

Indian Institute of Information Technology (IIIT) Pune

Python Lab.

3rd Semester

Academic Session 2024-2025

Lab - 1

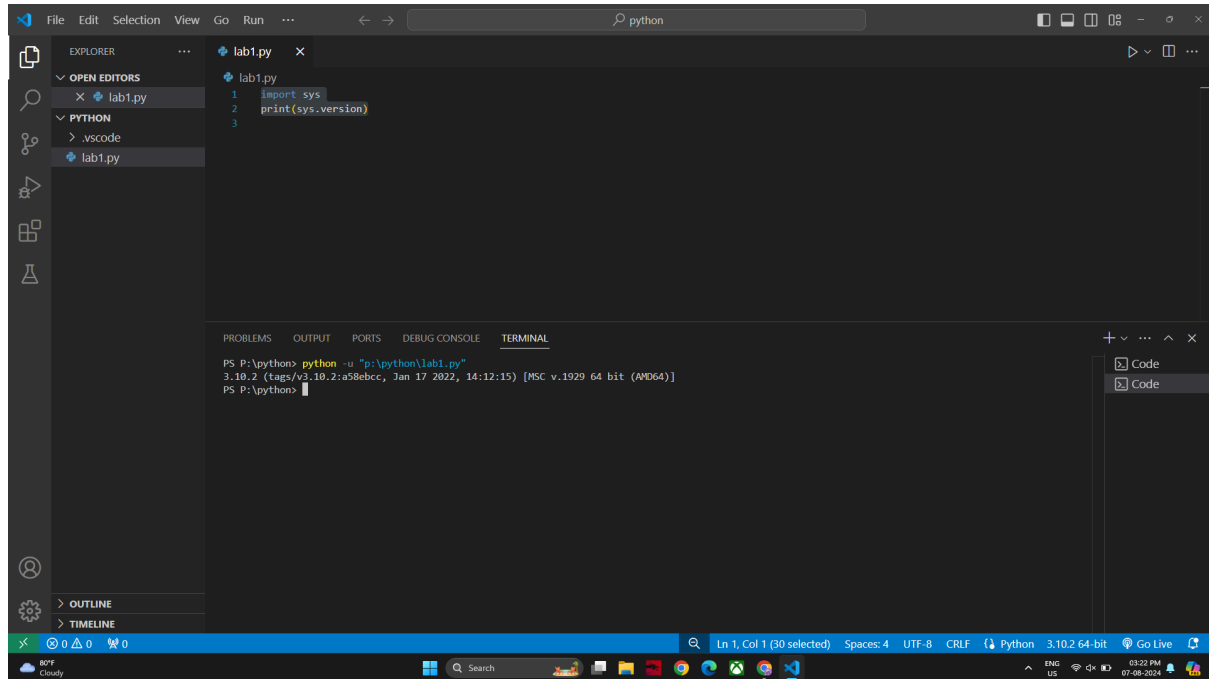
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‘Group 4’

