**Abstract**

To fulfill the academic requirements of our degree program for the 2025–2026 academic year, we successfully completed a three-month internship program at Myanmar DCR Co., Ltd., a Japanese-invested IT company based in Yangon. During this internship, we had the opportunity to observe real-world workflows in a professional environment, understand company operations, and participate in team-based software development activities.

As part of the internship, we were involved in the development of a Human Resource Management System (HRMS) using C# and PostgreSQL. The system was designed to manage employee information, track employee attendance, handle departments and positions, process leave requests, generate attendance summary reports, and support user authentication. Through this project, we gained hands-on experience in desktop application development, database design, and collaborative problem-solving.

This report reflects the technical skills and knowledge we acquired, the challenges we faced, and the valuable lessons we learned while working under the guidance of industry professionals.

**3. Plan of Internship Program**

I completed my internship at Myanmar DCR Co., Ltd., an IT company based in Yangon, where I worked as part of a group of four students. We were assigned to the Software Development Department and collaborated under the supervision of the project manager. Our main assignment was to develop a Human Resource Management System (HRMS) as an internal training project. The project aimed to automate and simplify core HR processes such as managing employee profiles, departments, positions, attendance tracking, leave requests, and user authentication.

The internship officially started on May 2, 2025, and was successfully completed on July 31, 2025, lasting a total of three months. During this period, we followed a structured plan set by the project manager, which included weekly task allocation, technical discussions, and code reviews. We held regular team meetings every Friday, where we discussed our progress, shared our challenges, and received feedback and guidance from the project leader and senior developers.

Throughout the internship, I had the opportunity to apply the theoretical knowledge of C# Windows Forms that I had learned during university coursework. I gained hands-on experience in real-world software development by working on different modules of the HRMS, including the employee registration form, leave management interface, and attendance tracking system. I also became familiar with PostgreSQL for backend database design and used Git for version control and team collaboration.

Apart from development tasks, I also contributed to writing functional documentation, preparing test cases, and performing manual testing of the application. This process helped me understand the importance of clear documentation, user requirements, and systematic testing in software development.

This internship not only enhanced my technical skills but also improved my teamwork, communication, and time management abilities. It was a valuable experience that gave me a strong foundation in building professional software in a collaborative environment.

**3.Plan of Internship Program**

I completed my internship at Myanmar DCR Co., Ltd., a software and IT services company located in Yangon. I was part of a student group of four members assigned to the Software Development Department, where we worked on a real-world software project under the supervision of the project manager. While we were not officially integrated into the company’s internal development team, we received ongoing guidance from the manager, team lead, and senior developers. The environment was structured to simulate an actual development team experience, allowing us to apply our academic knowledge in a professional context.Our assigned project was the development of a Human Resource Management System (HRMS). This system was intended to manage various HR processes, such as employee information, department and position management, attendance tracking, leave requests, and authentication features. The internship was organized to give us hands-on exposure to the complete software development lifecycle, from requirement analysis to system testing and documentation.

The internship began on May 2, 2025, and concluded on July 31, 2025, covering a duration of three months. Throughout this period, I actively participated in all project phases and fulfilled the responsibilities assigned to me.

In addition to coding, I gained valuable experience in several critical areas of software quality assurance and project management. I actively contributed to quality control by reviewing and testing the application to ensure it met both functional and UI standards as outlined in the project requirements. As part of schedule management, our team followed a predefined task plan, and we held weekly meetings every Friday to review our progress, address technical or timeline challenges, and adjust our schedules as necessary. I also participated in test documentation, where I helped create detailed test cases and reports used during manual testing to validate system functionality. For source code tracking, I was responsible for analyzing the codebase by counting lines of code per module and maintaining an organized structure across all project files. During the development process, we conducted thorough bug tracking by recording issues found during testing, categorizing them based on severity, and resolving them systematically before our final review. I was also involved in source code cleaning, where I performed refactoring tasks to remove unused methods, eliminate redundant logic, and enhance code readability and performance. Furthermore, I utilized Git for version control and team collaboration, which taught me how to manage branches effectively, resolve merge conflicts, and maintain a clean and traceable commit history. These experiences significantly improved my understanding of real-world software development practices beyond just writing code.

This internship not only enhanced my technical abilities but also improved my understanding of real-world project coordination, teamwork, and software quality practices. It gave me the confidence to work in a structured development environment and strengthened my foundation for future career opportunities in the software industry.

