**Name :Abhishekh Verma**

**Batch=06**

**Hall Tno.=2403A510H1**

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| **SCHOOL OF COMPUTER SCIENCE AND ARTIFICIAL INTELLIGENCE** | | | | | **DEPARTMENT OF COMPUTER SCIENCE ENGINEERING** | | | | |
| **ProgramName:**B. Tech | | | | **Assignment Type: Lab** | | | **AcademicYear:**2025-2026 | | |
| **CourseCoordinatorName** | | | | Venkataramana Veeramsetty | | | | | |
| **Instructor(s)Name** | | | | |  | | --- | | Dr. V. Venkataramana (Co-ordinator) | | Dr. T. Sampath Kumar | | Dr. Pramoda Patro | | Dr. Brij Kishor Tiwari | | Dr.J.Ravichander | | Dr. Mohammand Ali Shaik | | Dr. Anirodh Kumar | | Mr. S.Naresh Kumar | | Dr. RAJESH VELPULA | | Mr. Kundhan Kumar | | Ms. Ch.Rajitha | | Mr. M Prakash | | Mr. B.Raju | | Intern 1 (Dharma teja) | | Intern 2 (Sai Prasad) | | Intern 3 (Sowmya) | | NS\_2 ( Mounika) | | | | | | |
| **CourseCode** | | | 24CS002PC215 | **CourseTitle** | | AI Assisted Coding | | | |
| **Year/Sem** | | | II/I | **Regulation** | | R24 | | | |
| **Date and Day**  **of Assignment** | | | Week2 - Thursday | **Time(s)** | |  | | | |
| **Duration** | | | 2 Hours | **Applicableto**  **Batches** | |  | | | |
| **AssignmentNumber:4.4**(Present assignment number)/**24**(Total number of assignments) | | | | | | | | | |
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|  | **Q.No.** | **Question** | | | | | | ***ExpectedTime***  ***to complete*** |  |
|  | 1 | Lab 5: AI-Based Code Auto-Completion – Classes, Loops, and Conditionals in Python using GitHub Copilot  **Task 1: Auto-Complete a Python Class for Bank Account**  **Task Description #1**  • Write a class definition comment and start the constructor for a class called BankAccount with account\_holder and balance attributes. Use GitHub Copilot to auto-complete the rest of the class, including methods to deposit, withdraw, and display balance.    **Expected Output #1**  • Complete class with methods like:  deposit(self, amount)  withdraw(self, amount)  display\_balance(self)  • Output from sample usage:  **Task 2: Auto-Complete a For Loop to Sum Even Numbers in a List**  **Task Description #2** • Write a comment and the initial line of a loop to iterate over a list. Allow GitHub Copilot to complete the logic to **sum all even numbers** in the list.    **Expected Output #2** • Code that:   * Iterates over a list * Checks if the number is even using % 2 == 0 * Accumulates the sum • Sample input/output:   **Task 3: Auto-Complete Conditional Logic to Check Age Group**  **Task Description #3** • Start a function that takes age as input and returns whether the person is a **child**, **teenager**, **adult**, or **senior** using if-elif-else. Use Copilot to complete the conditionals.    **Expected Output #3** • Function like:  Output for age\_group(45) ➝ "Adult"  **Task 4: Auto-Complete a While Loop to Reverse Digits of a Number**  **Task Description #4** • Write a comment and start a while loop to reverse the digits of a number. Let Copilot complete the loop logic.  **Expected Output #4**  • Functional loop: Output: 4321  **Task 5: Auto-Complete Class with Inheritance (Employee → Manager)**  **Task Description #5** • Begin a class Employee with attributes name and salary. Then, start a derived class Manager that inherits from Employee and adds department. Let GitHub Copilot complete the methods and constructor chaining.  **Expected Output #5** • Auto-generated code like:  Name: John, Salary: 50000, Dept: IT  **Note: Report should be submitted a word document for all tasks in a single document with prompts, comments & code explanation, and output and if required, screenshots**  **Evaluation Criteria:**   | **Criteria** | **Max Marks** | | --- | --- | | Auto-Complete a Python Class for Bank Account  (Task #1) | 0.5 | | Auto-Complete a For Loop to Sum Even Numbers in a List (Task#2) | 0.5 | | Auto-Complete Conditional Logic to Check Age Group  (Task#3 ) | 0.5 | | Auto-Complete a While Loop to Reverse Digits of a Number (Task#4) | 0.5 | | Task 5: Auto-Complete Class with Inheritance (Employee → Manager)  omparison (Task #5) | 0.5 | | **Total** | **2.5 Marks** | | | | | | | Week2 - Thursday |  |