**INTERNSHIP WEEKLY PROGRESS REPORT**

**Program Name: < MCA- Science Sem IV> Batch 2022-24**

**2024-25**

**PRN: 1132230589**

**Name of the Student: Mayur Babaso Mali Class: SYMCA- SCIENCE SEM IV**

**Weekly Progress Report No.-: 04 Date: 24/02/2025**

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| **Report Start Date (DD/MMM/YYYY)**  **24-02-2025** | **Report End Date (DD/MMM/YYYY)**  **28-02-2025** |
| **Key Tasks Performed in Report Period** *(Task – Approximate Duration)***:**  • Advanced OOPs Concepts: Implemented abstract classes, interfaces, and their real-world applications (8 hours)  • Exception Handling: Explored try-catch, finally blocks, and custom exceptions (6 hours)  • Collections Framework:   * Learned about List, Set, and Map (ArrayList, HashMap, LinkedList, Tree-set) (8 hours)   • Multi-threading Basics:   * Explored thread creation using Runnable and Thread class (4 hours) * Implemented thread synchronization and concurrent execution (4 hours) | |
| **Key Learnings**   * Understood how abstract classes and interfaces enable flexible software design. * Learned how exception handling improves application reliability. * Explored Java Collections for efficient data storage and retrieval. * Gained hands-on experience with multi-threading to manage parallel execution. | |
| **Key Challenges and how you resolved them** *(if any)***:**   * **Challenge:** Faced confusion in choosing between abstract classes and interfaces.   **Resolution:** Studied use cases and best practices to understand when to use each.   * **Challenge:** Encountered issues with concurrent access in multi-threaded programs.   **Resolution:** Used synchronization techniques to manage shared resources. | |
| **Plan for the next Reporting Period:**   * Learn database concepts and SQL fundamentals. * Design and normalize databases in MySQL. * Start working with Spring Boot to create a simple REST API. | |
| **Cumulative Progress till date** *(% of total Work, if quantifiable)***:**   * 50% of total training completed (4 out of 8 weeks). * Java programming foundation completed; moving to backend development. | |

**Name & Signature of Student: Mayur Mali**