1) Python version

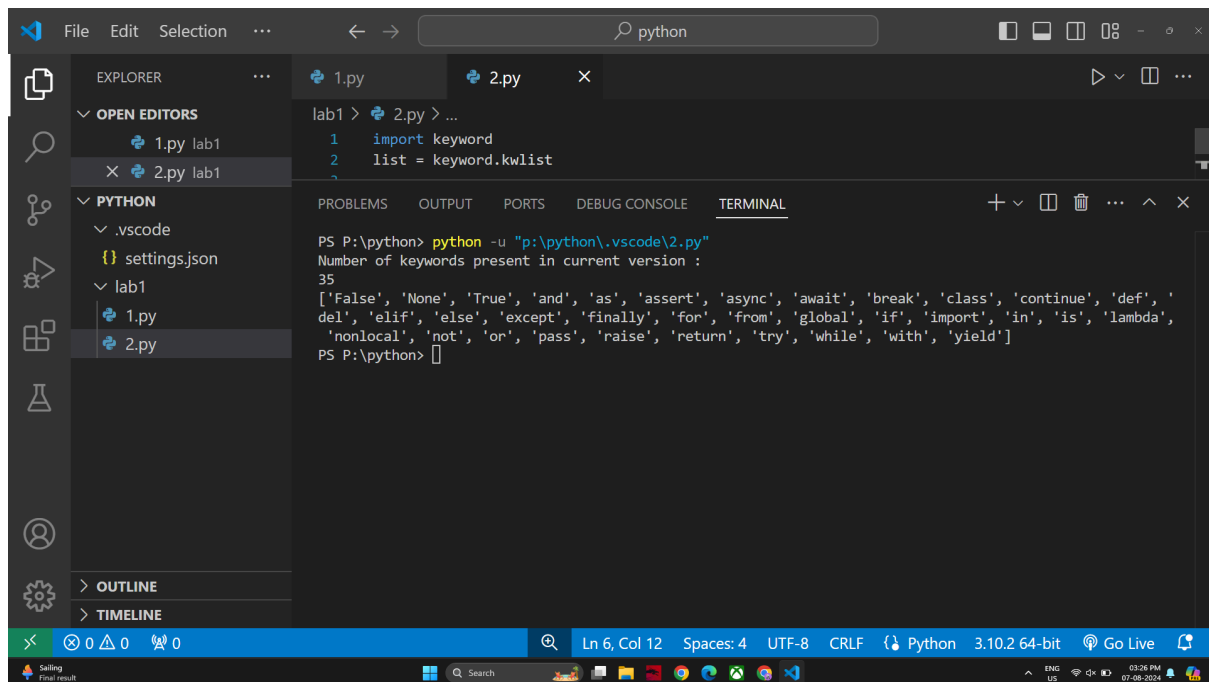
```
import sys
print(sys.version)
```



2) Write a Python program to list all the keywords in Python.

```
import keyword
list = keyword.kwlist

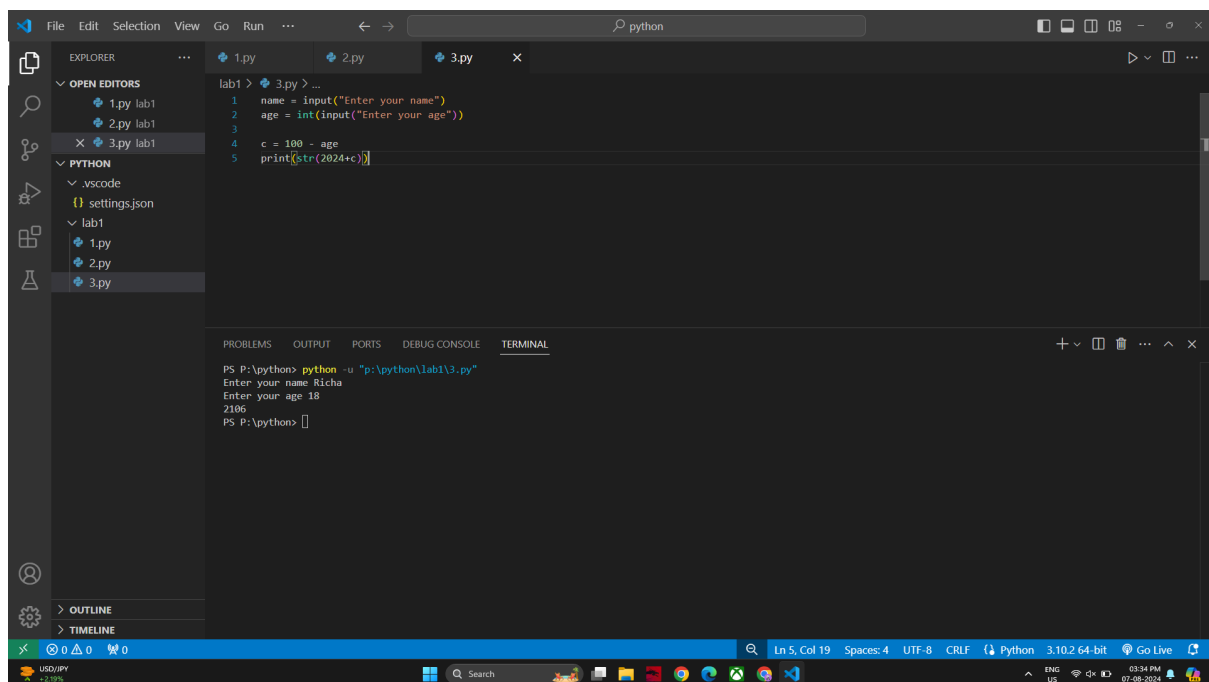
print("Number of keywords present in current version :")
print(len(list))
print(list)
```



