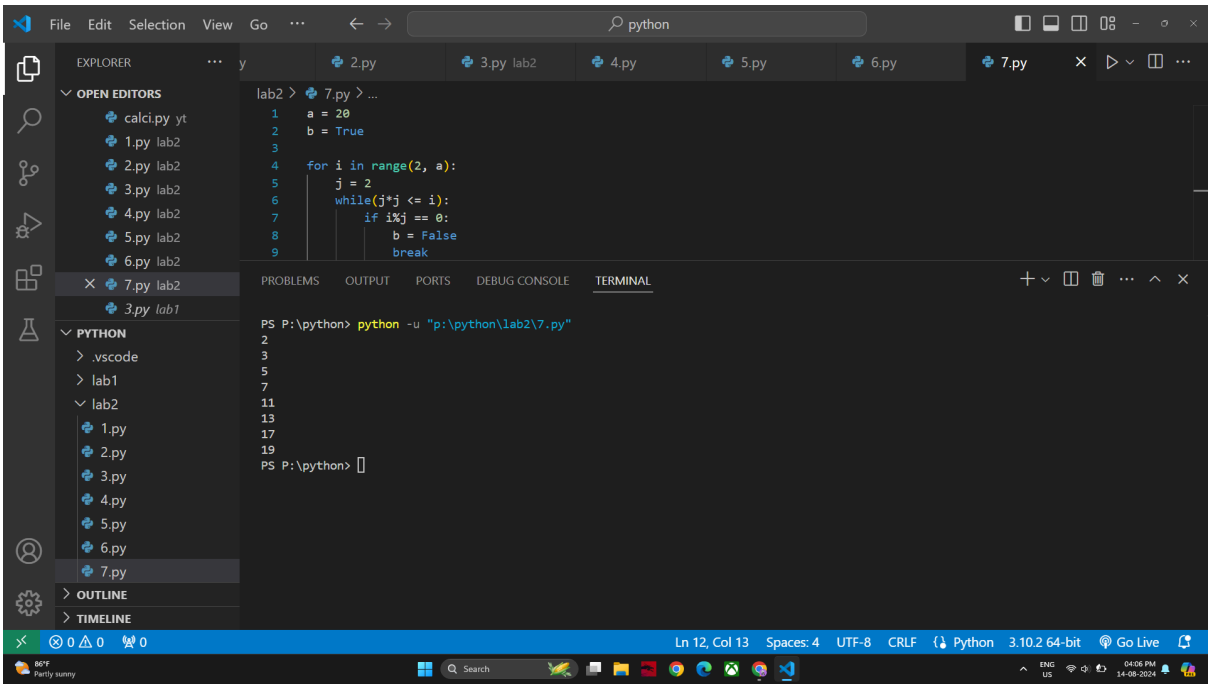
```
print("Temperature in Fahrenheit: ", f)
print("Temperature in Celsius: ", c)
```



7) Write a Python script that prints prime numbers less than 20.

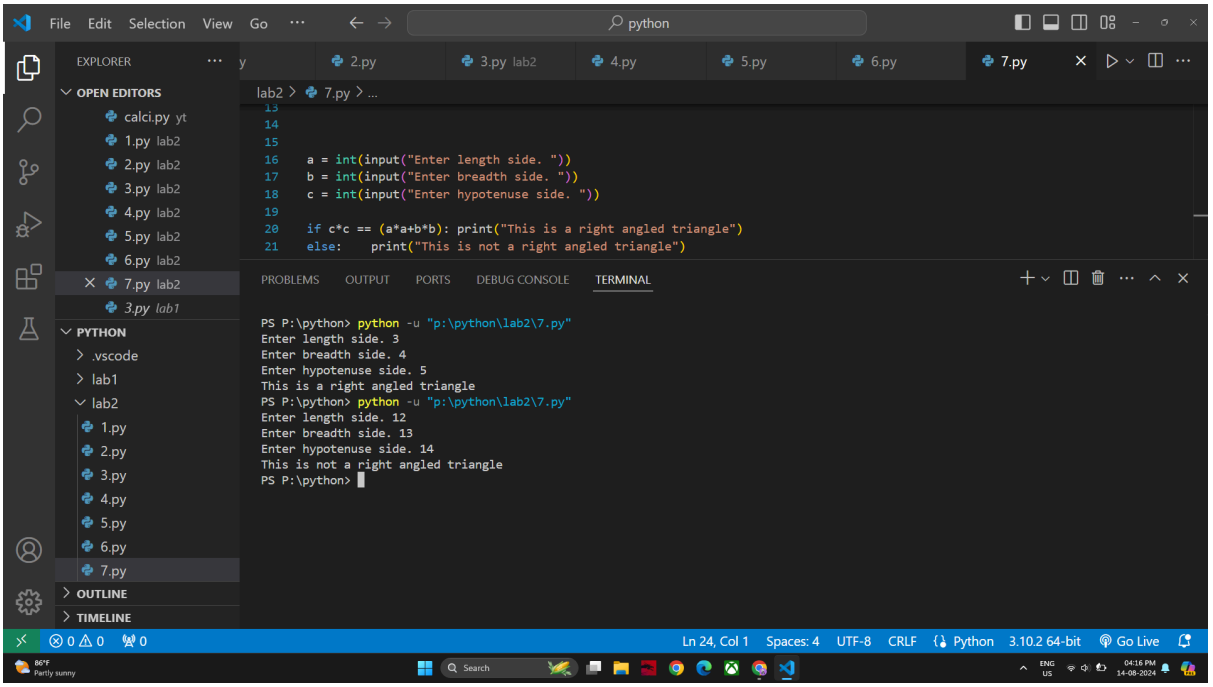
```
a = 20
b = True
```

```
for i in range(2, a):
    j = 2
    while(j*j <= i):
        if i%j == 0:
            b = False
            break
        j+=1
    if b == True: print(i)
    b = True
```



