

ASSIGNMENT - 4.3

2303A51355

Batch-10

Task-1

Prompt: Give me a program to zero-short prompt ng to check a leap year, and give instructions without providing examples

code :

```
def is_leap_year(year):    if (year % 4 == 0 and year % 100 !=
0) or (year % 400 == 0):
```

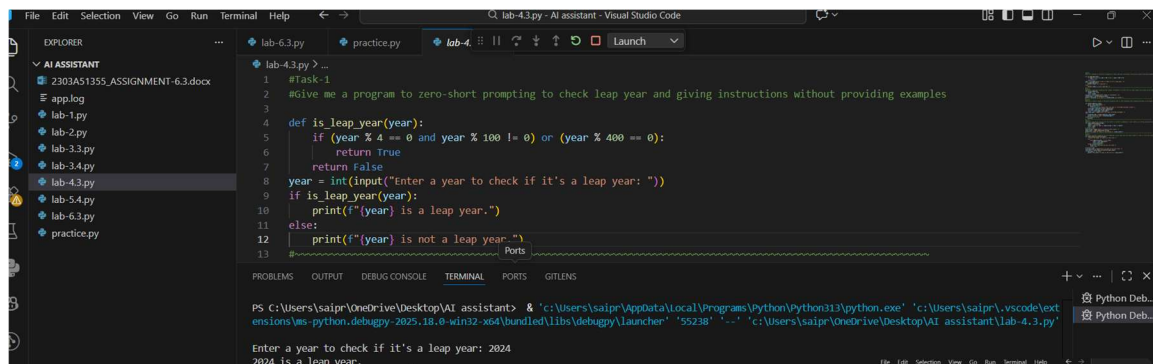
```
    return True    return False    year = int(input("Enter a
year to check if it's a leap year: ")) if is_leap_year(year):
```

```
    print(f"{year} is a leap year.")
```

else:

```
    print(f"{year} is not a leap year.")    Output
```

:



```
1 #Task-1
2 #Give me a program to zero-short prompting to check leap year and giving instructions without providing examples
3
4 def is_leap_year(year):
5     if (year % 4 == 0 and year % 100 != 0) or (year % 400 == 0):
6         return True
7     return False
8
9 year = int(input("Enter a year to check if it's a leap year: "))
10 if is_leap_year(year):
11     print(f"{year} is a leap year.")
12 else:
13     print(f"{year} is not a leap year.")
```

PS C:\Users\sajpr\OneDrive\Desktop\VAI assistant> & 'c:\Users\sajpr\AppData\Local\Programs\Python\Python313\python.exe' 'c:\Users\sajpr\.vscode\extensions\ms-python.debugpy-2025.18.0-win32-x64\bundled\libs\debugpy\launcher' '55238' '-' 'c:\Users\sajpr\OneDrive\Desktop\VAI assistant\lab-4.3.py'

Enter a year to check if it's a leap year: 2024
2024 is a leap year.

Code Analysis:

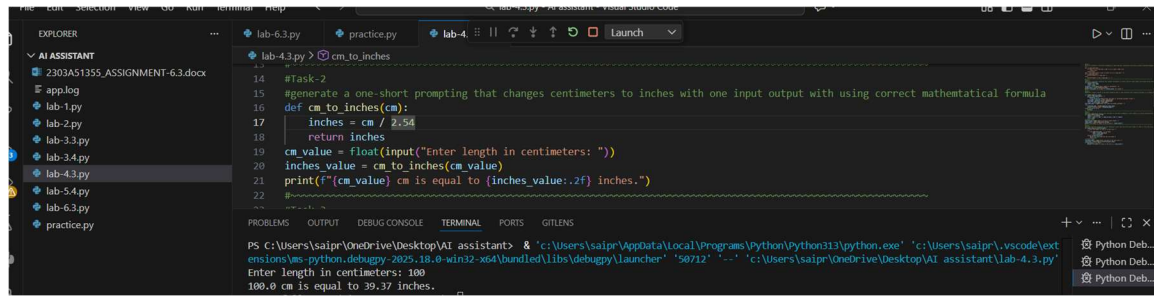
- ☐ This program determines whether a given year is a leap year using a function.
- ☐ The function applies standard leap year rules and returns True or False.
- ☐ The user inputs a year, which is checked by the function.
- ☐ The result is printed as either a leap year or not.

Task-2

Prompt: generate a one-short prompt that changes centimetres to inches with one input and output using the correct mathematical formula

Code :

```
def cm_to_inches(cm):  
    inches = cm / 2.54  
    return inches  
cm_value = float(input("Enter length  
in centimeters: "))  
inches_value =  
cm_to_inches(cm_value)  
print(f"{cm_value} cm  
is equal to {inches_value:.2f} inches.")
```

 Output :

Code Analysis:

- ☐ This program converts a length from centimetres to inches using the correct mathematical formula.
- ☐ A function performs the conversion by dividing the value by 2.54.
- ☐ The user enters a value in centimetres, which is passed to the function.
- ☐ The converted result is displayed in inches.

Task-3

Prompt: generate a python program is few-short prompt ng that is name forma ng like accep ng fullname as firstname,lastname.