3) Write a program that asks the user to enter their name and their age. Print out a message addressed to them that tells them the year that they will turn 100 years old.

```
name = input("Enter your name")
age = int(input("Enter your age"))

c = 100 - age
print(str(2024+c))
```



The screenshot shows the Visual Studio Code (VS Code) interface. The Explorer sidebar on the left shows a project named 'lab1' containing three Python files: '1.py', '2.py', and '3.py'. The '3.py' file is open in the editor, displaying the following code:

```
1 name = input("Enter your name")
2 age = int(input("Enter your age"))
3
4 c = 100 - age
5 print(str(2024+c))
```

The TERMINAL panel at the bottom shows the execution of the program. The command 'python -u "p:\python\lab1\3.py"' is entered, and the output is:

```
PS P:\python> python -u "p:\python\lab1\3.py"
Enter your name Richa
Enter your age 18
2186
PS P:\python>
```

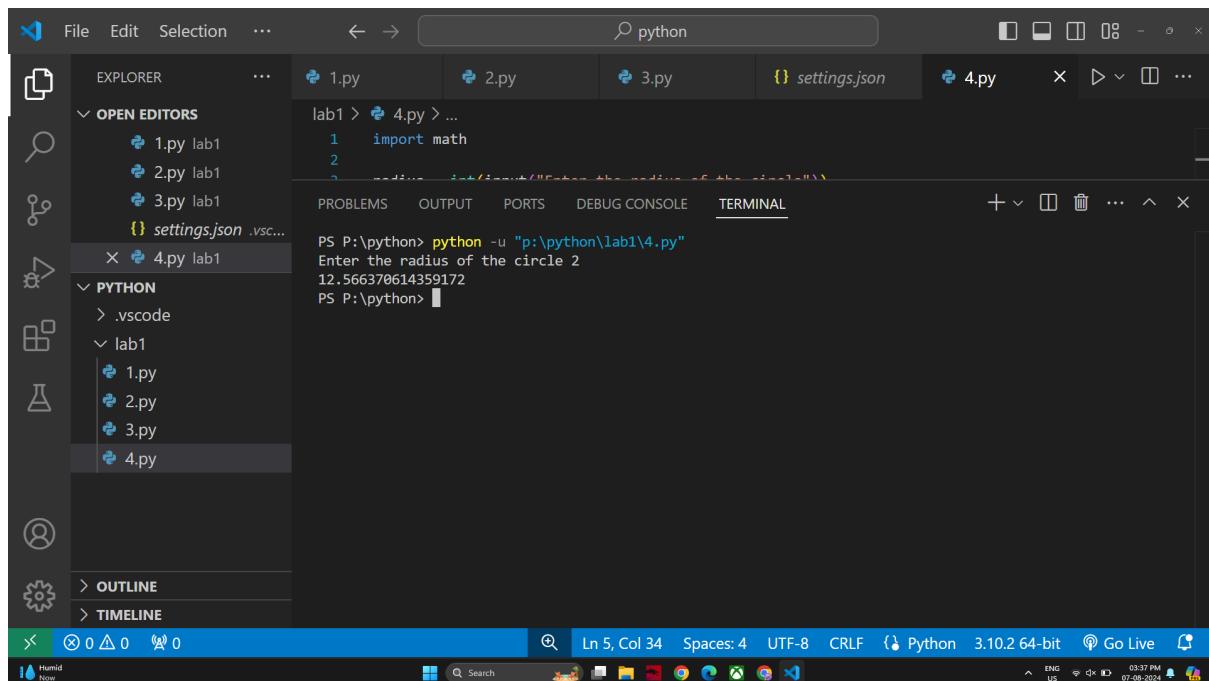
The status bar at the bottom indicates the file is 'Ln 5, Col 19', uses 'Spaces: 4', 'UTF-8' encoding, and 'CRLF' line endings. The Python interpreter is 'Python 3.10.2 64-bit'.

