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| **SCHOOL OF COMPUTER SCIENCE AND ARTIFICIAL INTELLIGENCE** | | | | | **DEPARTMENT OF COMPUTER SCIENCE ENGINEERING** | | | | |
| **ProgramName:**B. Tech | | | | **SET-B** | | | **AcademicYear:**2025-2026 | | |
| **Roll No.** | | | |  | | | | | |
| **Instructor(s)Name** | | | | 1. Dr. Venkataramana 2. Dr. Ch. Sridhar 3. Mr. Kundan Kumar | | | | | |
| **CourseCode** | | | 24CS002PC215 | **CourseTitle** | | AI Assisted Coding | | | |
| **Year/Sem** | | | II/I | **Regulation** | | R24 | | | |
| **Date and Day**  **of Assignment** | | | 22.08.2025 | **Time(s)** | | 01.00PM To 03.00PM | | | |
| **Duration** | | | 2 Hours | **Applicableto**  **Batches** | | 24BTCAIAIB09, 24BTCAIAIB10 | | | |
| **Lab Test :1**(Present test number)/**4**(Total number of tests) | | | | | | | | | |
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|  | **Q.No.** | **Question** | | | | | | ***ExpectedTime***  ***to complete*** |  |
|  | 1 | **Task Description#1**   * Write python program for a function **factorial\_febo(n)** that return both factorial of given number and Fibonacci series as per input “n”   **Prompt:** Write python code which includes a function factorial\_febo(n) that return both factorial of given number and Fibonacci series as per input “n” and comments shoud be included. And n should be given from console.  **Code:**    **Output:**    **Explanation:**  **This code performs two main tasks for a user-provided positive integer n:**   1. **Generates the Fibonacci series up to n terms.** 2. **Calculates the factorial of  n**  * **The user is prompted to enter a positive integer using input(). The input is converted to an integer and stored in n** * **The function [factorial\_febo(n)](vscode-file://vscode-app/c:/Users/ashri/AppData/Local/Programs/Microsoft%20VS%20Code/resources/app/out/vs/code/electron-browser/workbench/workbench.html" \o ") (not shown in your excerpt, but implied) is called. It should return two values: the factorial of**[**n**](vscode-file://vscode-app/c:/Users/ashri/AppData/Local/Programs/Microsoft%20VS%20Code/resources/app/out/vs/code/electron-browser/workbench/workbench.html)**and a list containing the first**[**n**](vscode-file://vscode-app/c:/Users/ashri/AppData/Local/Programs/Microsoft%20VS%20Code/resources/app/out/vs/code/electron-browser/workbench/workbench.html)**Fibonacci numbers.** * **The Fibonacci series is generated using a loop:**   + **Start with**[**a = 0**](vscode-file://vscode-app/c:/Users/ashri/AppData/Local/Programs/Microsoft%20VS%20Code/resources/app/out/vs/code/electron-browser/workbench/workbench.html)**and**[**b = 1**](vscode-file://vscode-app/c:/Users/ashri/AppData/Local/Programs/Microsoft%20VS%20Code/resources/app/out/vs/code/electron-browser/workbench/workbench.html)**.**   + **For each iteration, append**[**a**](vscode-file://vscode-app/c:/Users/ashri/AppData/Local/Programs/Microsoft%20VS%20Code/resources/app/out/vs/code/electron-browser/workbench/workbench.html)**to the list, then update**[**a**](vscode-file://vscode-app/c:/Users/ashri/AppData/Local/Programs/Microsoft%20VS%20Code/resources/app/out/vs/code/electron-browser/workbench/workbench.html)**and**[**b**](vscode-file://vscode-app/c:/Users/ashri/AppData/Local/Programs/Microsoft%20VS%20Code/resources/app/out/vs/code/electron-browser/workbench/workbench.html)**to the next Fibonacci numbers.** * **The results are printed:**   + **The factorial value.**   + **The Fibonacci series as a list.**   **Expected Output#1**   * **factorial\_febo(n) and output**   **Task Description#2**   * Write Python program in cursor AI for **student class** with attributes like Name, Roll no, Marks and also construct a method i.e., **display\_details** to display name, rollno, marks and grades      * **Prompt:** write a simple python code which includes **student class** with attributes like Name, Roll no, Marks and also construct a method i.e., **display\_details** to display name, rollno, marks and grades are given based on marks like if the range of marks are from 90-100 grade is A+,75-89 grade is A, 60-74 grade is B, 50-59 grade is C, if marks are below 50 grade is F(Fail).and comments should be included and take input from the console.   **Code:**      **Output:**    **Explanation:**  ***1. The code defines a `Student` class with attributes for the student's name, roll number, and marks.***  ***2. The `display\_details` method prints the student's details and calculates the grade based on the marks:***  ***90-100: "A+"***  ***75-89: "A"***  ***60-74: "B"***  ***50-59: "C"***  ***Below 50: "F (Fail)"***  ***3. The program prompts the user to enter the student's name, roll number, and marks.***  ***- It ensures that the marks entered are numeric and within the range 0-100.***  ***4. A `Student` object is created with the provided details, and the `display\_details` method is called to show the information and grade.***    **Expected Output#2**   * Student Class and Display Details   **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 | | **Total** | **15 Marks** | | | | | | | 22.08.2025 03.00PM |  |