

**CPT 6216**

**TRIMESTER 3, 2024 INDUSTRIAL TRAINING REPORT**

**MYTEKSI SDN BHD**

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**SOFTWARE ENGINEERING**

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# **Company Background**

Grab is a technology company that started as a ride-hailing service and has grown into a “superapp” serving millions of users across Southeast Asia. The company began with the goal of helping drivers earn a living, but soon realized that the platform could benefit many other small business owners too. These include tuk-tuk drivers, wet market sellers, and food vendors who are essential to the local economy.

With over 70 million small and medium-sized businesses (SMEs) in Southeast Asia, Grab expanded its services to support these entrepreneurs. Through its platform, Grab helps people not only make an income but also improve their quality of life by giving them freedom to be their own boss and create a better future for themselves and their families.

Grab aims to provide more than just financial support-it is focused on economic empowerment, helping individuals grow their businesses and stay competitive in an ever-changing world. However, the company recognizes that many entrepreneurs still face challenges, like living without savings, and struggling to keep up with new technology.

Grab’s mission is to drive progress in Southeast Asia by equipping people with the tools and opportunities they need to succeed. The company believes that when everyday entrepreneurs thrive, the whole region benefits. Its long-term goal is to ensure that everyone has the chance to pursue economic progress and enjoy a better future.

# Objectives of the Internship

The objective of this internship is:

* 1. To gain valuable insights into how large app companies function, including their workflows, team dynamics, and product development processes.
  2. To benefit from the guidance and mentorship of experienced professionals, receiving feedback to enhance my mobile development skills and align with industry standards.
  3. To experience the work culture of leading companies, understanding what drives their innovation and success while exploring what makes them inspiring places to work.
  4. To build meaningful connections with skilled engineers, learning from their experiences and gaining practical advice to support my technical and professional growth.

# training projects/tasks/assignments

- reliability ticket

- end-to-end user project (ETA Migration)

- internal tool project (Pilot)

- remove feature flags

- fix typos and warning

# description/methods

* Reliability ticket
  + Address and resolve issues impacting system reliability. This involves diagnosing problems, implementing fixes. Specific focus includes fixing bugs related to the basket page and promotions, across Malaysia, Singapore, Thailand, and the Philippines country. This task requires close collaboration with the QA team to ensure all fixes meet quality standards.
* End-to-end user project
  + Person in charge for an end-to-end project related to estimated time of arrival. This includes planning, executing, and collaborating with the cross team.
* Internal tool project
  + Develop and pilot an internal tool aimed at improving team efficiency and productivity. Person in charge for handling tasks related to the migration of localization.
* Remove Feature flags
* Identify and remove obsolete feature flags from the codebase. This task ensures that the code remains clean and maintainable by eliminating unnecessary conditional logic.
* Fix typos and warning
  + Review the codebase and documentation to identify and correct typos and warnings. This task helps maintain code quality and ensures clear communication within the team and with end-users.

# Achievement of the tasks/implementation

* Reliability Ticket
  + Successfully addressed and resolved critical issues impacting system reliability. Diagnosed and implemented fixes for bugs related to the basket page and promotions across Malaysia, Singapore, Thailand, and the Philippines. Collaborated closely with the QA team to ensure all fixes met quality standards, resulting in a significant improvement in user experience and system stability.
* End-to-end user project
  + Led the end-to-end project for the estimated time of arrival (ETA) system. Participated in planned, executed, and collaborated with cross-functional teams to deliver the project on time. Improved the accuracy and reliability of ETA, enhancing user satisfaction and operational efficiency. However, the work is still in progress.
* Internal tool project
  + Took charge of developing and piloting an internal tool designed to boost team efficiency and productivity. Managed tasks related to the migration of localization, ensuring everything integrated smoothly. However, the work is still in progress.
* Remove feature flags
  + Identified and removed obsolete feature flags from the codebase, ensuring a cleaner and more maintainable codebase. This effort eliminated unnecessary conditional logic, reducing technical debt and improving code readability and performance.
* Fix typos and warning
  + Conducted a thorough review of the codebase and documentation, identifying and correcting numerous typos and warnings. This task enhanced code quality and ensured clear communication within the team and with end-users. The improvements contributed to a more professional and polished product.

