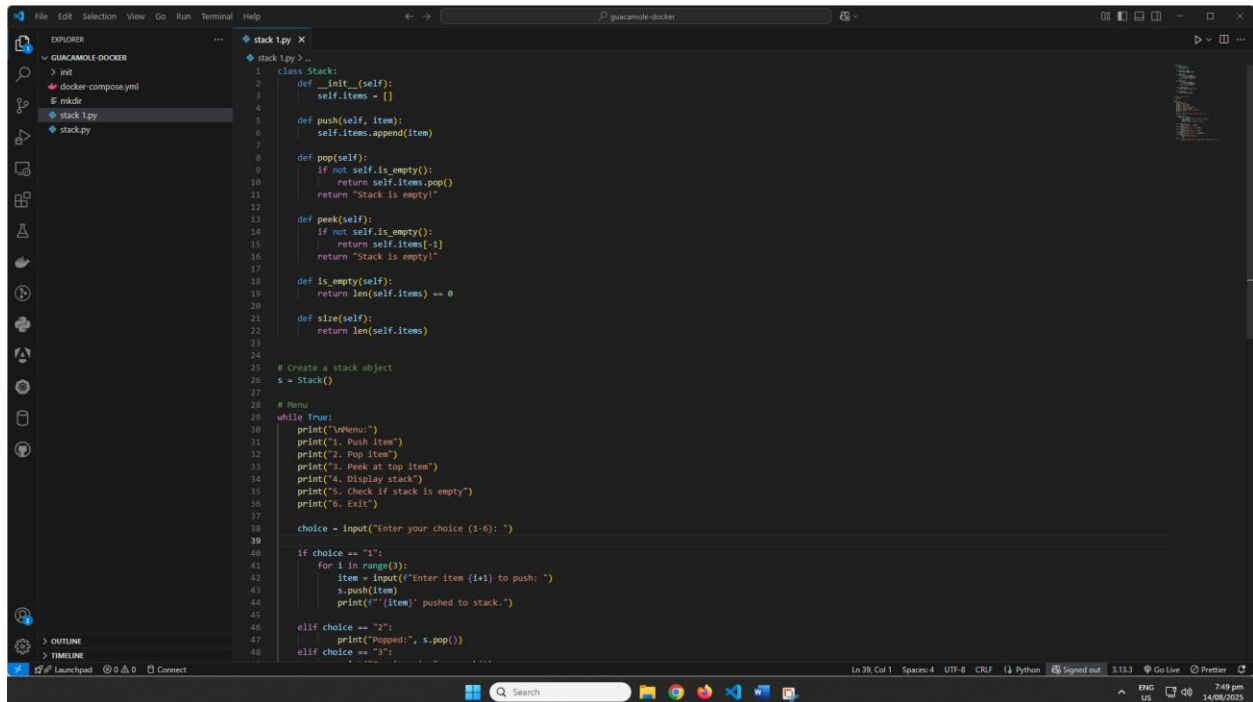


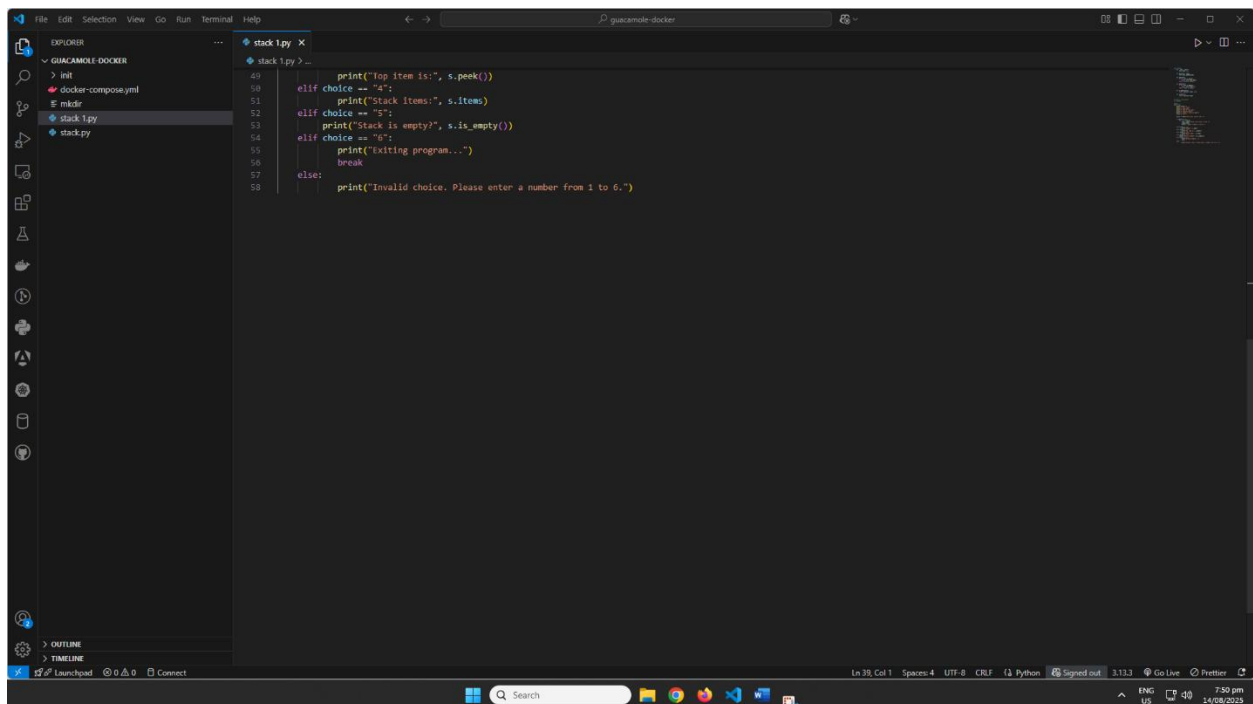
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The screenshot shows a Visual Studio Code editor window with a file explorer on the left. The file explorer shows a project named 'GUACAMOLE-DOCKER' with files 'init', 'docker-compose.yml', 'main.py', 'stack1.py', and 'stack.py'. The 'stack1.py' file is open in the editor. The code defines a 'Stack' class with methods for push, pop, peek, is_empty, and size. It also includes a main menu loop that prompts the user to enter a choice (1-6) to perform various stack operations.

```
1 class Stack:
2     def __init__(self):
3         self.items = []
4
5     def push(self, item):
6         self.items.append(item)
7
8     def pop(self):
9         if not self.is_empty():
10            return self.items.pop()
11        return "Stack is empty!"
12
13    def peek(self):
14        if not self.is_empty():
15            return self.items[-1]
16        return "Stack is empty!"
17
18    def is_empty(self):
19        return len(self.items) == 0
20
21    def size(self):
22        return len(self.items)
23
24
25 # Create a stack object
26 s = Stack()
27
28 # Menu
29 while True:
30     print("\nMenu:")
31     print("1. Push item")
32     print("2. Pop item")
33     print("3. Peek at top item")
34     print("4. Display stack")
35     print("5. Check if stack is empty")
36     print("6. Exit")
37
38     choice = input("Enter your choice (1-6): ")
39
40     if choice == "1":
41         for i in range(3):
42             item = input("Enter item [1-1] to push: ")
43             s.push(item)
44             print(f"{item} pushed to stack.")
45
46     elif choice == "2":
47         print("Popped:", s.pop())
48     elif choice == "3":
49         print("Top item is:", s.peek())
50     elif choice == "4":
51         print("Stack items:", s.items)
52     elif choice == "5":
53         print("Stack is empty?", s.is_empty())
54     elif choice == "6":
55         print("Exiting program...")
56         break