Code :

```
def format_name(full_name):  
    parts = full_name.split(',')  
    if len(parts) != 2:  
        raise ValueError("Please enter the name in 'Firstname,Lastname' format.")  
    first_name = parts[0].strip().capitalize()
```

```

    last_name = parts[1].strip().capitalize()    return f'{first_name}
{last_name}'    full_name_input  =  input("Enter  full  name
(Firstname,Lastname): ")

try:

    formated_name = format_name(full_name_input)    print(f"Forma
ed    Name: {formated_name}")

except ValueError as e:

    print(e)    Output:

```

The screenshot shows a Visual Studio Code window with a file explorer on the left containing files like '2303AS1355_ASSIGNMENT-6.3.docx', 'app.log', and several 'lab-*.py' files. The main editor displays a Python script 'lab-4.3.py' with the following code:

```

23 #Task-3
24 #generate a python program is few-short prompting that is name formatting like accepting fullname as firstname,lastname.
25
26 def format_name(full_name):
27     parts = full_name.split(',')
28     if len(parts) != 2:
29         raise ValueError("Please enter the name in 'Firstname,Lastname' format.")
30     first_name = parts[0].strip().capitalize()
31     last_name = parts[1].strip().capitalize()
32     return f'{first_name} {last_name}'
33 full_name_input = input("Enter full name (Firstname,Lastname): ")
34
35 try:
36     formatted_name = format_name(full_name_input)
37     print(f"Formatted Name: {formatted_name}")
38 except ValueError as e:
39     print(e)
40

```

The bottom panel shows the terminal output:

```

PS C:\Users\sai\r\OneDrive\Desktop\AI assistant> & 'c:\Users\sai\r\AppData\Local\Programs\Python\Python313\python.exe' 'c:\Users\sai\r\.vscode\extensions\ms-python.debugpy-2025.18.0-win32-x64\bundle\libs\debugpy\launcher' '59725' '-' 'c:\Users\sai\r\OneDrive\Desktop\AI assistant\lab-4.3.py'
Enter full name (Firstname,Lastname): yamsani,sai
Formatted Name: Yamsani Sai

```

Code Analysis :

- ☐ This program formats a full name entered as first name and last name.
- ☐ The input is split and validated to ensure the correct format.
- ☐ Each part of the name is cleaned and capitalised. ☐ The formated full name is then displayed.

Task-4

Prompt: [generate a comparative analysis for zero-shot vs few-shot prompting to count vowels in a string using a function:](#)

Code :

```

def count_vowels(input_string):

    vowels = 'aeiouAEIOU'    count = sum(1 for char in input_string if
char in vowels)    return count

# Example usage

```

```
test_string = input("Enter a string to count vowels: ")
vowel_count = count_vowels(test_string)
print(f"The number of vowels in the string is: {vowel_count}")
```

Output:

```

lab-4.3.py > count_vowels
38 print(e)
39
40 #Task-4
41 #generate comparative analysis for zero-shot vs few-shot prompting to count vowels in a string using function
42 def count_vowels(input_string):
43     vowels = 'aeiouAEIOU'
44     count = sum(1 for char in input_string if char in vowels)
45     return count
46 # Example usage
47 test_string = input("Enter a string to count vowels: ")
48 vowel_count = count_vowels(test_string)
49 print(f"The number of vowels in the string is: {vowel_count}")
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51 #Task-5
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```
# Example usage
file_path_input = input("Enter the
path of the text file: ")
line_count =
count_lines_in_file(file_path_input)
if line_count is
not None:

    print(f"The number of lines in the file is: {line_count}")
```

Output :

The screenshot shows the Visual Studio Code interface. The Explorer panel on the left lists files in a project named 'AI ASSISTANT', including '2303AS1355_ASSIGNMENT-6.3.docx' and several Python files. The main editor window displays a Python script with the following code:

```
29
30
31 #Task 5
32 #generate few short prompting for file handling to give read text file, count number of lines in file, line count should be returned by f
33 def count_lines_in_file(file_path):
34     """Count the number of lines in a text file."""
35     try:
36         with open(file_path, 'r') as file:
37             lines = file.readlines()
38             return len(lines)
39     except FileNotFoundError:
40         print("The specified file was not found.")
41         return None
42 # Example usage
43 file_path_input = input("Enter the path of the text file: ")
44 line_count = count_lines_in_file(file_path_input)
45 if line_count is not None:
46     print(f"The number of lines in the file is: {line_count}")
```

The bottom panel shows the TERMINAL output:

```
PS C:\Users\saipr\OneDrive\Desktop\AI assistant> & 'c:\Users\saipr\AppData\Local\Programs\Python\Python313\python.exe' 'c:\Users\saipr\.vscode\extensions\ms-python.debugpy-2025.18.0-win32-x64\bundle\libs\debugpy\launcher' '61942' '-' 'c:\Users\saipr\OneDrive\Desktop\AI assistant\lab-4.3.py'
Enter the path of the text file: lab-4.3.py
The number of lines in the file is: 66
```

Code Analysis :

- ☐ This program reads a text file and counts the number of lines.
- ☐ A function opens the file safely and calculates the line count.
- ☐ Error handling is used if the file does not exist.
- ☐ The final line count is returned and displayed.