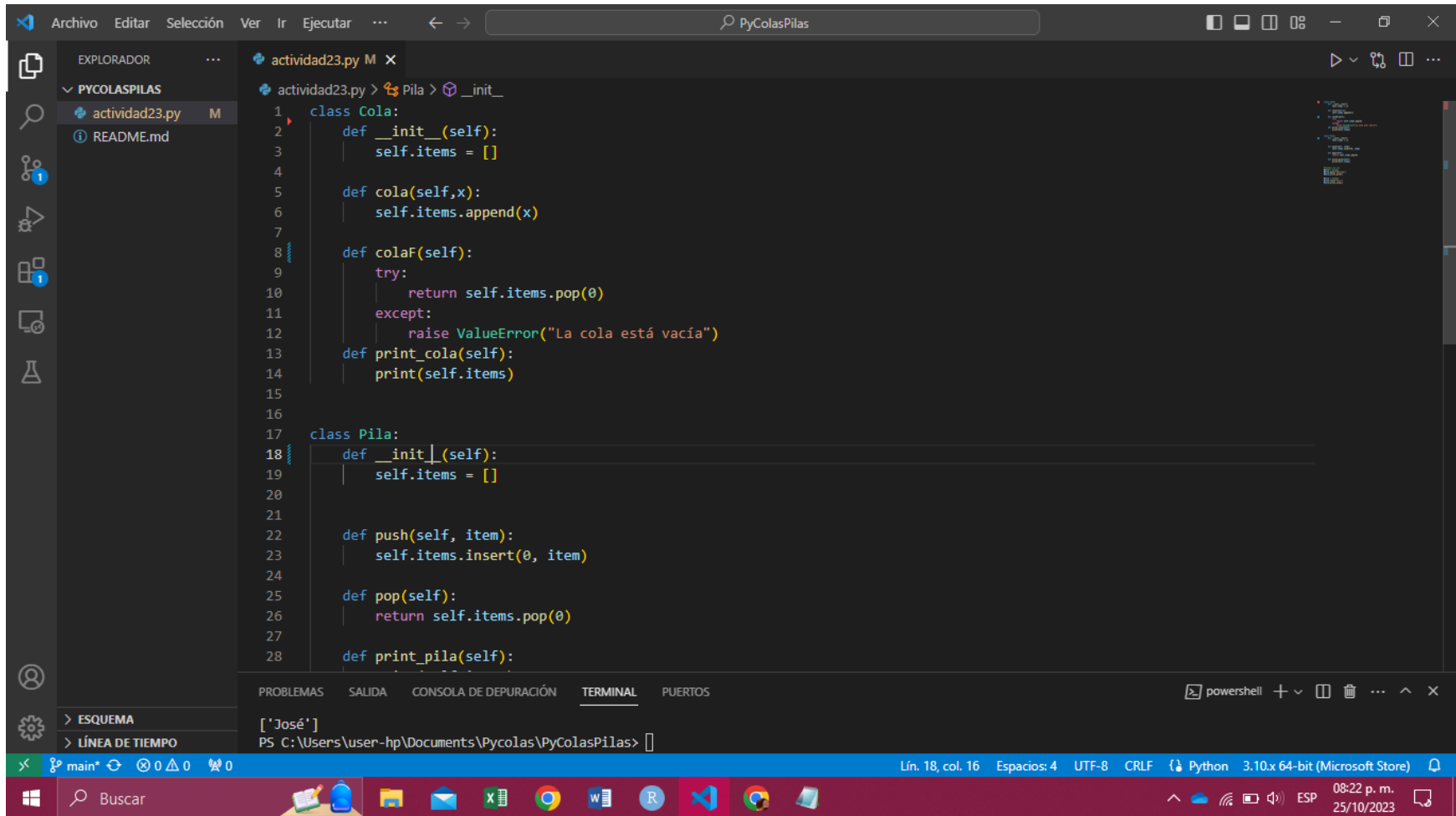


Código.



