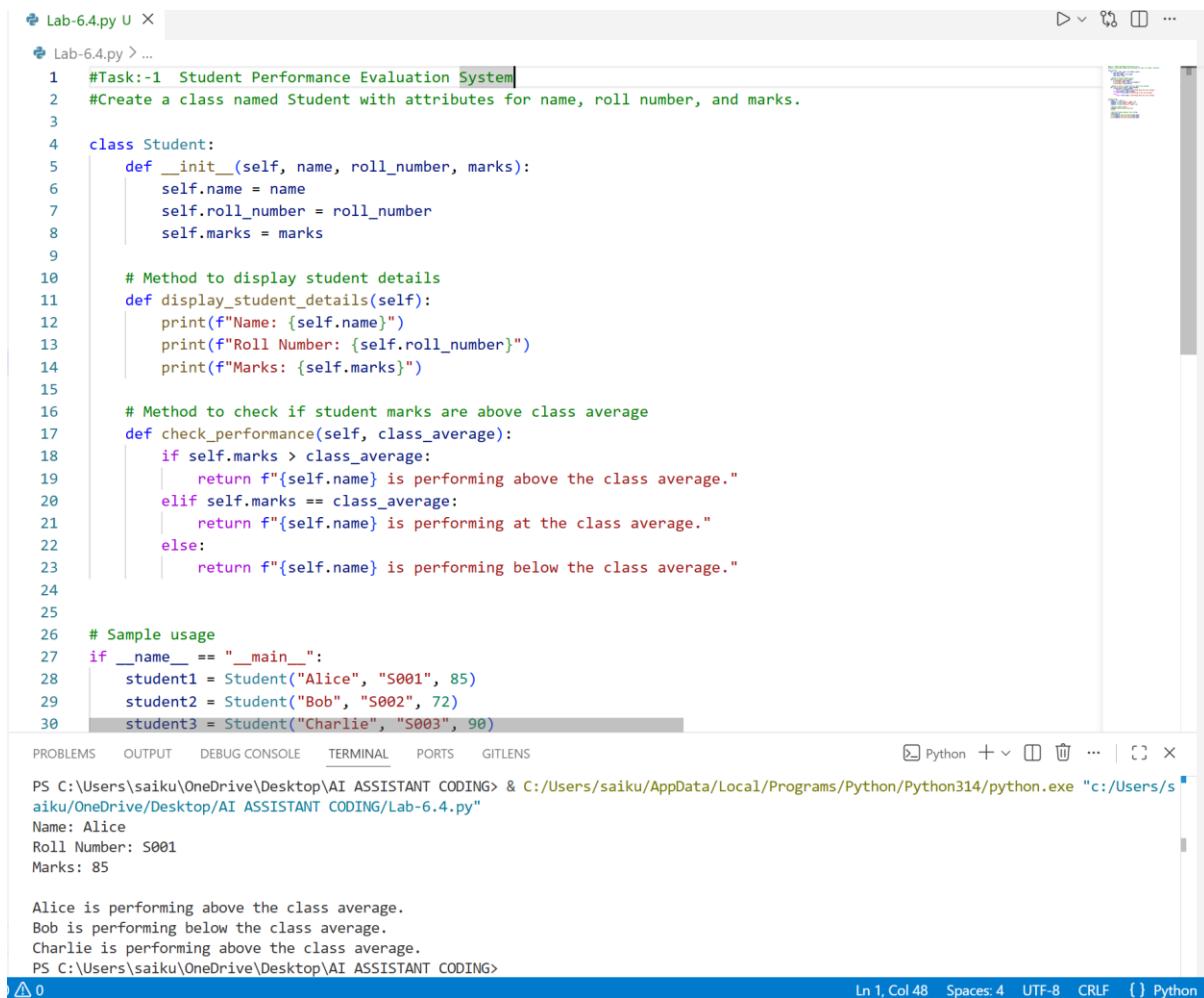


AI ASSISTED CODING

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Task 1: Student Performance Evaluation System.



```
Lab-6.4.py U X
Lab-6.4.py > ...
1 #Task:-1 Student Performance Evaluation System
2 #Create a class named Student with attributes for name, roll number, and marks.
3
4 class Student:
5     def __init__(self, name, roll_number, marks):
6         self.name = name
7         self.roll_number = roll_number
8         self.marks = marks
9
10    # Method to display student details
11    def display_student_details(self):
12        print(f"Name: {self.name}")
13        print(f"Roll Number: {self.roll_number}")
14        print(f"Marks: {self.marks}")
15
16    # Method to check if student marks are above class average
17    def check_performance(self, class_average):
18        if self.marks > class_average:
19            return f"{self.name} is performing above the class average."
20        elif self.marks == class_average:
21            return f"{self.name} is performing at the class average."
22        else:
23            return f"{self.name} is performing below the class average."
24
25
26    # Sample usage
27    if __name__ == "__main__":
28        student1 = Student("Alice", "S001", 85)
29        student2 = Student("Bob", "S002", 72)
30        student3 = Student("Charlie", "S003", 90)

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS GITLENS
PS C:\Users\saiku\OneDrive\Desktop\AI ASSISTANT CODING & C:/Users/saiku/AppData/Local/Programs/Python/Python314/python.exe "c:/Users/saiku/OneDrive/Desktop/AI ASSISTANT CODING/Lab-6.4.py"
Name: Alice
Roll Number: S001
Marks: 85

Alice is performing above the class average.
Bob is performing below the class average.
Charlie is performing above the class average.
PS C:\Users\saiku\OneDrive\Desktop\AI ASSISTANT CODING>
Ln 1, Col 48 Spaces: 4 UTF-8 CRLF {} Python
```

Task 2: Data Processing in a Monitoring System.

```
Lab-6.4.py U X ▷ ⚙  
Lab-6.4.py > ...  
