SCHOOL OF COMPUTER SCIENCE AND ARTIFICIAL INTELLIGENCE		DEPARTMENT OF COMPUTER SCIENCE ENGINEERING	
Program Name: B. Tech		**Assignment Type: Lab**	**Academic Year:**2025-2026
Course Coordinator Name		Dr. Rishabh Mittal	
Course Code	23CS002PC304	**Course Title**	AI Assisted Coding
Year/Sem	III/II	**Regulation**	R23
Date and Day of Assignment	**Week3 – Wednesday**	**batch**	**47_B**
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AssignmentNumber: 6.3

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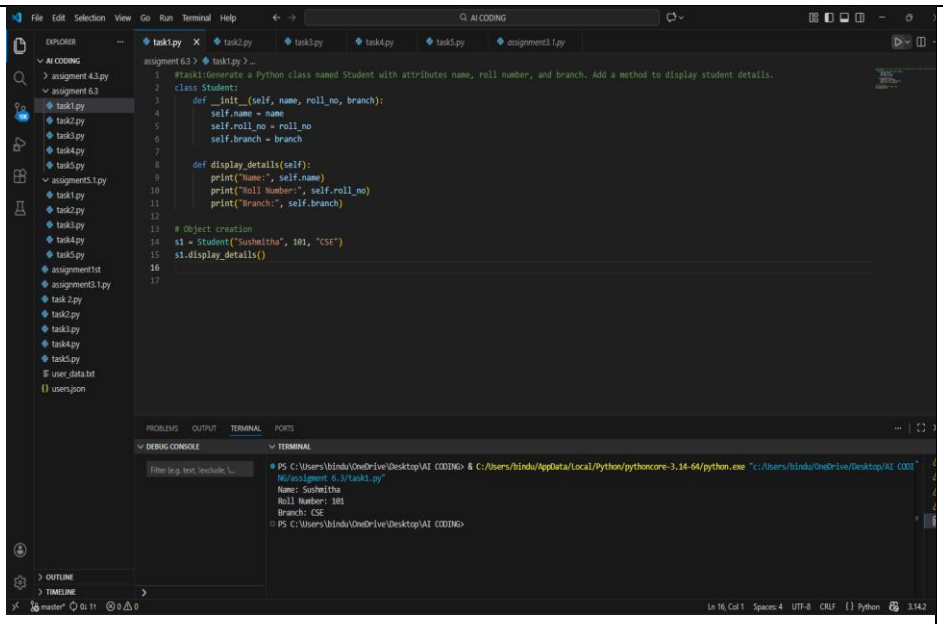
	# Lab 6: AI-Based Code Completion – Classes, Loops, and Conditionals	
1	**Task Description #1: Classes (Student Class)** **Scenario** You are developing a simple student information management module. **Task:** Create a Student class with name, roll number, and branch, and display student details. **Prompt Used** Generate a Python class named Student with attributes name, roll number, and branch. Add a method to display student details. **Sample Input:** Name = Roll Number = Branch = **Sample Output:** Name: Sushmitha Roll Number: 101 Branch: CSE **Short Explanation:** This program uses a class to store student details the constructor initializes values and the method print them neatly	Week3 - Wednesday



Task Description #2: Loops (Multiples of a Number)

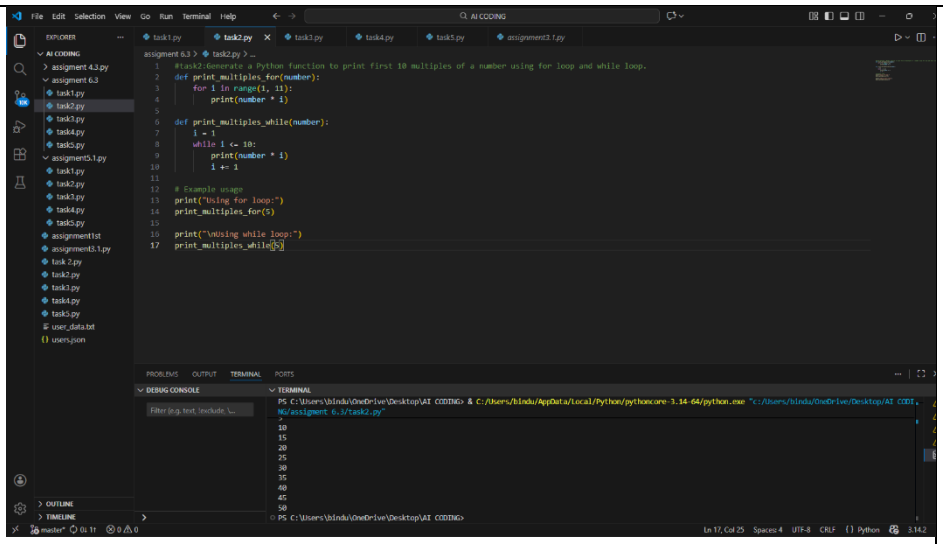
Scenario
You are writing a utility function to display multiples of a given number.

Task: Print the first 10 multiples of a given number using loops.