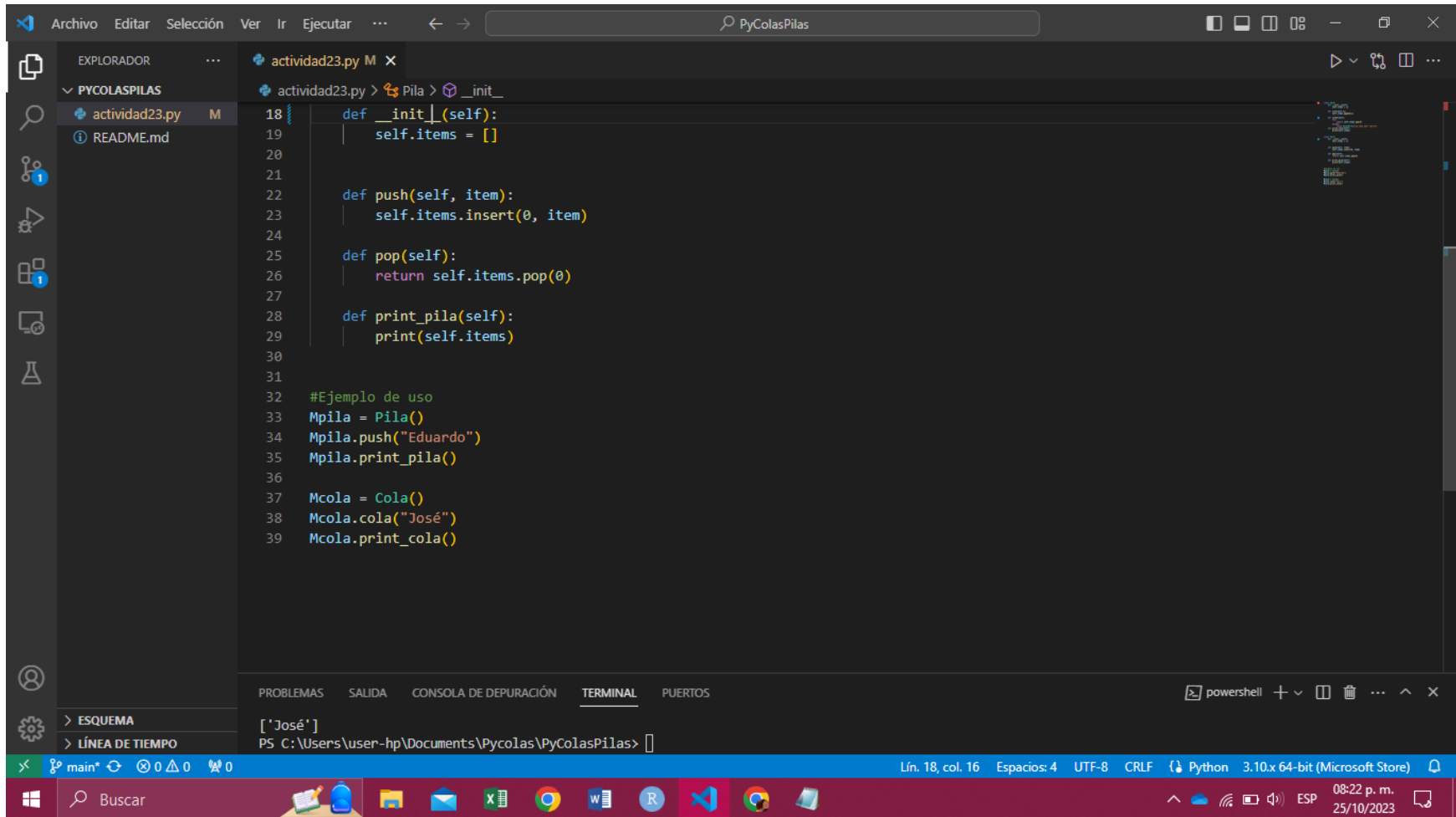
```
1 class Cola:
2     def __init__(self):
3         self.items = []
4
5     def cola(self,x):
6         self.items.append(x)
7
8     def colaF(self):
9         try:
10             return self.items.pop(0)
11         except:
12             raise ValueError("La cola está vacía")
13
14     def printCola(self):
15         print(self.items)
16
17 class Pila:
18     def __init__(self):
19         self.items = []
20
21
22     def push(self, item):
23         self.items.insert(0, item)
24
25     def pop(self):
26         return self.items.pop(0)
27
28     def print_pila(self):
```