4) Write a python program which accepts the radius of a circle from the user and compute the area.

```
import math

radius = int(input("Enter the radius of the circle"))

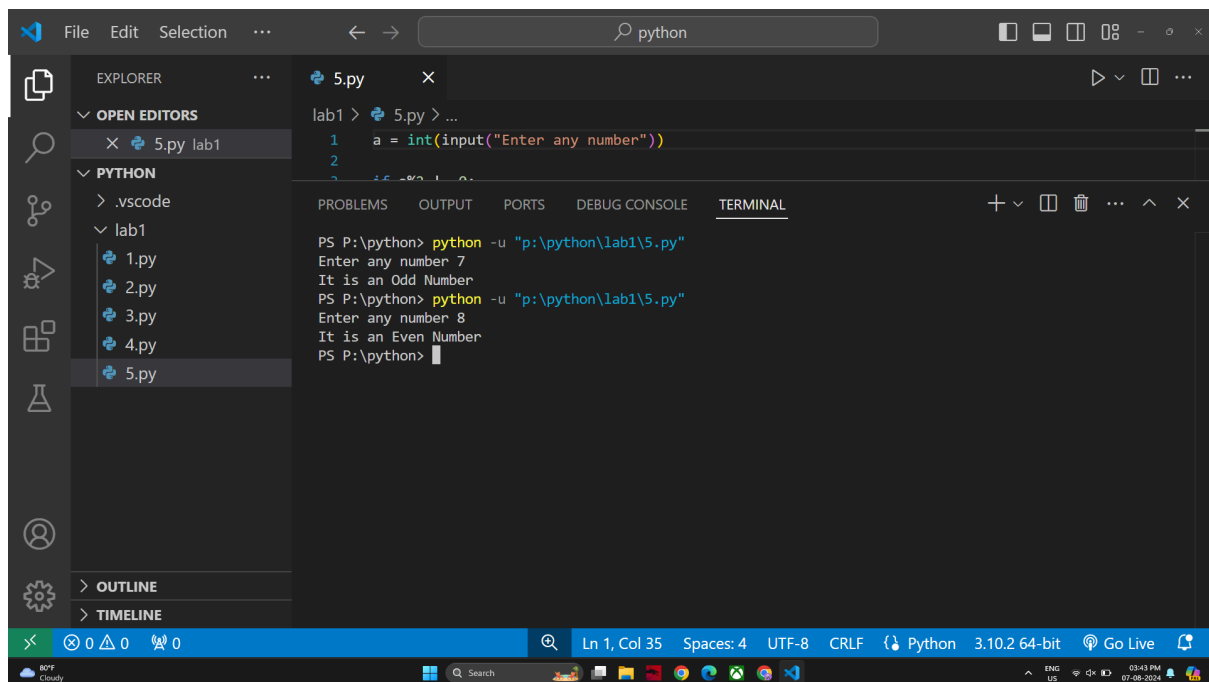
print(str(math.pi*radius*radius))
```



5) Ask the user for a number. Depending on whether the number is even or odd, print out an appropriate message to the user.

