**UNIVERSITY OF COMPUTER STUDIES, HINTHADA**



**INTERNSHIP REPORT**

University of Computer Studies, Hinthada

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In Partial Fulfillment of the Requirements for the Degree of Bachelor of Computer Science

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**EXECUTIVE SUMMARY**

I was assigned as an internship student at the Faculty of Computer Science, Hinthada. The internship period lasted for three months, from May to July. During the first week, I began by exploring ideas for my project and reviewing the fundamental principles of system analysis and design. In the second week, I finalized the scope of the system and divided the responsibilities between the administrative features and the user interface.

And next months, I wrote backend using NodeJS and add the necessary data together with frontend. I received the suggestions and collected information from department. Moreover, I had to solve a lot of error. The last month, I discussed with department supervisor and added the feature of remove people from shop and I tried to complete the system needed. And I prepared details of project in that internship report and thesis.

My project title is Shop Tax Payment System. It is written using languages such as Node.js and Express as the backend, and integrated it with the frontend built using React, Tailwind CSS, and DaisyUI. As the main part of the system, there are two parts, admin and user. The admin can log in and then access the dashboard where they can see how many users and admins there are, check overdue users, and view pending payments (when users submit payments). The admin can accept or reject payment submissions from users and also send warnings. On top of that, the admin can create user accounts and assign users to shops and remove them from shops as needed. Finally, the admin can log out. For the user, they can view the homepage and log in. After logging in, the user gets a dashboard where they can see their last payment, the next payment due date, how many warnings they have, and all their receipts. Users can also submit payments by uploading screenshots of Kpay and finally log out

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**CHAPTER 1**

**INTRODUCTION OF THE REPORT**

This internship aims to enhance our academic knowledge in our specific fields of study. It offers a chance to gain practical experience by applying classroom theories to real-world and community situations. I've been able to explore various real-world working experiences as we desired.

This internship report book contains five chapters. In chapter 1, I want to introduce this book. The overview of the organization will be shown in chapter 2. In this chapter, titles such as university profile, university of mission, vision & value and internship objective will be included. In the next chapter, the learning experiences I had during my internship will be explained in detail. In this chapter, the report for the internship period of 3 months will be described as description of duties and lessons I learned. In chapter 4, which is the analyses of chapter, Strength, Weakness, Opportunity and Threat has been added. And then the last chapter is recommendations and conclusion.

Finally, in the university, there are many departments and many programming languages taught. My internship project was done using NodeJS and MongoDB database. My project focused on efficiency by allowing users to complete shop tax payments online, eliminating the need to visit physical offices. I have documented my best efforts regarding the project. If there are any inconveniences, I kindly ask for understanding.

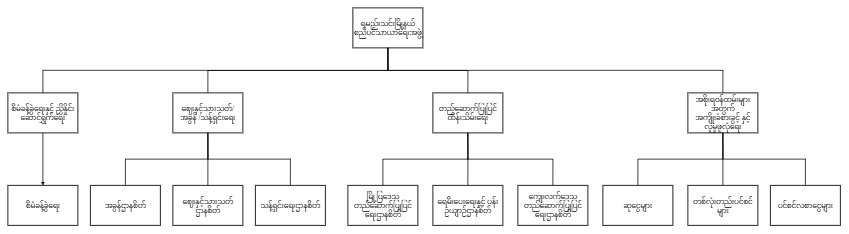
**CHAPTER 2**

**OVERVIEW OF THE ORGANIZATION**

The Yamethin Township Development Affair Department(YTDAD) is the local governing body responsible for municipal services and urban development in Yamethin Township, Mandalay Region. The committee consists of four sub-departments: the Administration & Coordination Sub-Department, which handles governance and interdepartmental matters; the Market, Slaughterhouse, Tax & Sanitation Sub-Department, which manages public markets, slaughterhouses, tax collection and cleanliness; the Construction & Maintenance Sub-Department, which oversees infrastructure projects in both urban and rural areas including utilities and public parks; and the Government Employee Benefits Sub-Department, which administers pensions and welfare programs for civil servants. Through these sub-departments, the YTDAD delivers essential public services and maintains infrastructure across Yamethin Township.