Prompt Used: Generate a Python function to print first 10 multiples of a number using for loop and while loop.

Sample Input:
5
Sample Output:
5
10
15
20
25
30
35
40
45
50

Short Explanation: Both loops repeat the same task.
The for loop is shorter, while the while loop gives more control over conditions.



Task Description #3: Conditional Statements (Age Classification)

Scenario
You are building a basic classification system based on age.

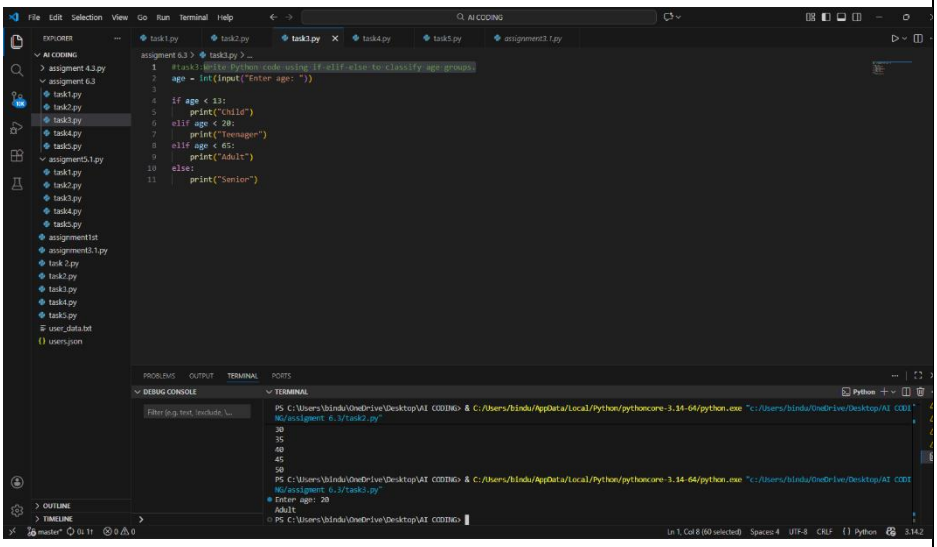
Task
Classify age into child, teenager, adult, or senior.

Prompt Used: Write Python code using if-elif-else to classify age groups.

Sample Input: 20

Sample Output: Adult

Short Explanation: The program checks age step by step using conditions and prints the correct group.



Task Description #4: For and While Loops (Sum of First n Numbers)

Scenario
You need to calculate the sum of the first n natural numbers.

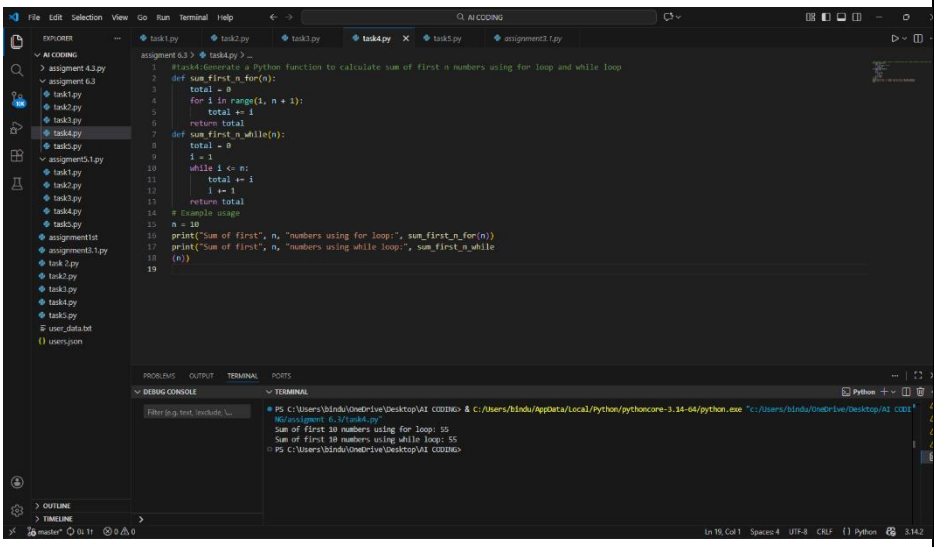
Task
Calculate the sum of first n natural numbers.

Prompt Used: Generate a Python function to calculate sum of first n numbers using for loop and while loop.

Sample Input: Sum of first 10 numbers using for loop: 55

Sample Output
Sum of first 10 numbers using while loop: 55

Short Explanation
Both methods add numbers from 1 to n.
The logic is simple accumulation using loops.



Task Description #5: Classes (Bank Account Class)

Scenario
You are designing a basic banking application.

Task
Create a Bank Account class with deposit, withdraw, and check balance.

Prompt Used:
Generate a Python BankAccount class with deposit, withdraw, and balance checking methods.

Sample Input
Initial Balance = 1000
Deposit = 500
Withdraw = 300

Sample Output:

Deposited: 500
Withdrawn: 300
Current Balance: 1200

Short Explanation
This class manages bank operations.
It updates balance safely and checks conditions before withdrawing money.