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

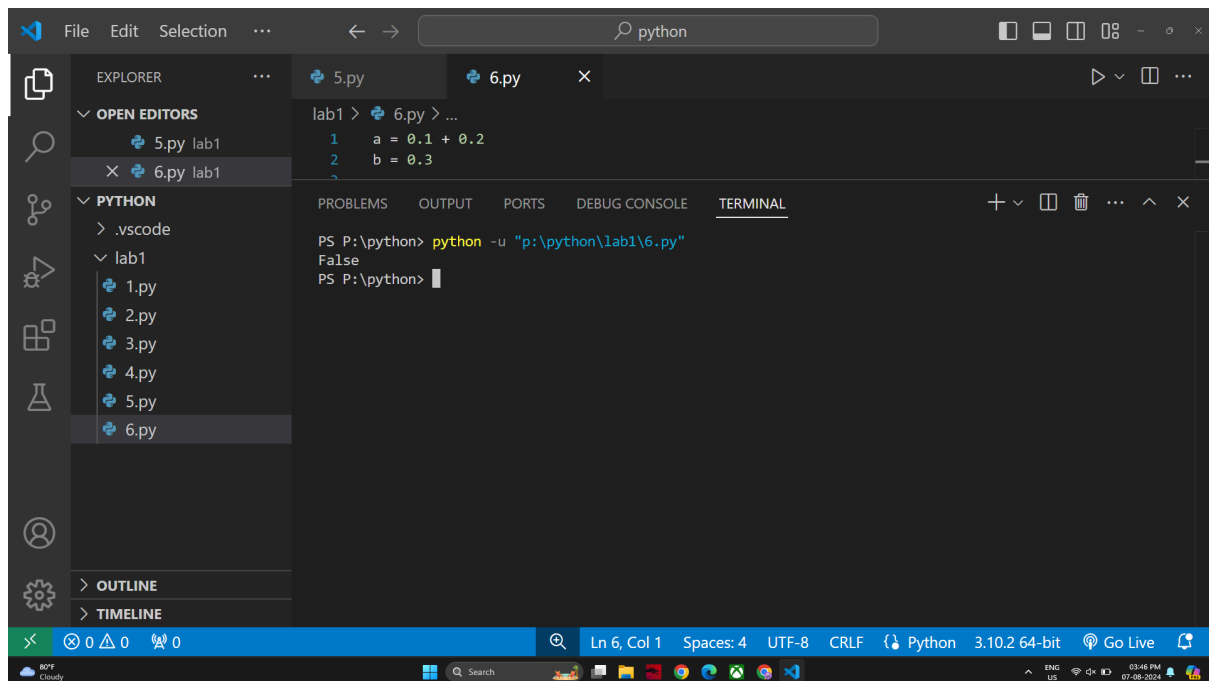
if a%2 != 0:
    print("It is an Odd Number")
else:
    print("It is an Even Number")
```



6) Check whether $0.1 + 0.2 = 0.3$ holds true in Python? If not find the ways to make it true.

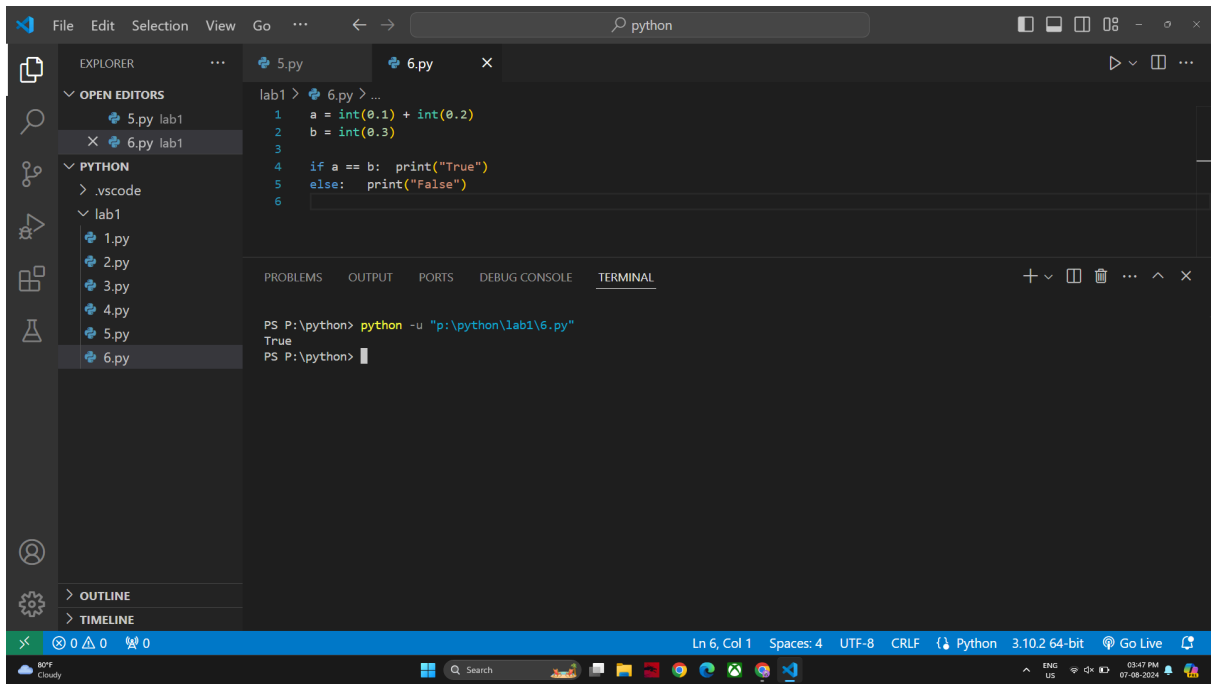
```
a = 0.1 + 0.2
b = 0.3

