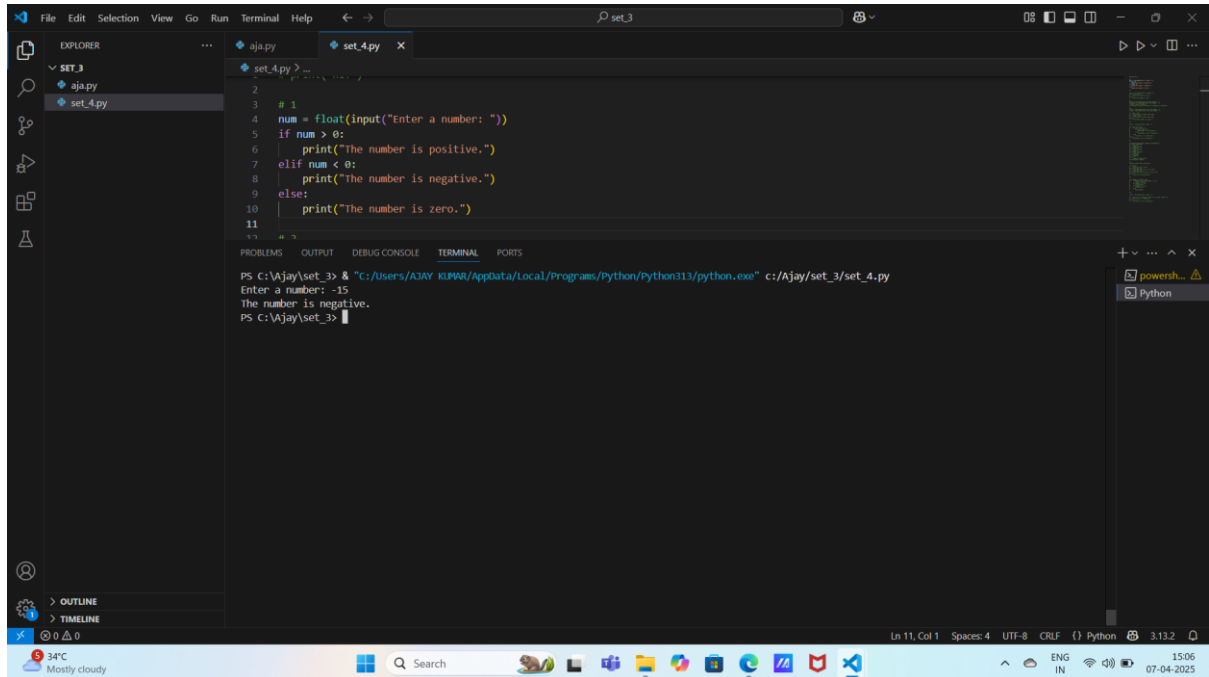


Question1



```
File Edit Selection View Go Run Terminal Help
set_3

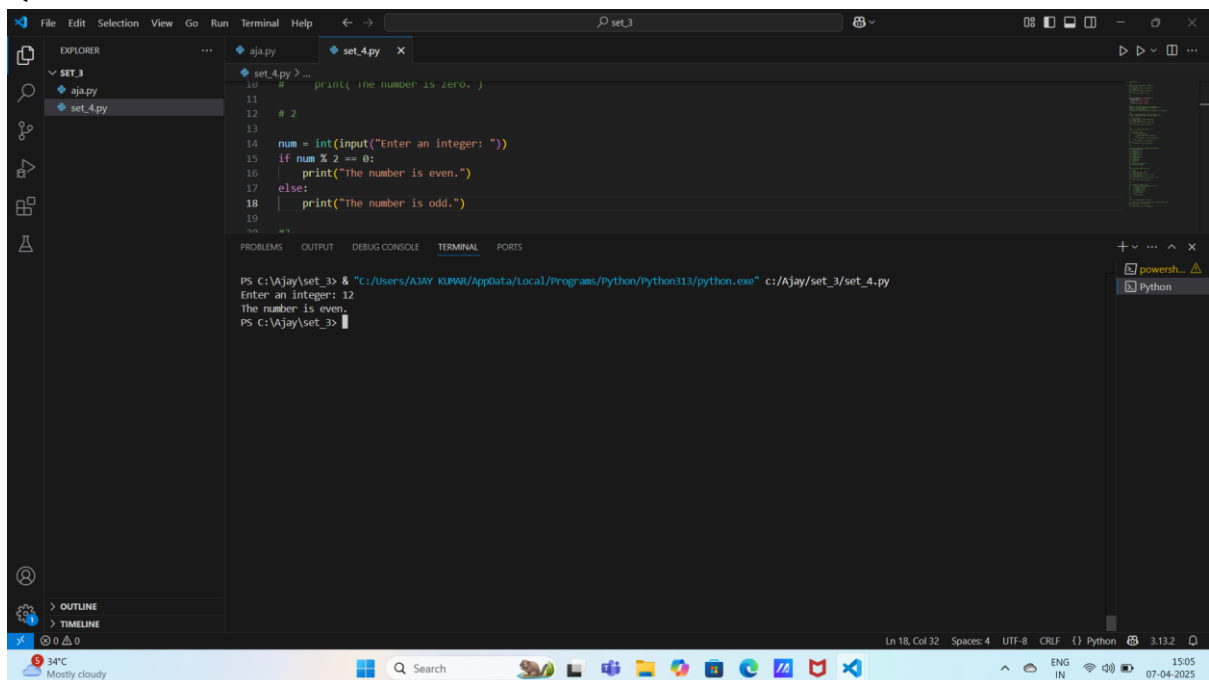
EXPLORER
SET_3
  aja.py
  set_4.py

ajay.py
set_4.py
set_4.py > ...
2
3 # 1
4 num = float(input("Enter a number: "))
5 if num > 0:
6     print("The number is positive.")
7 elif num < 0:
8     print("The number is negative.")
9 else:
10    print("The number is zero.")
11

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

PS C:\Ajay\set_3> & "C:/Users/AJAY KUMAR/AppData/Local/Programs/Python/Python313/python.exe" c:/Ajay/set_3/set_4.py
Enter a number: -15
The number is negative.
PS C:\Ajay\set_3>
```