8) Write a program that accepts the lengths of three sides of a triangle as inputs. The program output should indicate whether or not the triangle is a right triangle (Recall from the Pythagorean Theorem that in a right triangle, the square of one side equals the sum of the squares of the other two sides).

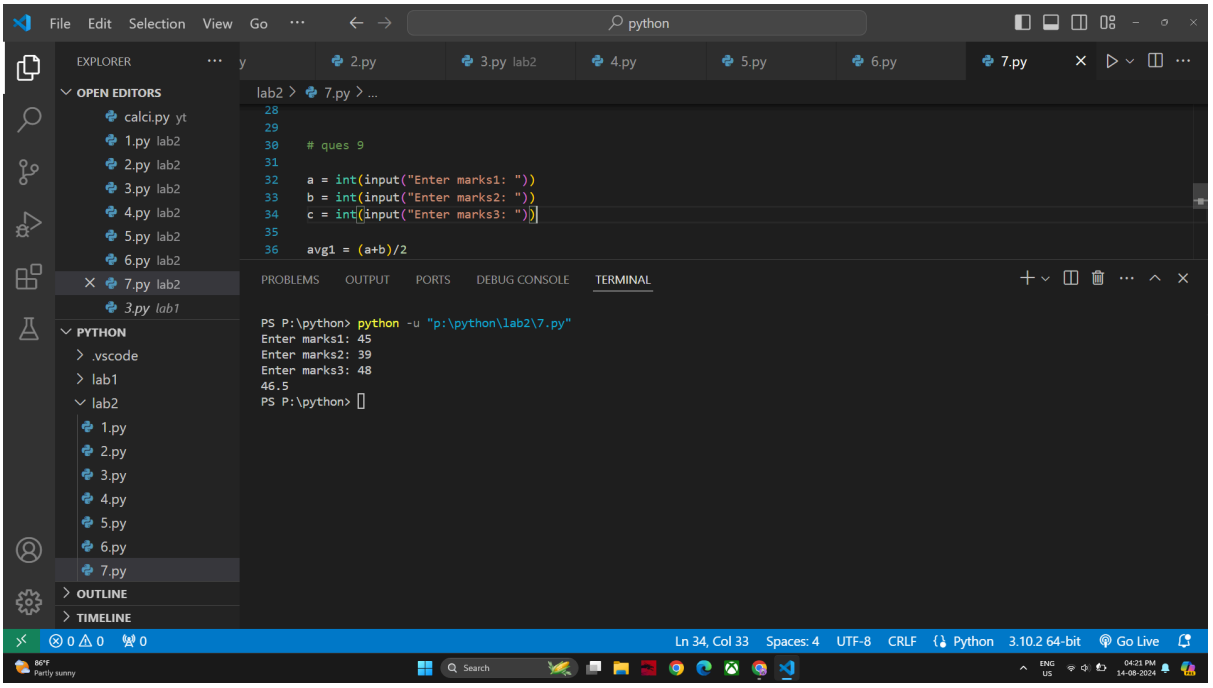
```python
a = int(input("Enter length side. "))
b = int(input("Enter breadth side. "))
c = int(input("Enter hypotenuse side. "))

if c*c == (a*a+b*b): print("This is a right angled triangle")
else:    print("This is not a right angled triangle")
```



9) Write a python program to find the best of two test average marks out of three test's marks accepted from the user.