main* 0 0 0 0

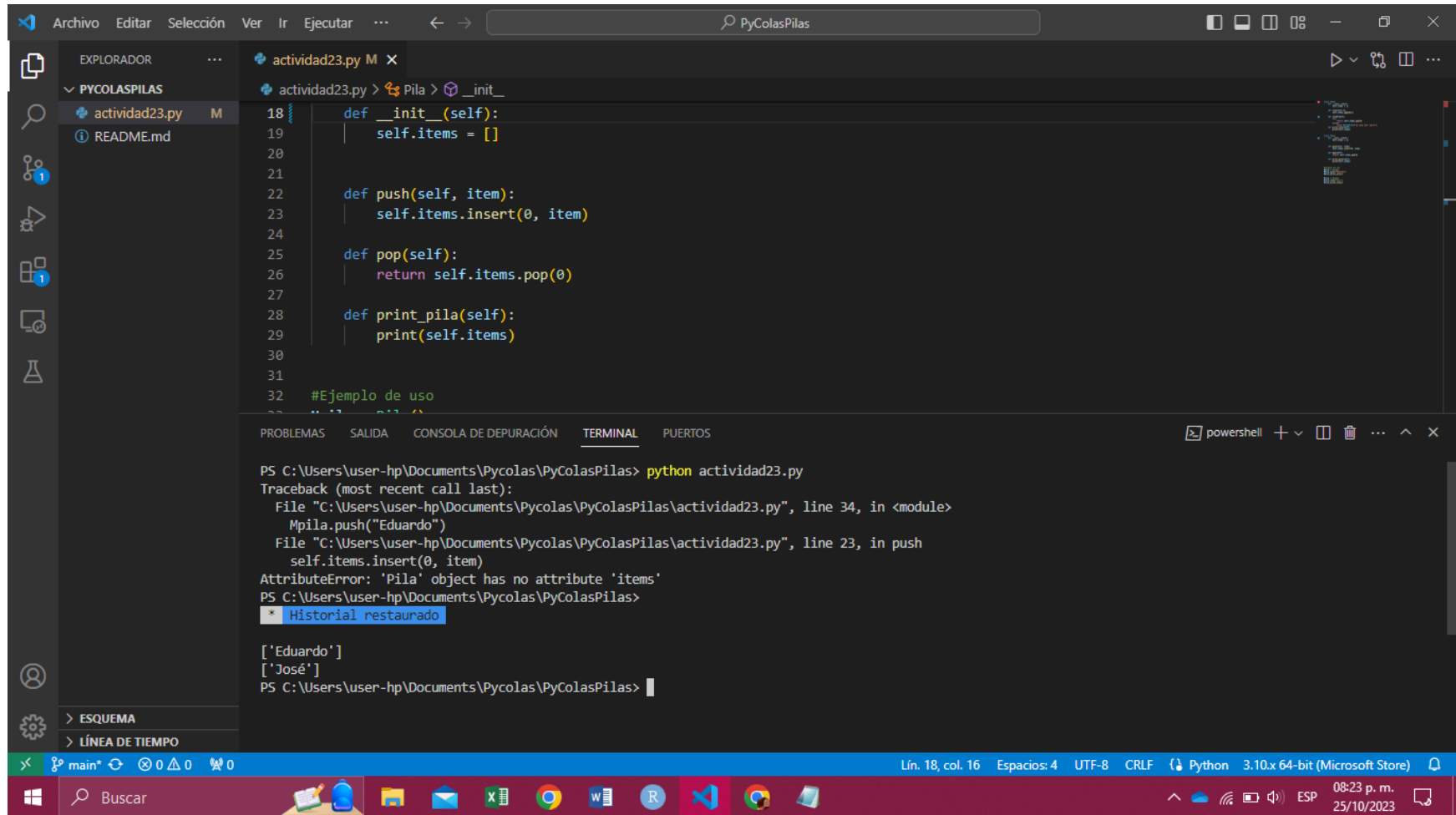
Lín. 18, col. 16 Espacios: 4 UTF-8 CRLF Python 3.10.x 64-bit (Microsoft Store)

Buscar

08:22 p. m. 25/10/2023



Ejecución.