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# Problem Encountered and Ways to Improve

* big feature branch

During my internship, I encountered several challenges that required adaptability and problem-solving. Working with a large feature branch made it difficult to track and manage changes efficiently. To improve in this area, I plan to break down large tasks into smaller, manageable branches, ensuring better organization and faster progress.

* small changes and critical changes only

Handling small but critical changes required attention to detail and prioritization. Moving forward, I will develop stronger task management skills and leverage tools to keep track of these changes more efficiently.

* overwhelmed by large codebase

Being overwhelmed by a large codebase made it difficult to contribute quickly. To overcome this, I will continue improving my code-reading skills and rely more on documentation and team discussions. Similarly, handling ambiguous tasks was challenging, especially when requirements were not clear. I plan to ask more clarifying questions early and work closely with stakeholders to reduce uncertainty.

* remote work challenges

Remote work brought communication challenges, such as delayed feedback and difficulties staying aligned with the team. To overcome this, I will improve my communication by being proactive with updates, actively participating in discussions, and making better use of collaboration tools to stay connected.

* dealing with imposter syndrome

At times, I felt imposter syndrome, doubting my abilities despite making progress. To manage this, I will focus on recognizing my achievements, remind myself that growth involves learning and mistakes, and seek support from mentors and peers to stay motivated and confident in my skills.

-training analysis

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# skills developed/other knowledge gained

skills developed:

* programming language skills

During the internship, I improved my coding skills by working on real projects, writing cleaner and more efficient code. I also became more familiar with advanced features and best practices, which made me more confident in applying the programming languages and frameworks used.

* debugging and testing skills

I got better at identifying and fixing bugs by dealing with real-world issues, which required a step-by-step approach to problem-solving. I also learned how to write tests to catch potential issues early, making the code more stable and reliable.

* version control skills

Working with Git taught me how to manage code changes effectively, especially when collaborating with a team. I became more comfortable with branching, squashing, resolving merge conflicts, and following good practices to keep the codebase organized and easy to maintain.

* receiving and implementing feedback

Receiving feedback from experienced team members helped me improve my work. I learned how to take feedback positively, make changes based on suggestions, and use it as an opportunity to grow. This made me more open-minded and helped me create better quality code.

knowledge gained:

* code reviews

I gained valuable experience participating in code reviews, learning how to provide and receive constructive feedback. This process helped me understand the importance of writing maintainable code and following best practices.

* release train

I became familiar with the concept of release trains, understanding how companies schedule and manage regular software releases to ensure consistent delivery and minimize disruptions.

* tools for debugging

Through hands-on experience, I learned how to effectively use debugging tools to identify and fix issues in the code, making the development process more efficient.

* agile development

Working in an Agile environment gave me insight into iterative development, sprint planning, and daily stand-ups. I saw how this methodology helps teams stay organized and deliver value incrementally.

* internal tools

I was introduced to various internal tools that support workflows, from project management systems to developer platforms, helping me understand how these tools streamline collaboration and productivity.

* feature flag

I learned about feature flags and how they allow teams to toggle features on or off in production, enabling controlled rollouts and reducing the risk of disruptions.

* ci/cd pipeline

I gained knowledge about Continuous Integration and Continuous Deployment (CI/CD) pipelines, understanding how automation is used to streamline testing and deployment, ensuring faster and more reliable software releases.

* exposure to company culture and ethic

Working closely with professionals allowed me to experience the company’s culture and values, showing me how ethics and teamwork play a crucial role in creating a positive work environment.

* familiarity with industry trends

I kept up with industry trends by participating in discussions and observing how new technologies are adopted in the company. This exposure gave me insight into current best practices and emerging innovations in the tech world.