1 #Task 2: Data Processing in a Monitoring System.  
2 # Sensor readings data  
3 sensor_readings = [12, 7, 24, 15, 36, 9, 48, 3, 18, 22]  
4  
5 # Iterate over sensor readings and process even numbers  
6 # For each reading, identify even numbers using modulus operator,  
7 # calculate their square, and print in format "Reading: X, Square: Y"  
8 for reading in sensor_readings:  
9     if reading % 2 == 0:  
10         square = reading ** 2  
11         print(f"Reading: {reading}, Square: {square}")
```

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS GITLENS  Python +    ...
```

PS C:\Users\saiku\OneDrive\Desktop\AI ASSISTANT CODING> & C:/Users/saiku/AppData/Local/Programs/Python/Python314/python.exe /Users/saiku/OneDrive/Desktop/AI ASSISTANT CODING/Lab-6.4.py"

Reading: 12, Square: 144
Reading: 24, Square: 576
Reading: 36, Square: 1296
Reading: 48, Square: 2304
Reading: 18, Square: 324
Reading: 22, Square: 484

PS C:\Users\saiku\OneDrive\Desktop\AI ASSISTANT CODING>

Task 3: Banking Transaction Simulation.

```
Lab-6.4.py U X
Lab-6.4.py > ...
1 #Task 3: Banking Transaction Simulation
2 #create a structure of a Python class named BankAccount with attributes:account_holder and balance.
3 class BankAccount:
4     def __init__(self, account_holder, balance=0):
5         self.account_holder = account_holder
6         self.balance = balance
7
8     def deposit(self, amount):
9         if amount > 0:
10             self.balance += amount
11             print(f"Deposit successful! Current balance: ₹{self.balance}")
12         else:
13             print("Deposit amount must be greater than zero.")
14
15     def withdraw(self, amount):
16         if amount <= 0:
17             print("Withdrawal amount must be greater than zero.")
18         elif amount <= self.balance:
19             self.balance -= amount
20             print(f"Withdrawal successful! Remaining balance: ₹{self.balance}")
21         else:
22             print("Insufficient balance. Withdrawal denied.")