if a == b: print("True")
else:     print("False")
```



```
a = int(0.1) + int(0.2)
b = int(0.3)

if a == b: print("True")
else:     print("False")
```

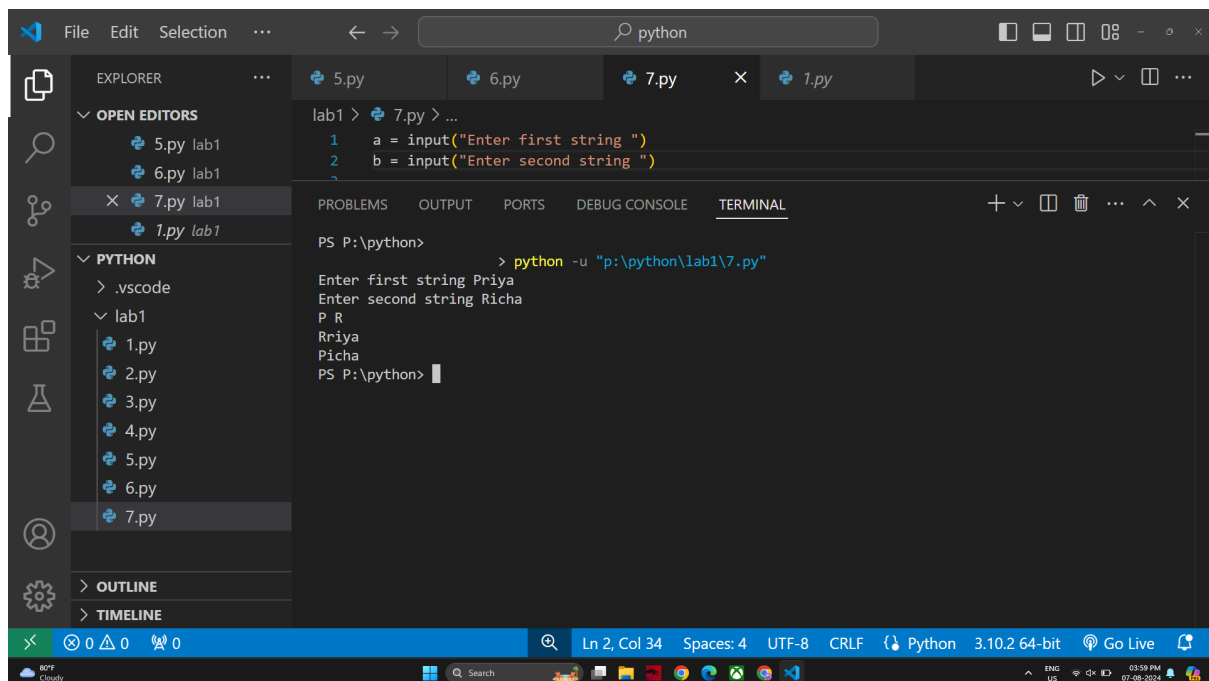


7) Write a Python program to get a single string from two given strings, separated by a space and swap the first two characters of each string.

