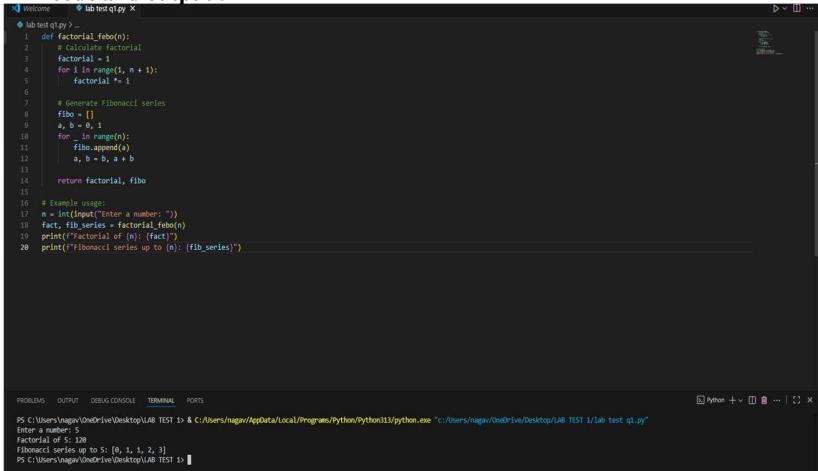


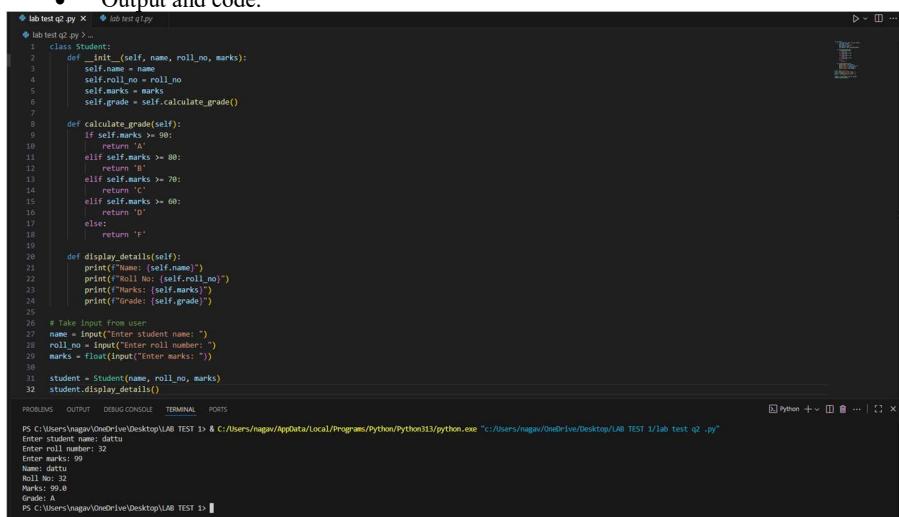
SCHOOL OF COMPUTER SCIENCE AND ARTIFICIAL INTELLIGENCE		DEPARTMENT OF COMPUTER SCIENCE ENGINEERING	
<b>ProgramName:</b> B. Tech		<b>SET-B</b>	
<b>Roll No.</b>			
<b>Instructor(s)Name</b>		1. Dr. Venkataramana 2. Dr. Ch. Sridhar 3. Mr. Kundan Kumar	
<b>CourseCode</b>	24CS002PC215	<b>CourseTitle</b>	AI Assisted Coding
<b>Year/Sem</b>	II/I	<b>Regulation</b>	R24
<b>Date and Day of Assignment</b>	22.08.2025	<b>Time(s)</b>	01.00PM To 03.00PM
<b>Duration</b>	2 Hours	<b>Applicableto Batches</b>	24BTCAIAIB09, 24BTCAIAIB10
<b>Lab Test :</b> 1(Present test number)/4(Total number of tests)			
<b>Q.No.</b>	<b>Question</b>	<i>ExpectedTime to complete</i>	
1	<p><b>Task Description#1</b></p> <ul style="list-style-type: none"> <li>Write python program for a function <b>factorial_feb(n)</b> that return both factorial of given number and Fibonacci series as per input "n"</li> </ul> <p><b>Expected Output#1</b></p> <ul style="list-style-type: none"> <li><b>factorial_feb(n) and output</b></li> <li><b>prompt :write a python function namedd factorial_feb(n) that returns both the factorial of n and the first n numbers of the Fibonacci series."</b></li> <li><b>code and output :</b></li> </ul>  <pre> 1 Welcome to lab test q1.py 2 3 def factorial_feb(n): 4     # Calculate factorial 5     factorial = 1 6     for i in range(1, n + 1): 7         factorial *= i 8 9     # Generate Fibonacci series 10    fibo = [] 11    a, b = 0, 1 12    for _ in range(n): 13        fibo.append(a) 14        a, b = b, a + b 15 16    return factorial, fibo 17 18 # Example usage: 19 n = int(input("Enter a number: ")) 20 fact, fibo_series = factorial_feb(n) 21 print(f"Factorial of {n}: {fact}") 22 print(f"Fibonacci series up to {n}: {fibo_series}") </pre> <p>PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS</p> <p>PS C:\Users\nagav\OneDrive\Desktop\LAB TEST 1&gt; &amp; C:/Users/nagav/AppData/Local/Programs/Python/Python313/python.exe "c:/users/nagav/onedrive/Desktop/LAB TEST 1/lab test q1.py" Enter a number: 5 Factorial of 5: 120 Fibonacci series up to 5: [0, 1, 1, 2, 3] PS C:\Users\nagav\OneDrive\Desktop\LAB TEST 1&gt;</p>	22.08.2025 03.00PM	
	<b>Task Description#2</b>		
	<ul style="list-style-type: none"> <li>Write Python program in cursor AI for <b>student class</b> with attributes like Name, Roll</li> </ul>		

