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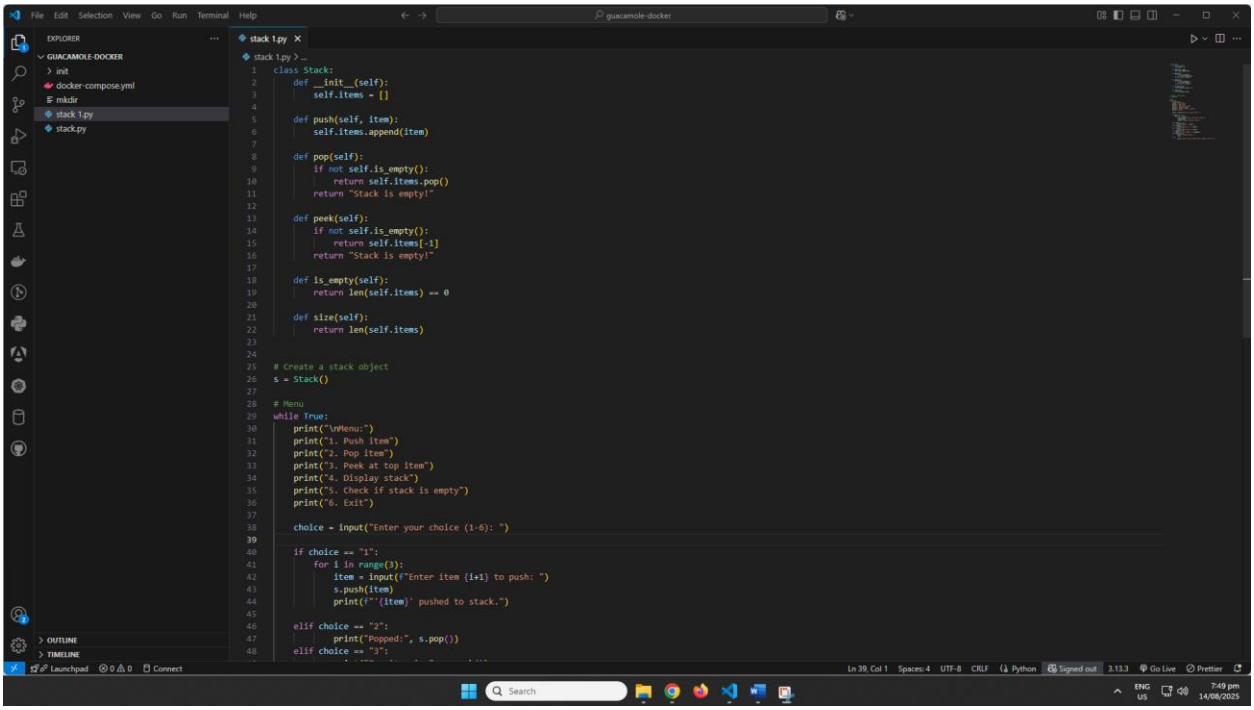
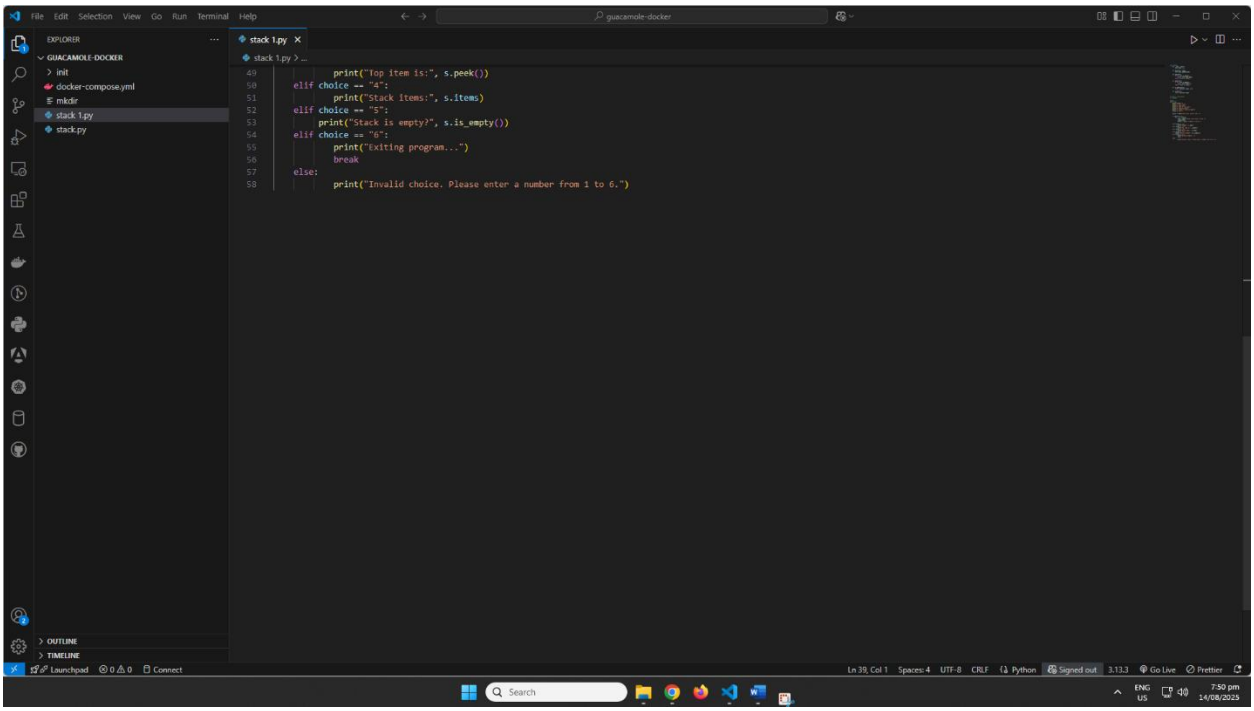
WD – 201



```python
class Stack:
    def __init__(self):
        self.items = []

    def push(self, item):
        self.items.append(item)

    def pop(self):
        if not self.is_empty():
            return self.items.pop()
        return "Stack is empty!"

    def peek(self):
        if not self.is_empty():
            return self.items[-1]
        return "Stack is empty!"

    def is_empty(self):
        return len(self.items) == 0

    def size(self):
        return len(self.items)


# Create a stack object
s = Stack()

# Menu
while True:
    print("\nMenu:")
    print("1. Push item")
    print("2. Pop item")
    print("3. Peek at top item")
    print("4. Display stack")
    print("5. Check if stack is empty")
    print("6. Exit")

    choice = input("Enter your choice (1-6): ")

    if choice == "1":
        for i in range(3):
            item = input(f"Enter item {i+1} to push: ")
            s.push(item)
            print(f"'{item}' pushed to stack.")

    elif choice == "2":
            print("Popped:", s.pop())
    elif choice == "3":
```



```python
            print("Top item is:", s.peek())
    elif choice == "4":
            print("Stack items:", s.items)
    elif choice == "5":
        print("Stack is empty?", s.is_empty())
    elif choice == "6":
            print("Exiting program...")
            break
    else:
            print("Invalid choice. Please enter a number from 1 to 6.")
```


PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS
DEVDB
Python
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>