3.Plan Of Internship Program

We completed our internship at Myanmar DCR Co., Ltd., a software and IT services company located in Yangon. I was part of a four-member student group assigned to the Software Development Department, where we worked on a real-world project under the supervision of the project manager. Although we were not part of the company’s internal development team, we received regular guidance from senior developers, the team leader, and the manager.

Our assigned project was to develop a Human Resource Management System (HRMS), designed to handle employee information, department and position management, attendance tracking, leave requests, and user authentication. The internship allowed us to gain hands-on experience in the full software development lifecycle, including requirement analysis, system design, implementation, testing, and documentation.

The internship began on May 2, 2025, and concluded on July 31, 2025, covering a duration of three months. Throughout the internship, I had the opportunity to apply the theoretical knowledge of C# Windows Forms that I had learned during university coursework. I gained hands-on experience by working on key modules of the HRMS, such as the employee registration form, leave management interface, and attendance tracking system and attendance summary report. I also became proficient in using PostgreSQL for backend database design and utilized Git for version control and collaboration, which taught me how to manage branches effectively, resolve merge conflicts, and maintain a clean and traceable commit history. These tools strengthened my understanding of full-stack application development.

In addition to programming, I was actively involved in software quality assurance and project coordination. I contributed to quality control by testing the system to ensure it met functional and UI standards. Our team followed a weekly project schedule with review meetings every Friday to evaluate progress and resolve issues. I helped write test cases and reports for manual testing, analyzed and organized the source code by module, and tracked bugs categorized by severity. Before final submission, I participated in code cleanup and refactoring to enhance performance and readability.

This internship helped improve both my technical and interpersonal skills. It strengthened my ability to work in a team, solve problems independently, and understand the flow of professional software development projects. The experience built a solid foundation for my future career in the software industry.

Training Program

* Learned C#.Net, with a focus on Windows Forms for desktop application development, PostgreSQL for database management, and Git for version control.
* Collected project requirements by analyzing existing HRMS solutions and collaborating with supervisors to understand system needs.
* Developed key modules such as Employee Registration, Login Authentication, Leave Management, Attendance Tracking, and Attendance Summary Reports.
* Completed assigned development and testing tasks on time, while maintaining daily progress logs and documenting implemented features.
* Conducted unit testing and manual testing based on predefined test cases to ensure program functionality and reliability.
* Participated in weekly team meetings for progress reviews, feedback sessions, and task coordination.
* Contributed to quality control by thoroughly testing the system to ensure it met both functional and UI standards.
* Ensured product quality in the HRMS project by designing and executing test cases, performing unit and manual testing, validating inputs, reviewing UI/UX, mapping features to requirements, documenting bugs, optimizing performance, conducting peer reviews, and using Git for version control.

Quality Control in the HRMS Project

1. **Created and executed test cases**
   * We designed detailed test cases for each module (Login, Leave Management, Attendance, etc.) to test both expected and edge cases.
2. **Performed unit testing**
   * Each module was tested individually to verify that its functions worked correctly before integration.
3. **Conducted manual functional testing**
   * We used the system like real users to simulate different workflows (e.g., login → view attendance → request leave) and confirmed the system behaved as expected.
4. **Validated input fields**
   * We ensured all form fields had proper validation (e.g., required fields, email format, date validation, etc.) to prevent incorrect data entry.
5. **Tested UI and UX**
   * We reviewed the interface design to confirm it was clean, user-friendly, and consistent with common user expectations.
6. **Cross-checked against requirements**
   * We mapped implemented features against the project requirements to make sure all requested functions were developed.
7. **Documented bugs and fixed issues**
   * Whenever we found issues during testing, we recorded them, discussed fixes with the team, and retested after resolving.
8. **Improved performance**
   * We checked the system’s responsiveness, especially on data-heavy forms like Attendance Summary Report, and optimized where needed.
9. **Peer review**
   * Team members reviewed each other’s code to catch logic errors, improve consistency, and maintain coding standards.
10. **Used version control (Git)**

* To maintain quality during collaboration, we used Git to manage code versions, avoid conflicts, and safely roll back if needed.

**Quality Control Section in Training Program (List Format):**

* Studied and followed the **product quality file** provided by senior developers to guide the testing and evaluation process.
* Performed **systematic testing** of all developed modules (Employee, Leave, Attendance, etc.) using the predefined test cases included in the quality file.
* Conducted **unit testing** to verify that individual components functioned correctly and reliably.
* Performed **manual testing** to simulate real user actions and ensure smooth interactions and proper UI responses.
* Verified that the system met **functional requirements**, such as form validations, data saving accuracy, and correct report generation.
* Ensured that the system met **UI standards** by reviewing layout consistency, usability, and input/output clarity.
* Reported any bugs or UI issues to the development team and collaborated on fixes and re-testing.
* Used internal feedback from team members and supervisor reviews to continuously improve the overall quality of the application.