no, Marks and also construct a method i.e., **display\_details** to display name, rollno, marks and grades

Table: Grades Classification Based on Marks	
Marks Range (%)	Grade
90 – 100	A+
75 – 89	A
60 – 74	B
50 – 59	C
Below 50	F (Fail)

### Expected Output#2

- Student Class and Display Details
- Prompt : Create a student class in Python that stores a student's name, roll number, and marks. Also, define a method to display all these details and compute the grade
- Output and code:



```

1 lab test q2.py X lab test q1.py
2
3 #!/usr/bin/python
4
5 class Student:
6     def __init__(self, name, roll_no, marks):
7         self.name = name
8         self.roll_no = roll_no
9         self.marks = marks
10        self.grade = self.calculate_grade()
11
12    def calculate_grade(self):
13        if self.marks >= 90:
14            return 'A+'
15        elif self.marks >= 80:
16            return 'A'
17        elif self.marks >= 70:
18            return 'B'
19        elif self.marks >= 60:
20            return 'C'
21        elif self.marks >= 50:
22            return 'D'
23        else:
24            return 'F'
25
26    def display_details(self):
27        print("Name: " + self.name)
28        print("Roll No: " + str(self.roll_no))
29        print("Marks: " + str(self.marks))
30        print("Grade: " + self.grade)
31
32 # Take input from user
33 name = input("Enter student name: ")
34 roll_no = input("Enter roll number: ")
35 marks = float(input("Enter marks: "))
36
37 student = Student(name, roll_no, marks)
38 student.display_details()

```

The screenshot shows a Jupyter Notebook interface with two cells. The first cell contains the Python code for the `Student` class. The second cell shows the output of running the code, which prompts for student details and prints them along with the calculated grade.

**Note:** Report should be submitted a word document for all tasks in a single document with prompts, comments & code explanation, and output screenshots

### Evaluation Criteria:

Criteria	Max Marks
Factorial Function (Task#1)	5
Sorting Function (Task#2)	5
Viva	5
<b>Total</b>	<b>15 Marks</b>