# suitability, strengths, weaknesses, etc..

strengths:

* curiosity and openness to feedback
  + Throughout my internship, I actively seek opportunities to learn by asking for tasks and exploring new areas of the project. I was open to constructive feedback from teammates, and manager, viewing it as a chance for me to improve and grow. This helped me quickly adapt to the company’s workflow and develop a deeper understanding of industry best practices.
* strong motivation and willingness to learn
  + I approached every task as an opportunity to learn and improve. Whether it was diving into big unfamiliar codebases or understanding complex systems, I stayed motivated and committed to mastering new concepts. This allowed me to take on challenges beyond my comfort zone and steadily improve my skills.
* Resilience
* Software development often comes with challenges, including debugging the codebase, unexpected issues occurring and tight deadlines. During these moments, I demonstrated resilience by staying focused, keeping a positive attitude, and continuing to push forward. I treated setbacks as learning experiences, which helped me become more efficient in problem-solving.
* strong work ethic and commitment
  + I consistently managed my time effectively to meet deadlines while maintaining the quality of my work. I stayed engaged in all aspects of the project, from coding to collaborative meetings, ensuring that I was a reliable and contributing member of the team. My commitment to delivering results helped build trust and reinforced my ability to thrive in a fast-paced environment.

weaknesses:

* limited practical experience
  + While I had a solid foundation in software development concepts. I realized that practical experience in a real-world setting is quite different. Some tasks took longer as I navigated complexities of working in a professional environment for the first time. However, with guidance from my mentors, I was able to improve gradually and become more comfortable with practical problem-solving.
* unfamiliarity with agile development practices
* Coming into the internship. I had limited exposure to Agile workflows, which are widely used in large tech companies. At first, I found it challenging to keep up with sprints, daily stand-ups, and iterative development cycles. Over time, however, I became more familiar with these practices, and by the end of my internship, I had gained a better understanding of how Agile improves team collaboration and efficiency.
* time management Issues
* Balancing multiple tasks and projects in a fast-paced environment was challenging at the beginning of my internship. I sometimes underestimated how long certain tasks would take, which led to minor delays. With feedback from the manager and my teams, I worked on prioritizing tasks more effectively and improved my ability to manage headlines as the internship progressed.
* difficulty working with large codebases
  + Working with a large, complex database was initially overwhelming, as it required understanding dependencies, following coding conventions, and maintaining consistency. I struggled at first to find my way around the code and make meaningful contributions. As time progressed, I was slowly adapting to the codebase by reviewing regularly.

opportunities

* understand company operations
  + I had the chance to observe how different teams collaborate to build and maintain large-scale applications. This experience gave me valuable insight into the inner workings of a big tech company, including workflows, decision-making processes, and how various roles come together to achieve common goals.
* high impact project involvement
  + Being involved in real-world projects allowed me to contribute directly to meaningful tasks. I worked on features that added value to the company’s product, which gave me a sense of accomplishment and a better understanding of how software solutions are implemented on a larger scale.
* mentorship and guidance
* Throughout my internship, I benefited from the guidance of experienced mentors. They provided feedback on my work, shared their experiences, and helped me overcome challenges, which contributed significantly to my growth as both a developer and a professional.
* Networking
  + I had the opportunity to connect with talented engineers and professionals from various backgrounds. These connections not only expanded my network but also gave me valuable insights into different career paths and perspectives within the tech industry.
* expose to new technologies
  + Working on different tasks introduced me to new tools, frameworks, and practices that I had not encountered before. This exposure broadened my technical skill set and made me more adaptable, better preparing me to work with emerging technologies in the future.

threats

* high expectations
  + Operating in a fast-paced environment meant there was constant pressure to perform at a high level. Meeting the company’s standards and expectations was demanding, and at times, it was overwhelming. However, this pushed me to stay focused and improve my performance under pressure.
* Miscommunication
  + Working with multiple stakeholders and across different teams sometimes led to miscommunication or misunderstanding of project requirements. These situations highlighted the importance of clear communication and alignment, and I learned to ask more questions to avoid confusion and keep tasks on track.
* rapid technological changes
  + The tech industry evolves quickly, and staying up to date with new tools and frameworks was a challenge. Adapting to rapid changes required continuous learning, and it underscored the need for flexibility and a growth mindset to remain effective in this dynamic field.