Expected Result:
Enter marks for test1 : 45
Enter marks for test2 : 39
Enter marks for test3 : 48
Average of best two test marks out of three test's marks is 46.5

```python
a = int(input("Enter marks1: "))
b = int(input("Enter marks2: "))
c = int(input("Enter marks3: "))

avg1 = (a+b)/2
avg2 = (a+c)/2
avg3 = (b+c)/2

print(max(avg1, max(avg2, avg3)))
```

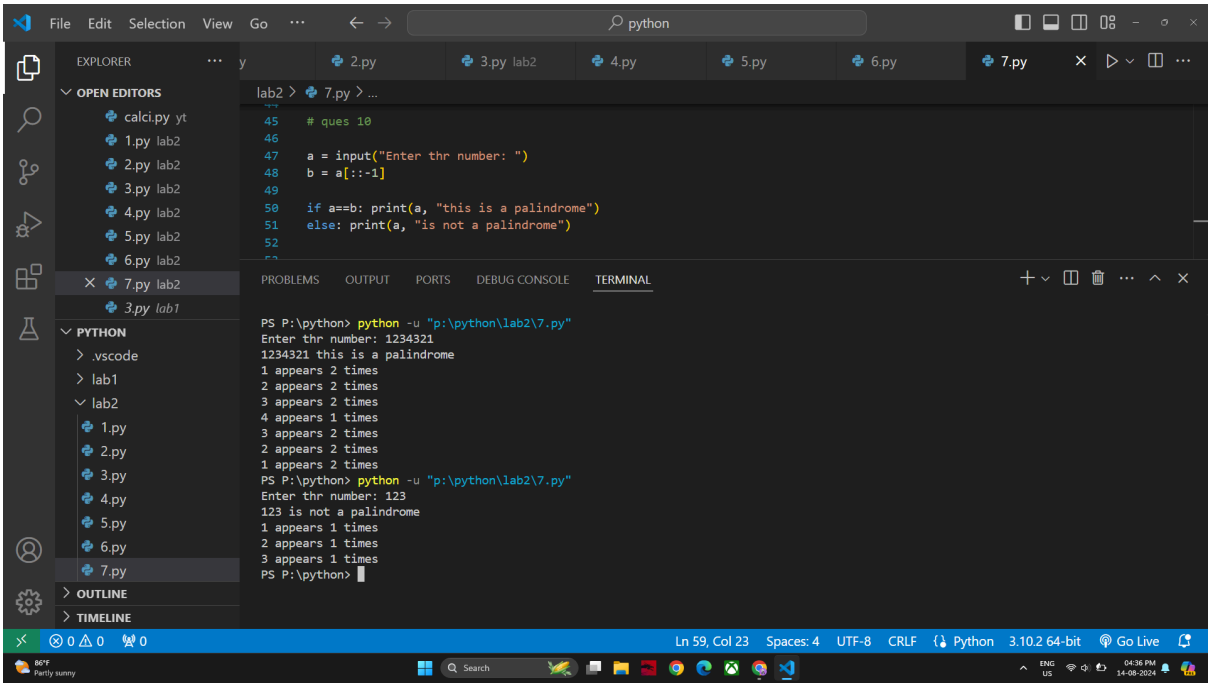


10) Develop a Python program to check whether a given number is palindrome or not and also count the number of occurrences of each digit in the input number.

Expected Result:
Enter a value : 1234234
Not Palindrome
1 appears 1 times
2 appears 2 times

3 appears 2 times
4 appears 2 times
Enter a value : 12321
Palindrome
1 appears 2 times
2 appears 2 times
3 appears 1 times

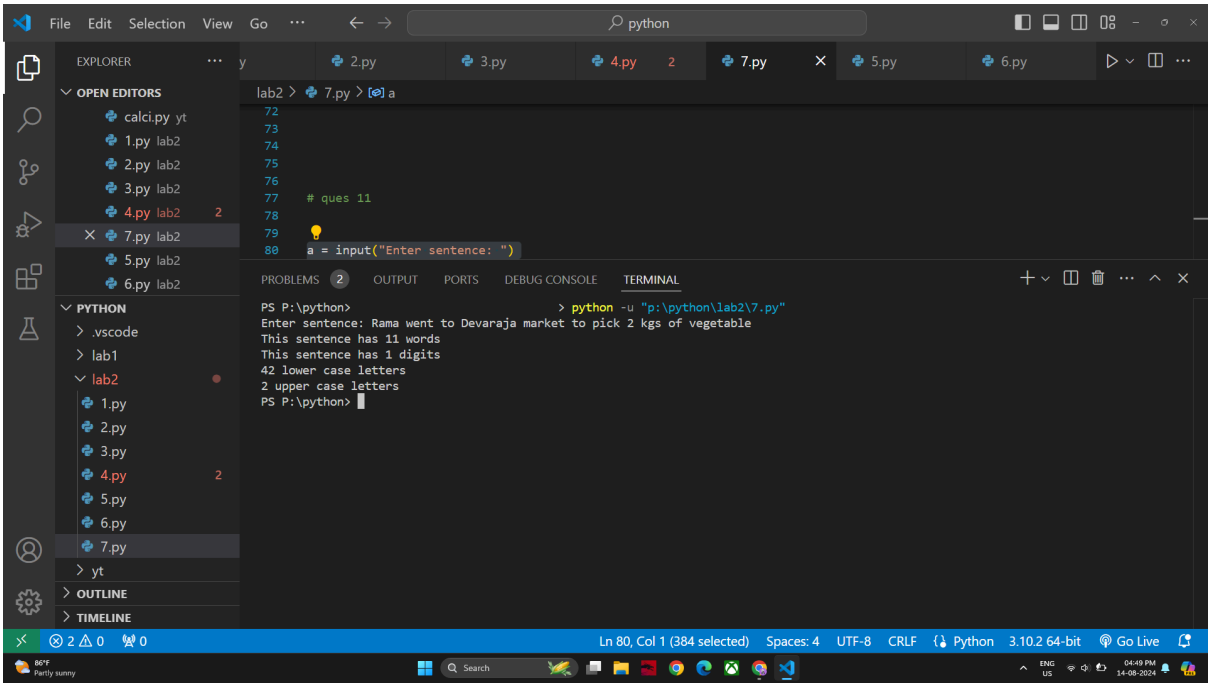
```
a = input("Enter thr number: ")
b = a[::-1]

if a==b: print(a, "this is a palindrome")
else: print(a, "is not a palindrome")


# i = 0
# j = len(a)-1
# f = True

# while i<=j:
#     if a[i] != a[j]:
#         print(a, " is Not a palindrome ")
#         f = False
#         break
#     else:
#         i+=1
#         j-=1

# if f == True:   print(a," is a palindrome")

for i in a: print(i, "appears", a.count(i),
```


File Edit Selection View Go
python
EXPLORER
OPEN EDITORS
calci.py yt
1.py lab2
2.py lab2
3.py lab2
4.py lab2
5.py lab2
6.py lab2
7.py lab2
3.py lab1
PYTHON
.vscode
lab1
lab2
1.py
2.py
3.py
4.py
5.py
6.py
7.py
OUTLINE
TIMELINE
2.py
3.py lab2
4.py
5.py
6.py
7.py
lab2 > 7.py > ...
45 # ques 10
46
47 a = input("Enter thr number: ")
48 b = a[::-1]
49
50 if a==b: print(a, "this is a palindrome")
51 else: print(a, "is not a palindrome")
52
PROBLEMS OUTPUT PORTS DEBUG CONSOLE TERMINAL
PS P:\python> python -u "p:\python\lab2\7.py"
Enter thr number: 1234321
1234321 this is a palindrome
1 appears 2 times
2 appears 2 times
3 appears 2 times
4 appears 1 times
3 appears 2 times
2 appears 2 times
1 appears 2 times
PS P:\python> python -u "p:\python\lab2\7.py"
Enter thr number: 123
123 is not a palindrome
1 appears 1 times
2 appears 1 times
3 appears 1 times
PS P:\python>
Ln 59, Col 23 Spaces: 4 UTF-8 CRLF Python 3.10.2 64-bit Go Live
Search

11) Write a Python program that accepts a sentence and find the number of words, digits, uppercase letters and lowercase letters.

Expected Result:
Enter a sentence : Rama went to Devaraja market to pick 2 kgs of vegetable
This sentence has 11 words
This sentence has 1 digits
2 upper case letters
42 lower case letters

```
a = input("Enter sentence: ")

words = 0
digits = 0
upper = 0
lower = 0

words = a.split(" ")

for i in a:
    if i.isdigit():    digits+=1
    if i.isupper():    upper+=1
    if i.islower():    lower+=1

print("This sentence has", len(words), "words")
print("This sentence has", digits, "digits")
print(lower, "lower case letters")
print(upper, "upper case letters")
```


File Edit Selection View Go
python
EXPLORER
OPEN EDITORS
calci.py yt
1.py lab2
2.py lab2
3.py lab2
4.py lab2 2
7.py lab2
5.py lab2
6.py lab2
PYTHON
.vscode
lab1
lab2
1.py
2.py
3.py
4.py 2
5.py
6.py
7.py
yt
OUTLINE
TIMELINE
2.py
3.py
4.py 2
7.py
5.py
6.py
lab2 > 7.py > a
72
73
74
75
76
77 # ques 11
78
79
80 a = input("Enter sentence: ")
PROBLEMS 2
OUTPUT
PORTS
DEBUG CONSOLE
TERMINAL
PS P:\python> > python -u "p:\python\lab2\7.py"
Enter sentence: Rama went to Devaraja market to pick 2 kgs of vegetable
This sentence has 11 words
This sentence has 1 digits
42 lower case letters
2 upper case letters
PS P:\python>
Ln 80, Col 1 (384 selected)
Spaces: 4
UTF-8
CRLF
Python
3.10.2 64-bit
Go Live
Search