The screenshot shows the Visual Studio Code interface with a Python file named `actividad23.py` open. The file contains a class `Pila` with methods `__init__`, `push`, `pop`, and `print_pila`. The `__init__` method initializes `self.items = []`. The `push` method inserts an item at the beginning of the list. The `pop` method removes and returns the first item. The `print_pila` method prints the current state of the stack. A comment at the bottom indicates an example of usage.

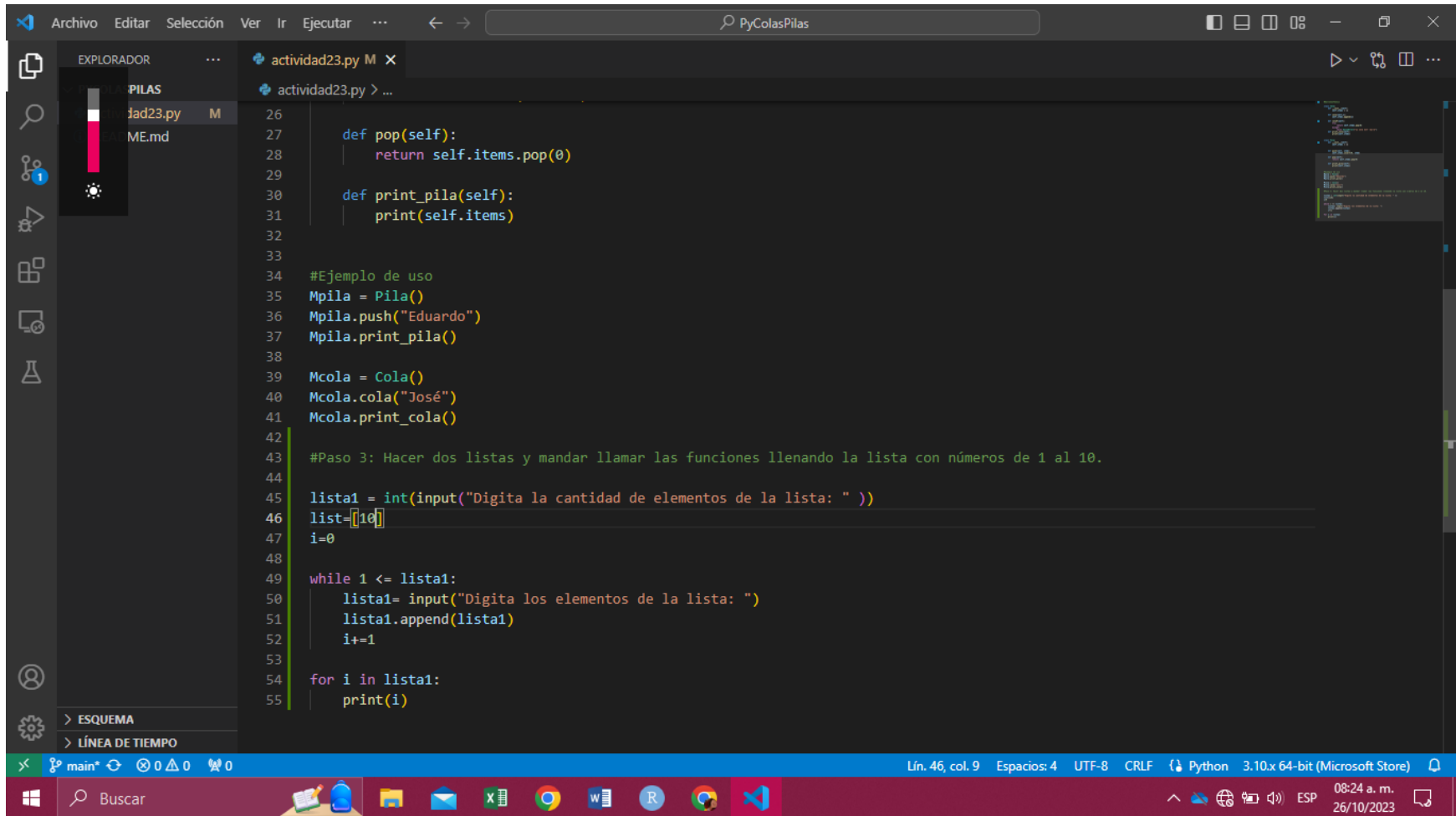
```
18 def __init__(self):
19     self.items = []
20
21
22 def push(self, item):
23     self.items.insert(0, item)
24
25 def pop(self):
26     return self.items.pop(0)
27
28 def print_pila(self):
29     print(self.items)
30
31
32 #Ejemplo de uso
```