**2.1 Department Profile**

The Yamethin Township Development Affairs Department is the governing body overseeing urban development and municipal services in Yamethin Township. Through its four sub-departments - Administration, Market & Sanitation, Construction, and Employee Benefits - it maintains infrastructure, regulates public services, and implements development projects. The committee plays a vital role in enhancing the quality of life for all township residents through its comprehensive municipal management approach.



**Figure 2.1 Organization Chart**

**2.2 Department’s Mission, Vision**

**Mission**

* To ensure sustainable urban development and quality municipal services.
* To maintain efficient infrastructure and public facilities.
* To promote clean, safe, and well-regulated community spaces.
* To support equitable access to essential township services.
* To enhance governance and public welfare through effective administration.

**Vision**

* To build a thriving, well-planned township with modern amenities.
* To create an inclusive community with improved living standards for all residents.
* To develop Yamethin as a model township with sustainable urban management.
* To foster collaboration between authorities, businesses, and citizens for progress.

**2.3 Internship Objectives**

The internship objectives are

* To learn new skills and improve the ones I already have
* To expand my understanding and knowledge of how my academic learning applies in real life
* To become more confidence in decision making skill, and teamwork required for success in a professional work environment
* To get better at communication skills, self-study learning skills and problem- solving skills.
* To try out this kind of work and see if it's right for my future career choice

**CHAPTER 3**

**LEARNING EXPERIENCE DURING INTERNSHIP**

Firstly, I received guidance from my supervisor to choose a government department for my internship. I was interested and thought carefully about which department would be meaningful and relevant to my skills. After considering various options, I chose Township Development Affairs Department because I believed developing a Shop Tax Payment System would be beneficial for the community. I went to the department and respectfully asked for permission from the responsible officials to allow my internship. Once I received approval, I informed my supervisor and proceeded with the necessary preparations. During this period, I also took the opportunity to study the programming languages and tools I would use in the project. I was confident that I would gain valuable experience not only in software development but also in understanding real-world processes within the department.

I worked in the Township Development Affairs Department for three months. After discussing with my supervisor, I was assigned to develop a Shop Tax Payment System using the MERN stack along with Tailwind CSS and DaisyUI. I started by researching and studying the required features, documentation, and sample projects through self-study.

Since I developed the system on my own, I encountered many challenges—errors, unexpected bugs, and unfamiliar methods. It took time to fully understand and apply each technology in the stack. The project began on May 5th and was completed by July 29th. There were times I had to work late to catch up with the schedule and fix issues effectively.

In the end, I gained valuable experience in project development—from frontend to backend—along with time management, problem-solving, and system design skills. I also strengthened my knowledge in MongoDB, Express, React, Node.js, Tailwind CSS, and DaisyUI. Whenever I faced difficulties, I sought help from my supervisor, explored solutions on Google, or learned through YouTube tutorials.

**3.1 Description of Duties and Lessons I Learned**

First of all, I learned the overall process flow of internship projects. I studied HTML5, CSS, JavaScript, and how to design ER diagrams and databases effectively.

Then, I moved on to learning the MERN stack—MongoDB, Express, React, and Node.js—along with Tailwind CSS and DaisyUI for styling the frontend. I also learned the basics of software testing to ensure functionality and stability throughout development During the process, I faced various errors, but I was able to solve most of them by researching on Google and reading solutions from other developers’ websites. As a result, I gained many valuable experiences throughout this internship period.

## 3.1.1 Activities of First Month (May)

**Table 3.1 Activities of First Month (May)**

|  |  |
| --- | --- |
| **Date** | **Task (Detail)** |
| 5.5.2025 | Discussed the project scope and objectives. |
| 6.5.2025 | Finalized the system design and structure. |
| 7.5.2025 | Created initial UI frames for login, register, and dashboard pages. |
| 8.5.2025 | Studied related course exercises and references. |
| 9.5.2025 | Set up project repository and initialized frontend and backend folders. |
| 12.5.2025 | Installed essential tools (VS Code, Node.js, MongoDB). |
| 13.5.2025 | Read government guidelines and shop registration documents. |
| 14.5.2025 | Studied shop and user-related data provided by the department. |
| 15.5.2025 | Wrote code for login page and implemented backend API. |
| 16.5.2025 | Connected login with MongoDB and handled error states |
| 17.5.2025 | Built register page and added form validations. |
| 20.5.2025 | Linked login and register flows; tested user signup. |
| 21.5.2025 | Designed and built user dashboard UI. |
| 22.5.2025 | Designed and implemented admin dashboard page. |
| 23.5.2025 | Created shop schema and linked users to shops in the database. |
| 27.5.2025 | Built contact page layout with Leaflet map for location. |
| 28.5.2025 | Fetched shop data and displayed on admin dashboard. |
| 29.5.2025 | Implemented logic for viewing shop details by admin. |
| 30.5.2025 | Added shop assignment logic |
| 31.5.2025 | Debugged map loading issue on contact page. |

**3.1.2 Activities of Second Month (June)**

**Table 3.2 Activities of Second Month (June)**

|  |  |
| --- | --- |
| **Date** | **Task (Detail)** |
| 3.6.2025 | Created overdue payment logic and displayed unpaid users. |
| 4.6.2025 | Implemented admin feature to mark payments as accepted. |
| 5.6.2025 | Learned and applied Redis Redlock for concurrent update prevention. |
| 6.6.2025 | Connected payment update with locking mechanism. |
| 9.6.2025 | Implemented "Remove user from shop" feature with confirmation modal. |
| 10.6.2025 | Discussed progress with supervisor and made corrections. |
| 11.6.2025 | Integrated real-time updates using Socket.IO for warning system. |
| 12.6.2025 | Created warning model and admin dashboard for warning management. |
| 13.6.2025 | Built user-side warning notification and unread count logic. |
| 14.6.2025 | Researched receipt PDF generation tools (jsPDF). |
| 17.6.2025 | Designed payment history table and filtering options. |
| 18.6.2025 | Added download PDF button for payment records. |
| 19.6.2025 | Built logic for accepting or rejecting tax payments by the admin. |
| 20.6.2025 | Integrated Redis Redlock and MongoDB transaction to prevent duplicate payment status updates. |
| 24.6.2025 | Improved UI/UX for dashboards (responsive design). |
| 25.6.2025 | Discussed report writing format with supervisor. |
| 26.6.2025 | Started writing project book Chapter 1. |
| 27.6.2025 | Continued writing Chapter 1 and started Chapter 2. |
| 28.6.2025 | Completed Chapter 2. |

## 3.1.3 Activities of Third Month (July)

**Table 3.3 Activities of Third Month (July)**

|  |  |
| --- | --- |
| **Date** | **Task (Detail)** |
| 1.7.2025 | Write the project book Chapter5. |
| 2.7.2025 | Draw Usecase Diagram |
| 3.7.2025 | Draw FlowChart Diagram |
| 4.7.2025 | Draw ER Diagram |
| 5.7.2025 | Designed real-time update flow using Socket.IO for tax rate changes. |
| 8.7.2025 | Implemented backend logic to allow admin to change shop tax rate. |
| 9.7.2025 | Connected tax rate change to frontend and tested admin broadcast. |
| 10.7.2025 | Implemented user-side socket listener to receive live updates of tax rate changes. |
| 11.7.2025 | Updated user dashboard to reflect new tax rate in shop and payment selection. |
| 12.7.2025 | Discussed with my supervisor for changes in tax rate. |
| 15.7.2025 | Finalized tax rate display logic in shop details and payment form. |
| 16.7.2025 | Discuss with the supervisor and add the needed data. |
| 17.7.2025 | Add the data. |
| 18.7.2025 | Try to finish design. |
| 21.7.2025 | Try to finish all design. |
| 23.7.2025 | Write the intern report. |
| 24.7.2025 | Finish up the project. |
| 25.7.2025 | Write the project book Chapter 3 and 4. |
| 27.7.2025 | Write the project book Chapter 3 and 4. |
| 29.7.2025 | Prepared the powerpoint. |

**CHAPTER 4**

**ANALYSES**

This internship was truly an introduction to the real working environment for me. I learned how to work within an organization and apply the knowledge I had gained from academic studies into practical, real-world tasks. I had the opportunity to work closely with experienced individuals at the department, and I learned many valuable lessons from their guidance and collaboration. Throughout this internship, I focused on developing a web-based system using the MERN stack along with Tailwind CSS and DaisyUI. This allowed me to enhance not only my technical skills but also my web design knowledge. I also improved my ability to communicate effectively in English, manage my time wisely, and set clear goals to stay on track. Working on real tasks helped me bridge the gap between theory and practice. I encountered and overcame many challenges that helped me improve my critical thinking and problem-solving skills. Thanks to the support and feedback from my mentor and the department, I was able to grow both professionally and personally during this internship.

**4.1 Strength**

This internship allowed me to apply the knowledge I had acquired at university. However, I quickly realized that beyond theoretical learning, I needed to develop essential workplace skills such as decision-making, problem-solving, planning, organization, communication, and the ability to process information effectively. At university, programming languages were mostly taught in theory. While I understood the logic and basic concepts, I still faced many challenges when applying them in a real project during the internship.

When I was assigned my project, my goal was to do my best and complete it within the given timeframe. Although I put in a lot of effort, not everything went according to schedule. One of the most important lessons I learned was how to manage my time effectively, especially under pressure. Sticking to a schedule became a commitment I made to myself. I also believe that the experience and knowledge I gained during this internship will give me more confidence when applying for jobs in this field.

**4.2 Weakness**

The department where I interned was not a technical department, so it was sometimes difficult to ask for the information I needed. Also, since my internship took

place during the rainy season, many weather-related illnesses occurred, and the department staff were very busy. This made it harder for me to get the information on time. Another challenge I faced was my laptop battery—it didn’t work without being connected to electricity. On top of that, there were frequent power outages in the city, which caused delays in working on my project.

**4.3 Opportunities**

The opportunities of my internship of 3 months are

* + I learned essential project management and system design skills for a month.
  + Working on real-world problems improved my problem-solving abilities and helped me find effective solutions under pressure.
  + I had the chance to observe how the programming languages I studied behave in real-world scenarios, beyond classroom theory.
  + This internship also helped me reflect on my career goals and guided me in making more informed decisions about my future job path.

**4.4 Threats**

I was initially concerned about finishing the project on time due to some technical limitations. I was also worried that the presentation might not go smoothly and could feel uncomfortable during the demonstration..

**CHAPTER 5**

**RECOMMENDATIONS AND CONCLUSION**

The internship program represents a significant opportunity for students to bridge the gap between academic learning and real-world application. While studying programming languages at university, it was often unclear how these skills would be applied in a professional setting. Through the internship, I was able to see firsthand how to implement what I had learned in a real-world job context. Fortunately, the internship not only reinforced my basic programming knowledge but also provided practical insights that are invaluable.

Our university predominantly focuses on theoretical instruction across all courses, including programming. However, practical teaching and laboratory courses have proven to be more effective than purely theoretical ones. Therefore, it is recommended that the university enhances its support for students in securing internship placements aligned with their academic programs. This could be achieved through providing strong recommendations and facilitating connections with industry partners. Continuing the internship program is crucial as it prepares students for their future careers by allowing them to practice and apply the theoretical knowledge gained in the classroom.

In conclusion, this internship experience has been immensely beneficial. It allowed me to apply the theoretical knowledge gained at university to real-world tasks and challenges. This hands-on involvement has been both instructive and invaluable, greatly enhancing my understanding and skills. The opportunity to learn and grow in a professional setting has been a pivotal part of my educational journey. I am deeply grateful for the experience and the chance to gain practical insights that will undoubtedly aid me in my future career endeavors.

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