# application of subject knowledge gained in university to the industrial environment

* Object Oriented Analysis and Design (TCP2201)
  + Swift is an object-oriented programming language. For example, the relation between UITableView, UIScrollview, UIView and UIButton lies in the fundamental concepts of object-oriented design. By studying this subject, I have developed a deeper understanding of how these components are organized and interact with one another, making me a more thoughtful programmer. Plus, the codebase I worked with uses multiple object-oriented concepts demonstrating their practical use in real-world development.
* Software Designs (TSE3151)
  + Grab has been in the industry for over 12 years, which has grown in size and complexity over time. Understanding the fundamentals of good software design has become the standard practice of managing the app. Through this subject, I learned how to read the codebase effectively, and fit the puzzle of how they structured the modular application. The concepts such as separation of concerns, design patterns, modularity are applied throughout the system.
* Software Requirements Engineering (TSE2451)
  + Software Requirements Engineering plays a critical role in ensuring that software products align with the needs and expectations of users and stakeholders. During my internship, I saw firsthand how this subject translates into real-world development. I was involved in project requirements, participating in meetings to gather feedback, and managing evolving user needs, all of which aligned with the techniques I learned in TSE2451. Concepts such as requirement elicitation, traceability, and prioritization were directly applicable, helping me understand how companies manage product goals and prevent scope creep. This experience made me appreciate the importance of clear, well-documented requirements and continuous communication with stakeholders to ensure the success of a project.
* Software Engineering Fundamentals (TSE2101)
* The principles from Software Engineering Fundamentals (TSE2101) were directly applied during my internship. I followed the software development life cycle (SDLC) using Agile practices and worked with tools like Git for version control, reinforcing collaboration and code management. The knowledge from this course helped me understand how software projects are structured and managed, allowing me to contribute effectively to the team.
* Software Reliability and Quality Assurance (TIS3151)
  + This course taught me the importance of gathering, analyzing and validating requirements, which I leverage when collaborating with stakeholders to understand feature specifications. I put these skills to practice by breaking down requirements into clear, actionable tasks. Additionally, I actively apply agile practices, such as sprint planning and backlog refinement, to manage evolving requirements and prioritize tasks efficiently.
* Programming Language Translation (TCP2451)
  + As a swift developer, understanding deeper knowledge in native mobile application development is crucial. This course deepened my understanding of how programming languages are designed which can be beneficial for me to understand underneath the hood of Swift. For example, I better understand memory management concepts like Automatic Reference Counting (ARC) and how the Swift compiler translates high-level code into optimized machine instructions. It may not be directly related to my internship but it is crucial to become a great software engineer.
* Project (TPT3101)
  + The hands-on experience from TPT3101 proved highly valuable during my internship. Developing an app during the course taught me how to apply practical skills like coding, debugging, and testing in a structured way. These skills translated directly into the real-world environment, allowing me to work more effectively on tasks and contribute to projects. The experience also prepared me to manage timelines, handle challenges, and collaborate with a team.

# recommendation to others

Grab’s internship program gives a great chance to gain real-world experience at one of Southeast Asia’s top tech companies. The fast-paced environment helps interns take on real challenges and work on projects that make a difference. This hands-on experience builds important problem-solving skills and improves knowledge in areas like software development and product management.

Interns also get to work with skilled engineers and professionals from different fields, helping them grow both technically and professionally. With strong mentorship and helpful feedback, the program supports interns every step of the way. Grab’s focus on innovation and learning makes it a great place to explore new technologies and ways of working. For those looking to make a meaningful impact, build connections, and gain valuable experience in a dynamic tech environment, Grab offers the perfect platform to kickstart a career.

# Conclusion

My internship experience provided valuable insights into the operations of a leading tech company and allowed me to apply the knowledge gained from university in a real-world setting. Working at Grab gave me hands-on experience with meaningful projects, enhancing my skills in software development, problem-solving, and teamwork. I also had the chance to collaborate with experienced professionals, gaining guidance and feedback that supported my growth both technically and personally.

While I faced challenges such as adapting to remote work, managing time effectively, and working with complex codebases, these experiences helped me develop resilience, improve communication, and adopt a more structured approach to problem-solving. Exposure to new technologies, agile practices, and professional workflows has better prepared me for future opportunities in the tech industry. This internship was an enriching experience that sharpened my abilities and provided a deeper understanding of what it takes to thrive in a dynamic and fast-paced environment.

references

appendices