57     else:
58         print("Invalid choice. Please enter a number from 1 to 6.")
```



The screenshot shows the same Visual Studio Code editor window, but the code is now showing the continuation of the main menu loop. The code prompts the user to enter a choice (1-6) and performs various stack operations based on the choice. The code is now showing the continuation of the main menu loop, which prompts the user to enter a choice (1-6) and performs various stack operations based on the choice.

```
49         print("Top item is:", s.peek())
50     elif choice == "4":
51         print("Stack items:", s.items)
52     elif choice == "5":
53         print("Stack is empty?", s.is_empty())
54     elif choice == "6":
55         print("Exiting program...")
56         break
57     else:
58         print("Invalid choice. Please enter a number from 1 to 6.")
```

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS DEVDS Python + - [ ] ... ^ x

Menu:
1. Push item
2. Pop item
3. Peek at top item
4. Display stack
5. Check if stack is empty
6. Exit
Enter your choice (1-6): 1
Enter item 1 to push: Apple
'Apple' pushed to stack.
Enter item 2 to push: Banana
'Banana' pushed to stack.
Enter item 3 to push: Cherry
'Cherry' pushed to stack.

Menu:
1. Push item
2. Pop item
3. Peek at top item
4. Display stack
5. Check if stack is empty
6. Exit
Enter your choice (1-6): 2
Popped: Cherry

Menu:
1. Push item
2. Pop item
3. Peek at top item
4. Display stack
5. Check if stack is empty
6. Exit
Enter your choice (1-6): 3
Top item is: Banana

Menu:
1. Push item
2. Pop item
3. Peek at top item
4. Display stack
5. Check if stack is empty
6. Exit
Enter your choice (1-6): 4
Stack items: ['Apple', 'Banana']

Menu:
1. Push item
2. Pop item
3. Peek at top item
4. Display stack
5. Check if stack is empty
6. Exit
Enter your choice (1-6): 5
Stack is empty? False

Menu:
1. Push item
2. Pop item
3. Peek at top item
4. Display stack
5. Check if stack is empty
6. Exit
Enter your choice (1-6): 6
Exiting program...
PS D:\guacamole-docker>
```