Question 2



```
File Edit Selection View Go Run Terminal Help
set_3

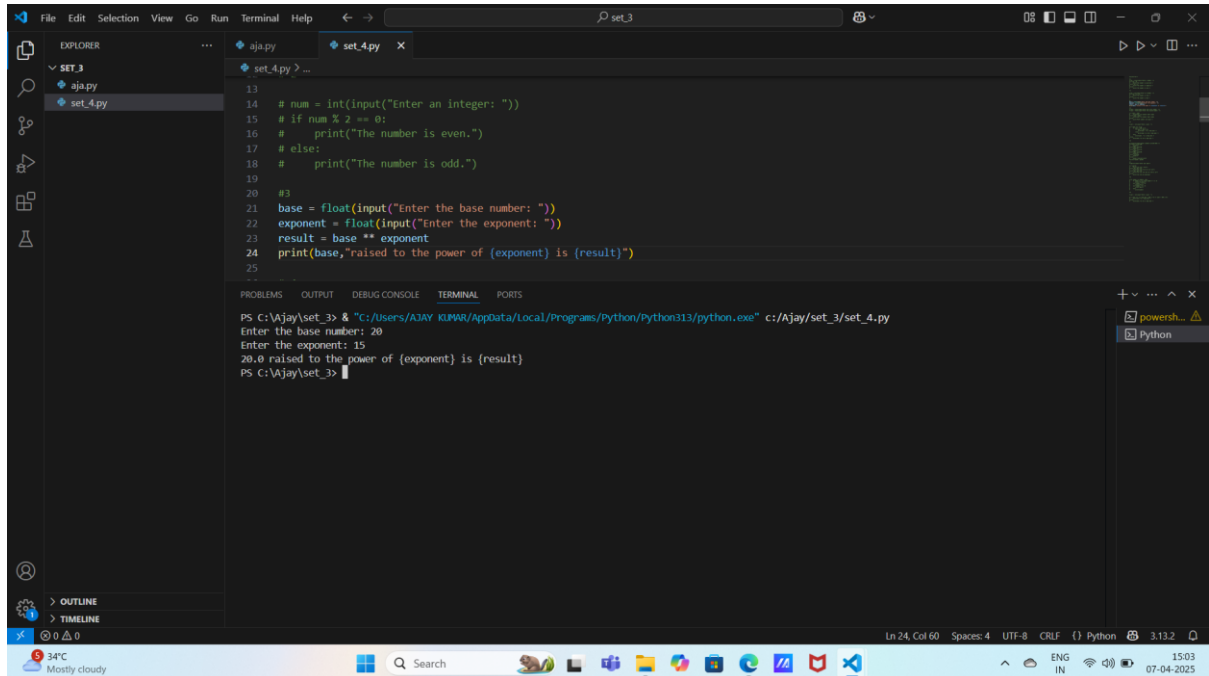
EXPLORER
SET_3
  aja.py
  set_4.py

ajay.py
set_4.py
set_4.py > ...
10 # print( the number is zero. )
11
12 # 2
13
14 num = int(input("Enter an integer: "))
15 if num % 2 == 0:
16     print("The number is even.")
17 else:
18     print("The number is odd.")
19

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

PS C:\Ajay\set_3> & "C:/Users/AJAY KUMAR/AppData/Local/Programs/Python/Python313/python.exe" c:/Ajay/set_3/set_4.py
Enter an integer: 12
The number is even.
PS C:\Ajay\set_3>
```

Question 3

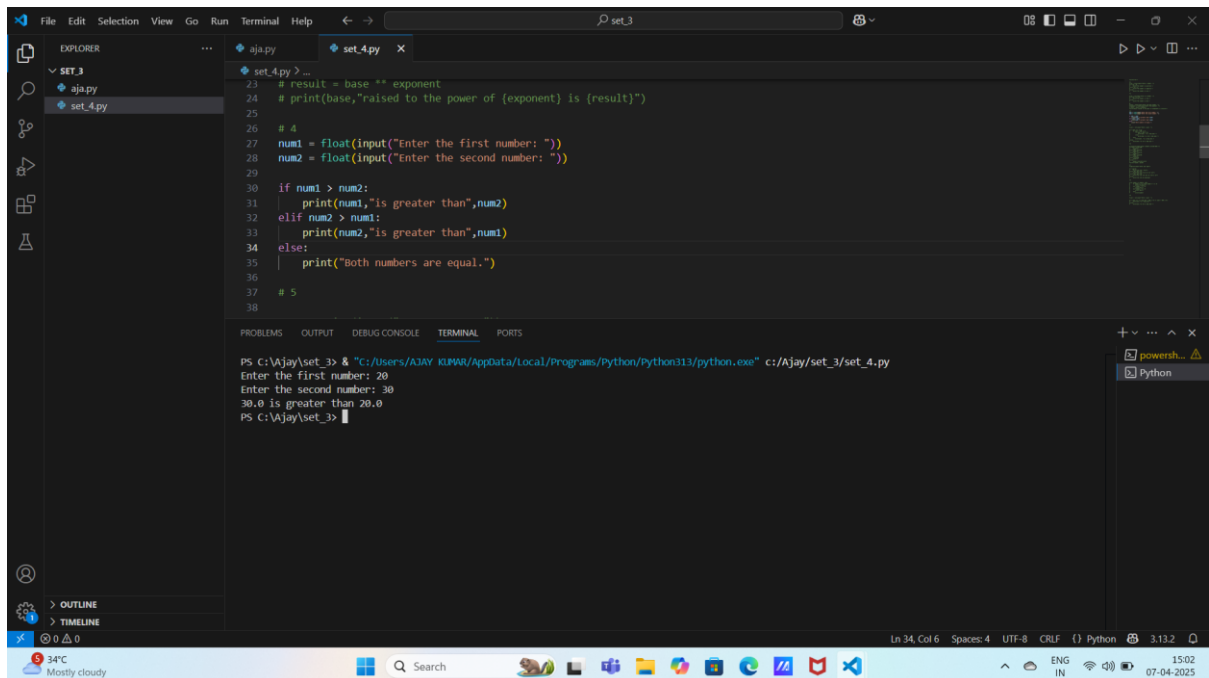


```
13
14 # num = int(input("Enter an integer: "))
15 # if num % 2 == 0:
16 #     print("The number is even.")
17 # else:
18 #     print("The number is odd.")
19
20 #3
21 base = float(input("Enter the base number: "))
22 exponent = float(input("Enter the exponent: "))
23 result = base ** exponent
24 print(base,"raised to the power of {exponent} is {result}")
25
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

PS C:\Vjay\set_3> & "C:\Users\AJAY KIMAR\AppData\Local\Programs\Python\Python313\python.exe" c:/Ajay/set_3/set_4.py
Enter the base number: 20
Enter the exponent: 15
20.0 raised to the power of {exponent} is {result}
PS C:\Vjay\set_3>

Question 4

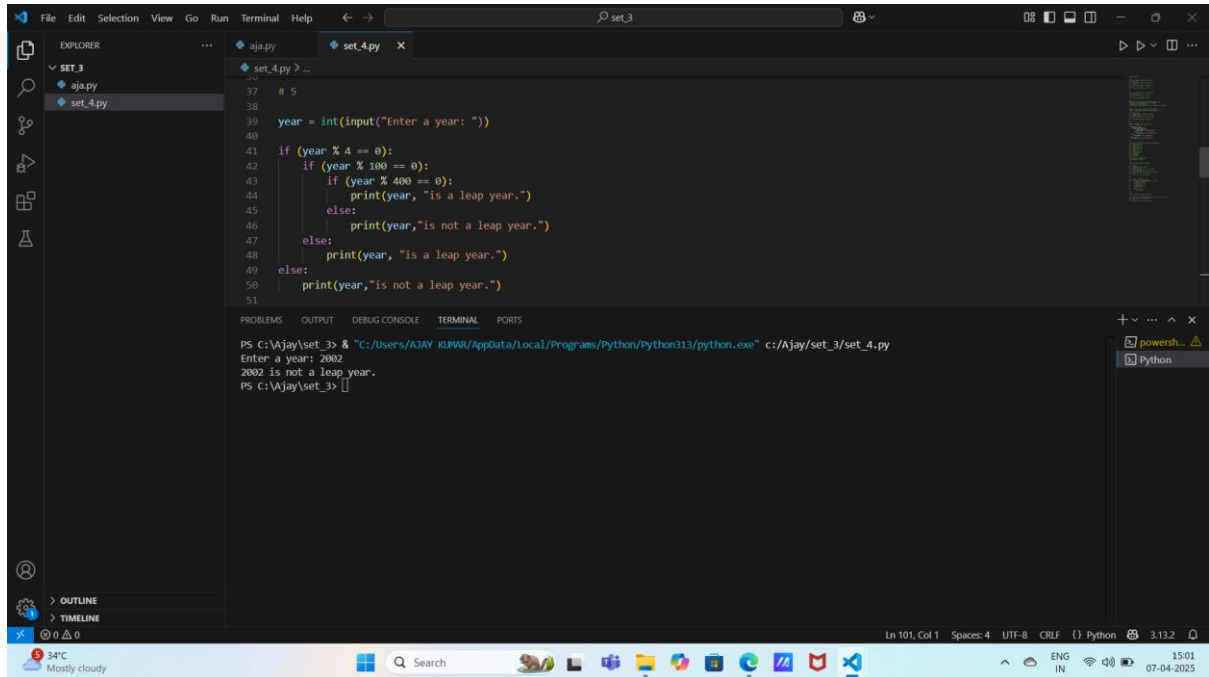


```
23 # result = base ** exponent
24 # print(base,"raised to the power of {exponent} is {result}")
25
26 # 4
27 num1 = float(input("Enter the first number: "))
28 num2 = float(input("Enter the second number: "))
29
30 if num1 > num2:
31     print(num1,"is greater than",num2)
32 elif num2 > num1:
33     print(num2,"is greater than",num1)
34 else:
35     print("Both numbers are equal.")
36
37 # 5
38
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

PS C:\Vjay\set_3> & "C:\Users\AJAY KIMAR\AppData\Local\Programs\Python\Python313\python.exe" c:/Ajay/set_3/set_4.py
Enter the first number: 20
Enter the second number: 30
30.0 is greater than 20.0
PS C:\Vjay\set_3>

Question 5



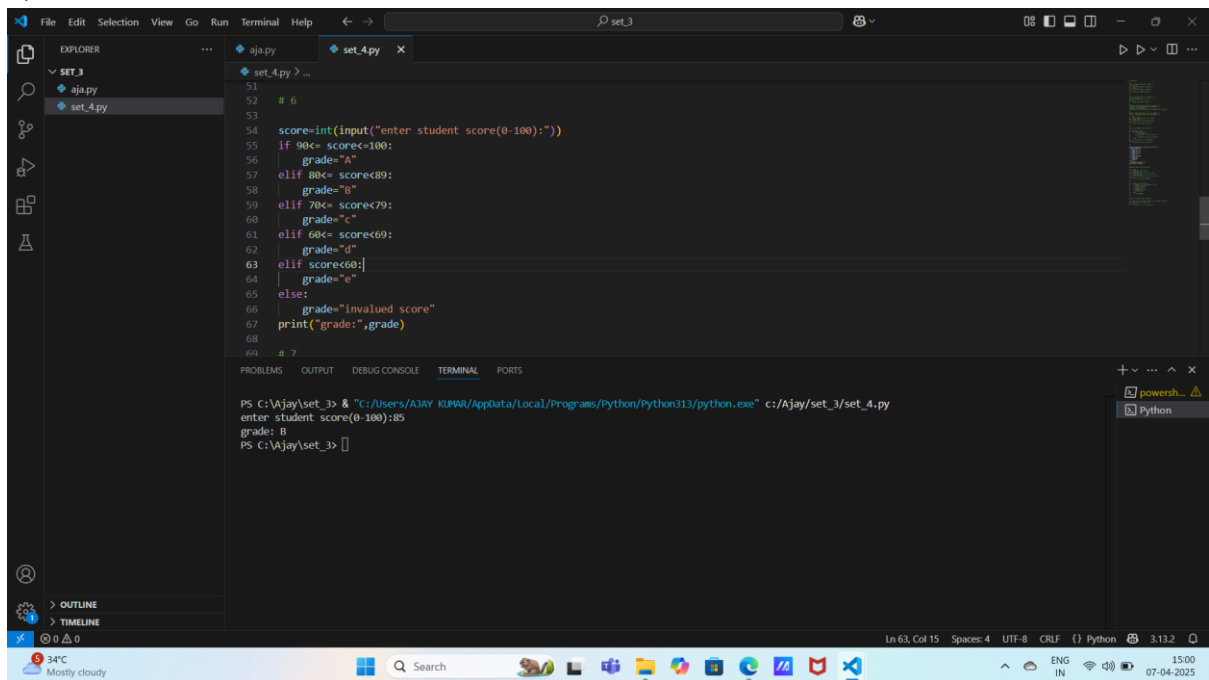
The screenshot shows the Visual Studio Code editor with a file explorer on the left containing 'SET_3', 'ajay.py', and 'set_4.py'. The main editor window displays the code for 'set_4.py', which is a Python script to check if a year is a leap year. The code uses nested if-else statements to handle the leap year logic. The terminal at the bottom shows the command to run the script, the input '2002', and the output '2002 is not a leap year.'.

```
37 # 5
38
39 year = int(input("Enter a year: "))
40
41 if (year % 4 == 0):
42     if (year % 100 == 0):
43         if (year % 400 == 0):
44             print(year, "is a leap year.")
45         else:
46             print(year, "is not a leap year.")
47     else:
48         print(year, "is a leap year.")
49 else:
50     print(year, "is not a leap year.")
51
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

PS C:\Ajay\set_3> & "C:/Users/AJAY KUMAR/AppData/Local/Programs/Python/Python313/python.exe" c:/Ajay/set_3/set_4.py
Enter a year: 2002
2002 is not a leap year.
PS C:\Ajay\set_3> []

Question 6



The screenshot shows the Visual Studio Code editor with a file explorer on the left containing 'SET_3', 'ajay.py', and 'set_4.py'. The main editor window displays the code for 'set_4.py', which is a Python script to calculate a student's grade based on their score. The code uses a series of if-elif-else statements to determine the grade. The terminal at the bottom shows the command to run the script, the input '85', and the output 'grade: B'.

```
51
52 # 6
53
54 score=int(input("enter student score(0-100):"))
55 if 90<= score<=100:
56     grade="A"
57 elif 80<= score<89:
58     grade="B"
59 elif 70<= score<79:
60     grade="C"
61 elif 60<= score<69:
62     grade="D"
63 elif score<60:
64     grade="E"
65 else:
66     grade="Invalid score"
67 print("grade:",grade)
68
69 # 7

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

PS C:\Ajay\set_3> & "C:/Users/AJAY KUMAR/AppData/Local/Programs/Python/Python313/python.exe" c:/Ajay/set_3/set_4.py
enter student score(0-100):85
grade: B
PS C:\Ajay\set_3> []

Question 7

The screenshot shows a Visual Studio Code editor with a Python file named `set_4.py` open. The code is a simple conditional logic script that takes an age as input and prints different messages based on the age range. The terminal shows the script being executed with the input `22`, resulting in the output `you can vote but not rent a car`.

```
68
69 # 7
70 age=int(input("enter your age"))
71
72 if age<16:
73     print("you can't drive")
74 elif 16<= age <=17:
75     print("you can drive but not vote")
76 elif 18<= age <=24:
77     print("you can vote but not rent a car")
78 else:
79     print("you can do anything")
80
81 # R
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
PS C:\Ajay\set_3> & "C:/Users/AJAY KUMAR/AppData/Local/Programs/Python/Python313/python.exe" c:/Ajay/set_3/set_4.py
enter your age22
you can vote but not rent a car
PS C:\Ajay\set_3>
```