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS GITLENS
PS C:\Users\saiku\OneDrive\Desktop\AI ASSISTANT CODING> & C:/Users/saiku/AppData/Local/Programs/Python/Python314/python.exe "c:/Use
SISTANT CODING/Lab-6.4.py"
● Enter account holder name: sai kumar

--- Banking Menu ---
1. Deposit
2. Withdraw
3. Exit
Enter your choice: 2
Enter withdrawal amount: 20000
Insufficient balance. Withdrawal denied.

--- Banking Menu ---
1. Deposit
2. Withdraw
3. Exit
Enter your choice: 3
Thank you for using the banking system.
○ PS C:\Users\saiku\OneDrive\Desktop\AI ASSISTANT CODING>
```

Task 4: Student Scholarship Eligibility Check.

```
Lab-6.4.py X
Lab-6.4.py > ...
1  # Task 4: Student Scholarship Eligibility Check
2
3  # Initialize list of students
4  students = [
5      {"name": "Rahul", "score": 85},
6      {"name": "Anita", "score": 72},
7      {"name": "Suresh", "score": 90},
8      {"name": "Meena", "score": 78},
9      {"name": "Kiran", "score": 65}
10 ]
11
12 print("Eligible students for merit-based scholarship:")
13
14 # Iterate through the list using a while loop
15 index = 0
16 while index < len(students):
17     if students[index]["score"] > 75:
18         print(students[index]["name"])
19     index += 1
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS GITLENS

```
PS C:\Users\saiku\OneDrive\Desktop\AI ASSISTANT CODING> & C:/Users/saiku/AppData/Local/Programs/Python/Python3
SISTANT CODING/Lab-6.4.py"
Eligible students for merit-based scholarship:
Rahul
○ Suresh
Meena
PS C:\Users\saiku\OneDrive\Desktop\AI ASSISTANT CODING>
```

Task 5: Online Shopping Cart Module.

The screenshot shows a code editor interface with a Python file named 'Lab-6.4.py'. The code defines a ShoppingCart class with methods for adding and removing items from a cart. Below the code editor is a terminal window displaying the execution of the script and its interaction with the user.

```
Lab-6.4.py U X
Lab-6.4.py > ...
1 # Task 5: Online Shopping Cart Module
2
3 class ShoppingCart:
4     def __init__(self):
5         # Empty list to store cart items
6         # Each item is a dictionary: name, price, quantity
7         self.items = []
8
9     def add_item(self, name, price, quantity):
10        # Add item details to the cart
11        item = {
12            "name": name,
13            "price": price,
14            "quantity": quantity
15        }
16        self.items.append(item)
17        print(f"{name} added to cart.")
18
19    def remove_item(self, name):
20        # Remove an item from the cart by name
21        for item in self.items:
22            if item["name"].lower() == name.lower():
23                self.items.remove(item)
24                print(f"{name} removed from cart.")
25
26    def view_total(self):
27        total_price = sum(item["price"] * item["quantity"] for item in self.items)
28        print(f"Total price: {total_price}")
29
30    def view_items(self):
31        for item in self.items:
32            print(item)
33
34    def exit(self):
35        print("Thank you for shopping with us!")
36
37
38 --- Shopping Cart Menu ---
39 1. Add Item
40 2. Remove Item
41 3. View Total
42 4. Exit
43 Enter your choice: 2
44 Enter item name to remove: eggs
45 Item not found in cart.

46 --- Shopping Cart Menu ---
47 1. Add Item
48 2. Remove Item
49 3. View Total
50 4. Exit
51 Enter your choice: 4
52 Thank you for shopping with us!
53 PS C:\Users\saiku\OneDrive\Desktop\AI ASSISTANT CODING>
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS GITLENS

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