```
a = input("Enter first string ")
b = input("Enter second string ")

c = b[0] + a[1:]
d = a[0] + b[1:]

print(c)
print(d)
```

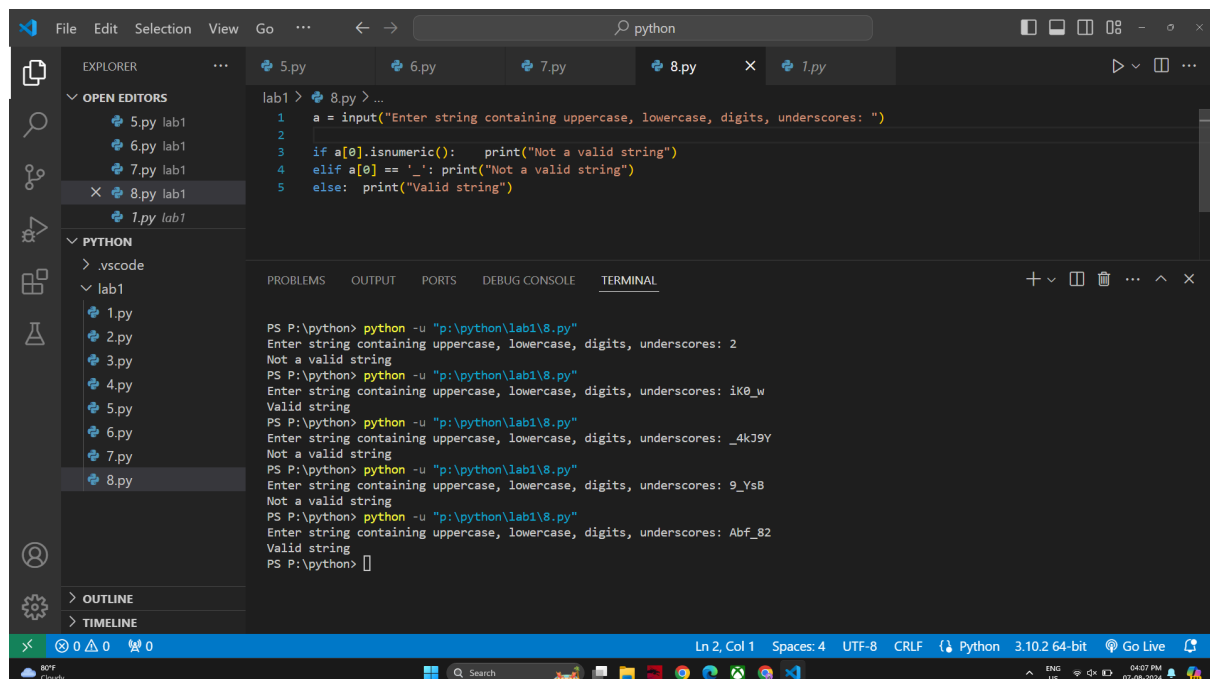


The screenshot shows the Visual Studio Code (VS Code) interface. The Explorer panel on the left shows a project named 'lab1' containing several Python files (1.py to 7.py). The file '7.py' is selected and open in the editor. The code in '7.py' is the same as shown in the previous block. The TERMINAL panel at the bottom shows the command prompt running the script: `PS P:\python> python -u "p:\python\lab1\7.py"`. The output of the script is displayed in the terminal: `Enter first string Priya`, `Enter second string Richa`, `P R`, `Rriya`, `Picha`, and `PS P:\python>`. The status bar at the bottom indicates the file is at line 2, column 34, with 4 spaces, using UTF-8 encoding and CRLF line endings. The Python interpreter is 3.10.2 64-bit.

8) Ask the user for a string containing lowercase letters, uppercase letters, digits or underscores or combination of all. Write a Python program to check whether the string is a valid identifier.

```
a = input("Enter string containing uppercase, lowercase, digits, underscores: ")

if a[0].isnumeric():    print("Not a valid string")
elif a[0] == '_': print("Not a valid string")
else: print("Valid string")
```



The screenshot shows the Visual Studio Code (VS Code) interface. The Explorer panel on the left shows a project named 'lab1' with several Python files (1.py to 8.py). The Editor panel displays the code for '8.py', which is the same program shown in the previous block. The Terminal panel at the bottom shows the output of running the program multiple times with different inputs. The status bar at the bottom indicates the current file is 'Ln 2, Col 1', the encoding is 'UTF-8', and the Python interpreter is 'Python 3.10.2 64-bit'.