**Training Program**

**Duties and Responsibilities Performed**

During my internship at **Myanmar DCR Co., Ltd.**, a software and IT services company based in Yangon, I was part of a four-member student group assigned to the **Software Development Department**. The training program was designed to simulate a professional software engineering environment, providing me with hands-on exposure to real-world development practices and tools. Under the guidance of a project manager, team leader, and senior developers, I received structured mentorship and technical support throughout the three-month internship, from **May 2, 2025, to July 31, 2025**.

**Project Assigned**

Our primary assignment was to develop a **Human Resource Management System (HRMS)** — a desktop application built using **C# Windows Forms**. The project was designed to manage core HR functions such as:

* Employee information management
* Department and position setup
* Leave request tracking
* Attendance monitoring
* User authentication and access control

This project allowed me to gain practical experience across the entire **Software Development Life Cycle (SDLC)**, including **requirement analysis, system design, coding, testing, and documentation**.

**Key Duties and Responsibilities**

**1. Interface Design and Development**  
I worked on designing and implementing multiple front-end modules of the HRMS system using **C# Windows Forms**. Key interfaces I contributed to included:

* **Employee Registration Form** – for adding, updating, and viewing employee records.
* **Leave Management Module** – allowing employees to request and track leave.
* **Attendance Tracking System** – displaying daily attendance logs per employee.

I applied object-oriented principles and followed a layered architecture (Model-View-Controller) to ensure the application remained modular and maintainable.

**2. Backend Database Integration**  
I became proficient in **PostgreSQL**, which we used for backend data storage. I designed and updated tables, wrote SQL queries for data retrieval and modification, and ensured referential integrity across modules. I also worked on data validation logic to prevent incorrect or duplicate records.

**3. Version Control and Collaboration**  
Throughout the project, I used **Git** for version control and collaboration. I regularly committed code, created branches for different modules, and resolved merge conflicts. This taught me to maintain a clean commit history and coordinate effectively in a shared codebase environment.

**4. Quality Assurance and Testing**  
I participated in **manual testing** and quality control processes to ensure the application met the functional and design requirements. I contributed to:

* Writing **test cases** and **test plans**
* Executing manual test scripts
* Identifying and logging bugs
* Classifying issues based on severity
* Performing **regression testing** after fixes

**5. Source Code Review and Cleanup**  
As we approached project deadlines, I was involved in **code refactoring** and cleanup. This included:

* Removing unused methods
* Improving code readability
* Eliminating redundant logic
* Optimizing performance

**6. Schedule and Progress Management**  
Our team followed a structured **project schedule** using a weekly task plan. Every **Friday**, we held meetings to:

* Review development progress
* Discuss blockers or bugs
* Adjust priorities or deadlines
* Seek feedback from supervisors

This routine helped build time management and collaboration skills within the team.

**Soft Skills and Professional Growth**

Apart from technical knowledge, this internship improved my ability to:

* Communicate effectively in a team environment
* Participate in collaborative problem-solving
* Present progress and ideas clearly in team meetings
* Work under deadlines and deliver assigned tasks on time

During my internship period, I was assigned to a development team working on a **Human Resource Management System (HRMS)** project. This project focused on building a desktop-based HR management tool using **C#.Net** with **Windows Forms**, integrated with **PostgreSQL** for data storage and **Git** for version control. The internship began with tool installation and environment setup. I installed **Microsoft Visual Studio**, **PostgreSQL**, and supporting tools such as **PgAdmin**, **Git**, and **Draw.io** for visual modeling and documentation. I also familiarized myself with GitHub for source control and collaboration .Before starting development, I studied existing HRMS systems to understand the expected features and real-world use cases. I worked closely with my supervisor and team to gather and document project requirements. This involved creating UI sketches, process flow diagrams, and module breakdowns. We discussed technical constraints, user roles, data flow, and UI expectations, which helped me understand the software development lifecycle and industry standards .I learned **C#.Net** and Windows Forms by following structured tutorials and developing small practice modules. I also studied **SQL** fundamentals to effectively interact with the PostgreSQL database. I practiced CRUD operations, data validation, relationships, and schema creation — which were essential for developing a robust and normalized backend.