Question 8

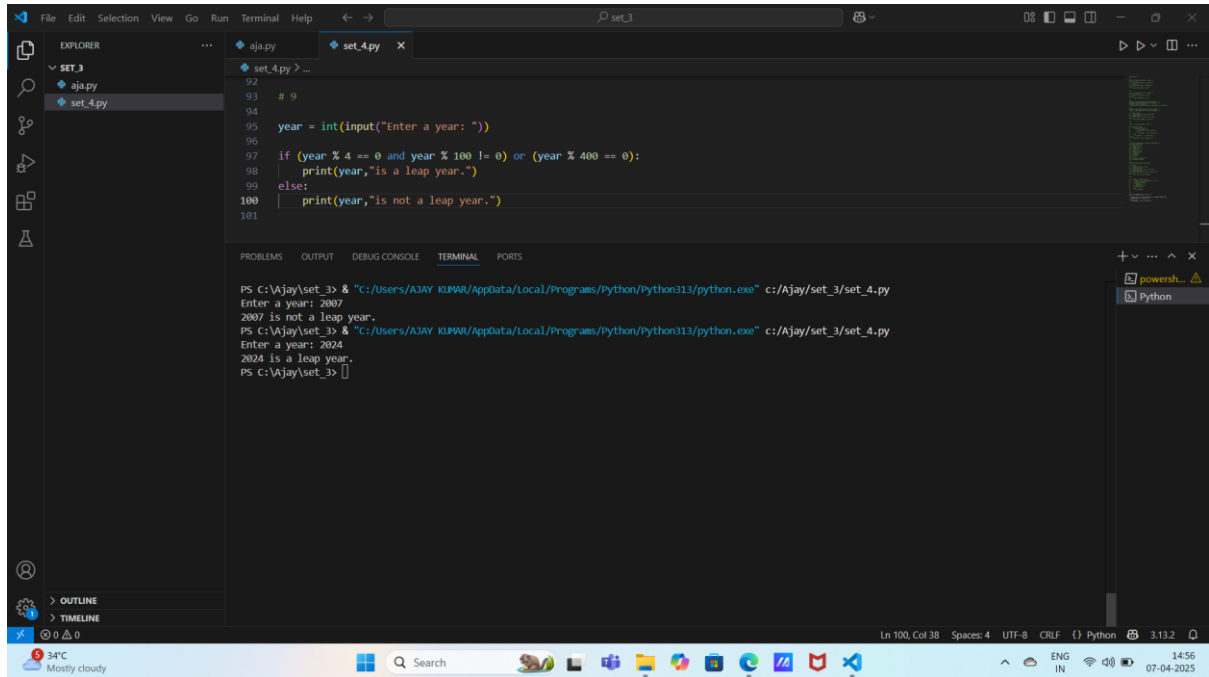
The screenshot shows a Visual Studio Code editor with a Python file named `set_4.py` open. The code is a FizzBuzz program that iterates through numbers from 1 to 101 and prints 'Fizz', 'Buzz', 'FizzBuzz', or the number itself based on its divisibility by 3 and 5. The terminal shows the output of the program, which is a sequence of numbers and 'Fizz'/'Buzz' strings.

```
81 # 8
82
83 for number in range(1, 101):
84     if number % 3 == 0 and number % 5 == 0:
85         print("FizzBuzz")
86     elif number % 3 == 0:
87         print("Fizz")
88     elif number % 5 == 0:
89         print("Buzz")
90     else:
91         print(number)
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
PS C:\Ajay\set_3> & "C:/Users/AJAY KUMAR/AppData/Local/Programs/Python/Python313/python.exe" c:/Ajay/set_3/set_4.py
1
2
Fizz
4
Buzz
Fizz
7
8
Fizz
Buzz
11
Fizz
13
14
FizzBuzz
16
17
Fizz
19
Buzz
Fizz
22
23
Fizz
```

Question 9



The screenshot shows a Visual Studio Code editor window with a Python file named `set_4.py` open. The file contains a script to check if a year is a leap year. The terminal at the bottom shows the command to run the script and the resulting output for the years 2007 and 2024.

```
92
93 # 0
94
95 year = int(input("Enter a year: "))
96
97 if (year % 4 == 0 and year % 100 != 0) or (year % 400 == 0):
98     print(year,"is a leap year.")
99 else:
100     print(year,"is not a leap year.")
101
```

Terminal Output:

```
PS C:\Ajay\set_3> & "C:/Users/AJAY KUMAR/AppData/Local/Programs/Python/Python313/python.exe" c:/Ajay/set_3/set_4.py
Enter a year: 2007
2007 is not a leap year.
PS C:\Ajay\set_3> & "C:/Users/AJAY KUMAR/AppData/Local/Programs/Python/Python313/python.exe" c:/Ajay/set_3/set_4.py
Enter a year: 2024
2024 is a leap year.
PS C:\Ajay\set_3>
```

VS Code status bar: Ln 100, Col 38, Spaces: 4, UTF-8, CRLF, Python 3.13.2

Windows taskbar: 34°C Mostly cloudy, Search, 14:56, 07-04-2025