The terminal window shows the execution of the script using `python actividad23.py`. It displays a `Traceback` error: `AttributeError: 'Pila' object has no attribute 'items'`. The error occurs in the `push` method at line 23. The terminal also shows the output of the `print_pila` method, which prints `['Eduardo']` and `['José']`.

```
PS C:\Users\user-hp\Documents\Pycolas\PyColasPilas> python actividad23.py
Traceback (most recent call last):
  File "C:\Users\user-hp\Documents\Pycolas\PyColasPilas\actividad23.py", line 34, in <module>
    Mpila.push("Eduardo")
  File "C:\Users\user-hp\Documents\Pycolas\PyColasPilas\actividad23.py", line 23, in push
    self.items.insert(0, item)
AttributeError: 'Pila' object has no attribute 'items'
PS C:\Users\user-hp\Documents\Pycolas\PyColasPilas>
* Historial restaurado

['Eduardo']
['José']
PS C:\Users\user-hp\Documents\Pycolas\PyColasPilas>
```

Lista:

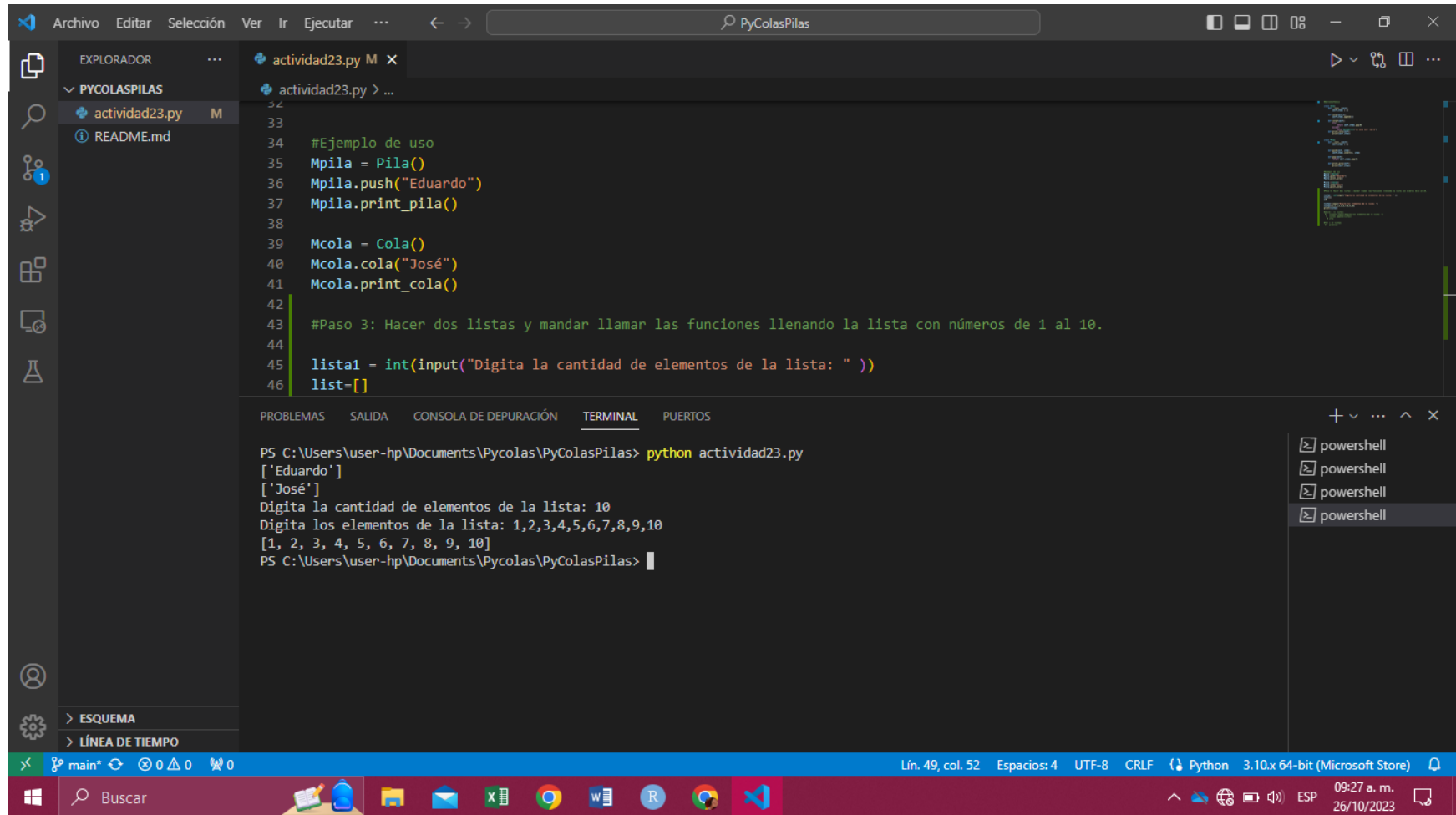


The image shows a Visual Studio Code editor window with a Python file named 'actividad23.py'. The code implements a stack (Pila) and a queue (Cola) using lists. The stack has 'push' and 'pop' methods, and the queue has a 'cola' method. The script includes a main loop where the user can create a stack or a queue and perform operations. The current state shows the user has entered 10 for the stack size and is entering elements.

```
26
27     def pop(self):
28         return self.items.pop(0)
29
30     def print_pila(self):
31         print(self.items)
32
33
34 #Ejemplo de uso
35 Mpila = Pila()
36 Mpila.push("Eduardo")
37 Mpila.print_pila()
38
39 Mcola = Cola()
40 Mcola.cola("José")
41 Mcola.printCola()
42
43 #Paso 3: Hacer dos listas y mandar llamar las funciones llenando la lista con números de 1 al 10.
44
45 lista1 = int(input("Digita la cantidad de elementos de la lista: "))
46 list=[10]
47 i=0
48
49 while 1 <= lista1:
50     lista1= input("Digita los elementos de la lista: ")
51     lista1.append(lista1)
52     i+=1
53
54 for i in lista1:
55     print(i)
```

The status bar at the bottom indicates the file is 'main', the encoding is 'UTF-8', and the interpreter is 'Python 3.10.x 64-bit (Microsoft Store)'. The system tray shows the date and time as 08:24 a. m. on 26/10/2023.

Ejecución:



The screenshot shows the Visual Studio Code interface with a Python file named `actividad23.py` open. The file contains code for a stack and queue implementation. The terminal at the bottom shows the execution of the script, which prompts the user for the number of elements and then for the elements themselves.

```
33
34 #Ejemplo de uso
35 Mpila = Pila()
36 Mpila.push("Eduardo")
37 Mpila.print_pila()
38
39 Mcola = Cola()
40 Mcola.cola("José")
41 Mcola.printCola()
42
43 #Paso 3: Hacer dos listas y mandar llamar las funciones llenando la lista con números de 1 al 10.
44
45 lista1 = int(input("Digita la cantidad de elementos de la lista: "))
46 list=[]
```

Terminal output:

```
PS C:\Users\user-hp\Documents\Pycolas\PyColasPilas> python actividad23.py
['Eduardo']
['José']
Digita la cantidad de elementos de la lista: 10
Digita los elementos de la lista: 1,2,3,4,5,6,7,8,9,10
[1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
PS C:\Users\user-hp\Documents\Pycolas\PyColasPilas>
```