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| **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** | | | | Venkataramana Veeramsetty | | | | |
| **Instructor(s)Name** | | | | 1. Dr. Mohammed Ali Shaik  2. Dr. T Sampath Kumar  3. Mr. S Naresh Kumar  4. Dr. V. Rajesh  5. Dr. Brij Kishore  6. Dr Pramoda Patro  7. Dr. Venkataramana  8. Dr. Ravi Chander  9. Dr. Jagjeeth Singh | | | | |
| **Course Code** | | | 24CS002PC215 | **Course Title** | | AI Assisted Coding | | |
| **Year/Sem** | | | II/I | **Regulation** | | R24 | | |
| **Date and Day**  **of Assignment** | | | 06-08-2025 | **Time(s)** | |  | | |
| **Duration** | | | 2 Hours | **Applicable to**  **Batches** | |  | | |
| **AssignmentNumber:6.5**(Present assignment number)/**24**(Total number of assignments) | | | | | | | | |
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|  | **Q.No.** | **Question** | | | | | | ***ExpectedTime***  ***to complete*** |  |
|  | 1 | **Lab 6: AI-Based Code Completion: Working with suggestions for classes, loops, conditionals**  Lab Assignment 1: Intelligent Code Completion for Object-Oriented Programming  **Objective:** To explore AI-powered code assistants for writing Python classes, constructors, and methods through intelligent suggestions.  Suppose that you are hired as an intern at a tech company that develops inventory management systems. Your manager asks you to create a **Product** class and a **Warehouse** class with some basic methods. You have decided to use AI-powered code suggestions to help speed up development and reduce syntax errors.  Tasks to be completed are as below  **1. Setup AI Coding Tool:**   * Install and configure GitHub Copilot or Kite with VS Code or JetBrains IDE. * Enable real-time code suggestions.   **2. Class Design Using AI Assistance:**   * Begin defining a Product class with attributes: name, price, quantity. * Use the AI suggestion feature to automatically complete the \_\_init\_\_() method. * Add a method calculate\_value() to return price \* quantity.   **PROMPT & SCREENSHOTS :**  Create a product class with different attributes like name price and quantity    Now to the given code add a method to calculate\_value() to return price\*quantity.    **3. Create Another Class:**   * Define a Warehouse class with a list of Product objects. * Use code completion to help implement**:**   + A method to add a product.   + A method to display the most valuable product.   **PROMPTS & SCREENSHOTS:**  Now similarly define a warehouse class for a list of product object.  Now for the code add method to add a product and displah the most valuable product.      **4. Reflection:**   * Identify how much of the code was completed by AI and what manual edits were needed. * Comment on the relevance and accuracy of AI suggestions.   **COMMENT:**   * **The majority of the code was generated by AI, including the structure and functionality of both the Product and Warehouse classes. The AI provided methods for initializing objects, calculating total value, displaying product details, managing inventory, and identifying the most valuable product. Manual edits, if any, would likely involve customizing attribute names, adjusting currency formatting, or refining print statements to match specific output preferences. Overall, the core logic and design were fully handled by the AI, requiring minimal to no manual intervention for basic functionality.** * **In short, AI suggestions are powerful tools when trained and deployed thoughtfully. Their relevance and accuracy are improving rapidly, but they still require human oversight and ethical safeguards to ensure they serve users well.**   **Requirements:**   * VS Code with Github Copilot or Cursor API and/or Google Colab with Gemini   **Deliverables:**   * Python script with both classes and comments on AI-generated suggestions. * Short report (1 page) summarizing your experience with AI code completion.   . | | | | | | 15.08.2025 EOD |  |