```
lab1 > 8.py >...
1  a = input("Enter string containing uppercase, lowercase, digits, underscores: ")
2
3  if a[0].isnumeric():    print("Not a valid string")
4  elif a[0] == '_': print("Not a valid string")
5  else: print("Valid string")

PROBLEMS  OUTPUT  PORTS  DEBUG CONSOLE  TERMINAL

PS P:\python> python -u "p:\python\lab1\8.py"
Enter string containing uppercase, lowercase, digits, underscores: 2
Not a valid string
PS P:\python> python -u "p:\python\lab1\8.py"
Enter string containing uppercase, lowercase, digits, underscores: iK0_w
Valid string
PS P:\python> python -u "p:\python\lab1\8.py"
Enter string containing uppercase, lowercase, digits, underscores: _4k39Y
Not a valid string
PS P:\python> python -u "p:\python\lab1\8.py"
Enter string containing uppercase, lowercase, digits, underscores: 9_YsB
Not a valid string
PS P:\python> python -u "p:\python\lab1\8.py"
Enter string containing uppercase, lowercase, digits, underscores: Abf_82
Valid string
PS P:\python>
```

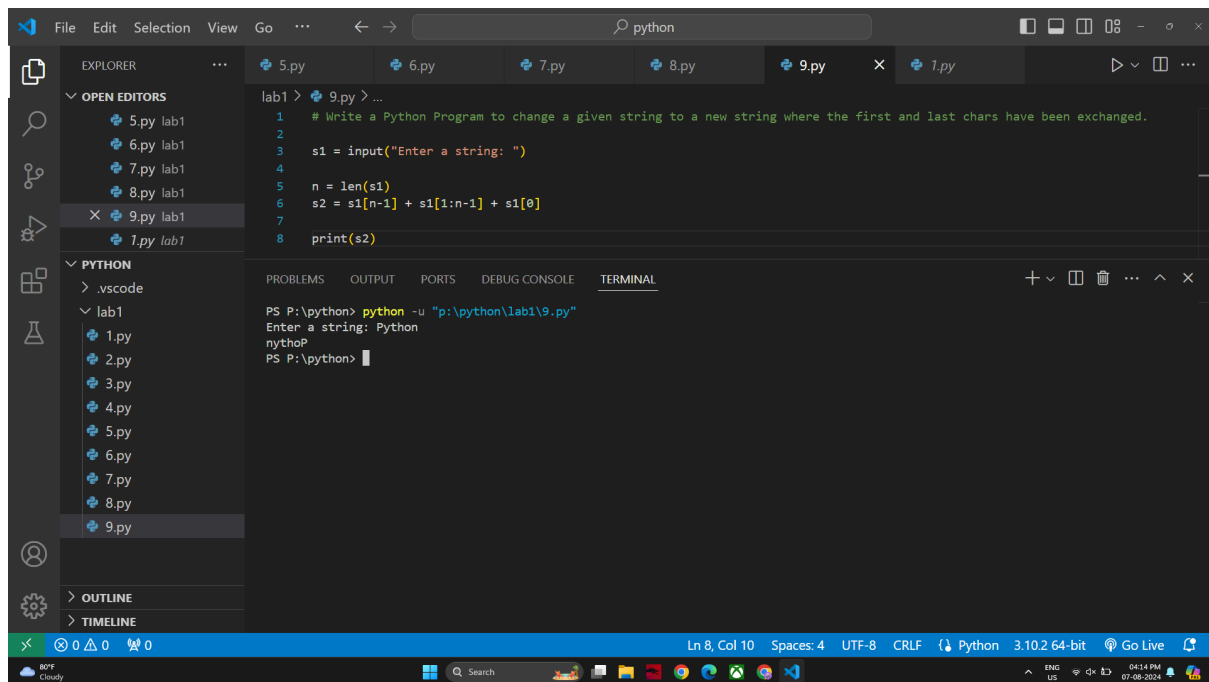
9) Write a Python Program to change a given string to a new string where the first and last chars have been exchanged.

```
# Write a Python Program to change a given string to a new string where the first
and last chars have been exchanged.

s1 = input("Enter a string: ")

n = len(s1)
s2 = s1[n-1] + s1[1:n-1] + s1[0]

print(s2)
```



10) Write a Python script that takes input from the user and displays that input back in uppercase and lowercase.

```
s = input("Enter the string: ")

print(s.upper())
print(s.lower())
```

