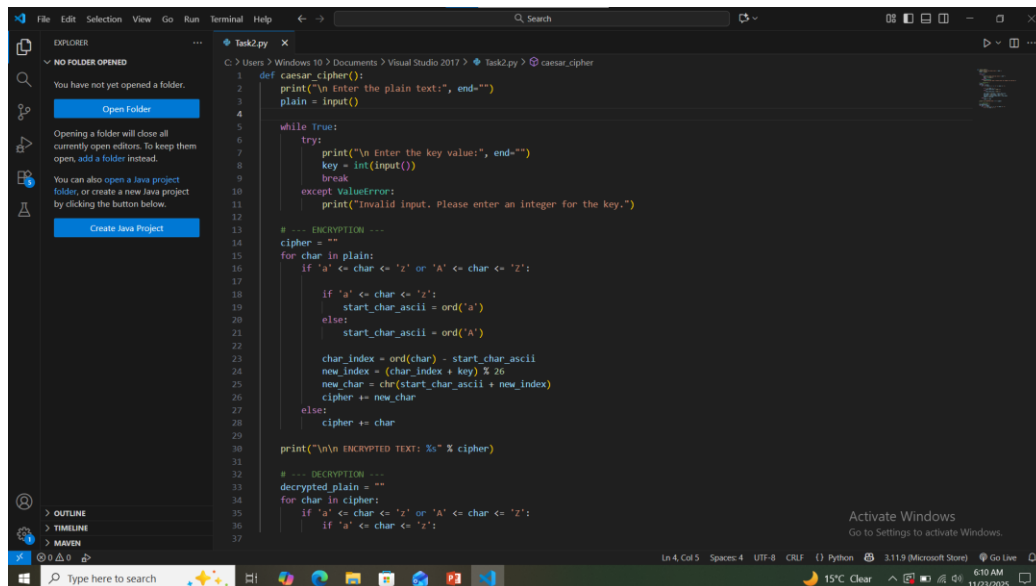


Coding in Python:



The screenshot shows the Visual Studio Code interface with a Python file named 'Task2.py' open. The code implements a Caesar cipher for encryption and decryption. The Explorer panel on the left shows 'NO FOLDER OPENED' with buttons to 'Open Folder' and 'Create Java Project'. The main editor area contains the following Python code:

```
1 def caesar_cipher():
2     print("\n Enter the plain text:", end="")
3     plain = input()
4
5
6
7
8
9
10
11
12
13 # --- ENCRYPTION ---
14 cipher = ""
15 for char in plain:
16     if 'a' <= char <= 'z' or 'A' <= char <= 'Z':
17
18         if 'a' <= char <= 'z':
19             start_char_ascii = ord('a')
20         else:
21             start_char_ascii = ord('A')
22
23         char_index = ord(char) - start_char_ascii
24         new_index = (char_index + key) % 26
25         new_char = chr(start_char_ascii + new_index)
26         cipher += new_char
27     else:
28         cipher += char
29
30 print("\n\n ENCRYPTED TEXT: %s" % cipher)
31
32 # --- DECRYPTION ---
33 decrypted_plain = ""
34 for char in cipher:
35     if 'a' <= char <= 'z' or 'A' <= char <= 'Z':
36         if 'a' <= char <= 'z':
37             start_char_ascii = ord('a')
```

The status bar at the bottom indicates 'Ln 4, Col 5', 'Spaces: 4', 'UTF-8', 'CRLF', 'Python', and '2.11.9 (Microsoft Store)'. The system tray shows the date and time as 11/23/2023, 6:10 AM.

- For writing the code in python, python extension should be installed in your system.
- We are writing the code in VS code.
- Firstly, we will make a folder in our system.
- Then we make a file in that folder and type .py at its end.
- Then will start typing the code in python language.

```
File Edit Selection View Go Run Terminal Help
Task2.py
C:\Users\Windows 10\Documents\Visual Studio 2017> Task2.py
def caesar_cipher():
    print("\n Enter the plain text:", end="")
    plain = input()

    while True:
        try:
            print("\n Enter the key value:", end="")
            key = int(input())
            break
        except ValueError:
            print("Invalid input. Please enter an integer for the key.")

    # --- ENCRYPTION ---
    cipher = ""
    for char in plain:
        if 'a' <= char <= 'z' or 'A' <= char <= 'Z':
            if 'a' <= char <= 'z':
                start_char_ascii = ord('a')
            else:
                start_char_ascii = ord('A')

            char_index = ord(char) - start_char_ascii
            new_index = (char_index + key) % 26
            new_char = chr(start_char_ascii + new_index)
            cipher += new_char
        else:
            cipher += char

    print("\n Encrypted text: ", cipher)

if __name__ == '__main__':
    caesar_cipher()
```

```
PS C:\Users\Windows 10\Documents\Visual Studio 2017> cd "C:\Users\Windows 10\Documents\Visual Studio 2017" & "C:\Users\Windows 10\AppData\Local\Microsoft\WindowsApps\python.11.exe" "C:\Users\Windows 10\Documents\Visual Studio 2017\Task2.py"
```

- After writing the code, we have to run the code for output.
- For output, click the RUN icon.
- Then click the RUN WITHOUT DEBUGGING.
- The code will run and give our desired output.