|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SCHOOLOFCOMPUTER SCIENCE AND ARTIFICIAL INTELLIGENCE** | | | | | **DEPARTMENTOFCOMPUTER SCIENCE ENGINEERING** | | | | |
| **ProgramName:**B. Tech | | | | **AssignmentType: 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 | | | |
| **DateandDay**  **of Assignment** | | | Week4 - Wednesday | **Time(s)** | |  | | | |
| **Duration** | | | 2 Hours | **Applicableto**  **Batches** | |  | | | |
| **AssignmentNumber:7.3**(Presentassignmentnumber)/**24**(Totalnumberofassignments) | | | | | | | | | |
|  | | | | | | | | | |
|  | | | | | | | | | |
|  | **Q.No.** | **Question** | | | | | | ***ExpectedTime***  ***to complete*** |  |
|  | 1 | Lab 7: Error Debugging with AI: Systematic approaches to finding and fixing bugs  Lab Objectives:   * To identify and correct syntax, logic, and runtime errors in Python programs using AI tools. * To understand common programming bugs and AI-assisted debugging suggestions. * To evaluate how AI explains, detects, and fixes different types of coding errors. * To build confidence in using AI to perform structured debugging practices.   Lab Outcomes (Los):  After completing this lab, students will be able to:   * Use AI tools to detect and correct syntax, logic, and runtime errors. * Interpret AI-suggested bug fixes and explanations. * Apply systematic debugging strategies supported by AI-generated insights. * Refactor buggy code using responsible and reliable programming patterns.   Task Description#1   * Paste a function with a missing colon (add(a, b)), and let AI fix the syntax error.     Expected Output#1   * Corrected function with syntax fix       Task Description#2 (Loops)   * Identify and fix a logic error in a loop that causes infinite iteration.     Expected Output#2   * AI fixes increment/decrement error     Task Description#3   * Debug a runtime error caused by division by zero. Let AI insert try-except.     Expected Output#3   * Corrected function with safe error handling       Task Description#4   * Provide a faulty class definition (missing self in parameters). Let AI fix it     Expected Output#4   * Correct \_\_init\_\_() method and explanation       Task Description#5   * Access an invalid list index and use AI to resolve the IndexError.     Expected Output#5   * AI suggests checking length or using safe access logic       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 | | --- | --- | | Identification of bugs | 0.5 | | Application of AI-suggested fixes | 0.5 | | Explanation and understanding of errors | 0.5 | | Corrected code functionality | 0.5 | | Report structure and reflection | 0.5 | | Total | 2.5 Marks | | | | | | | Week4 – Wednesday |  |

: