Internship at Versa Asia

22nd January 2025

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Introduction

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Matrix No.	**A21EC0032**
Position	**Developer Intern (Backend)**
Company Name	**Versa Asia**
Company Supervisor	**Nelson Wong**
Company Supervisor Position	**Chief Technical Officer (CTO)**

Company Overview

versa

What is Versa?

- A **digital wealth management app**
- Over **260,000** users
- Offers three key options: **Save, Invest & PRS**

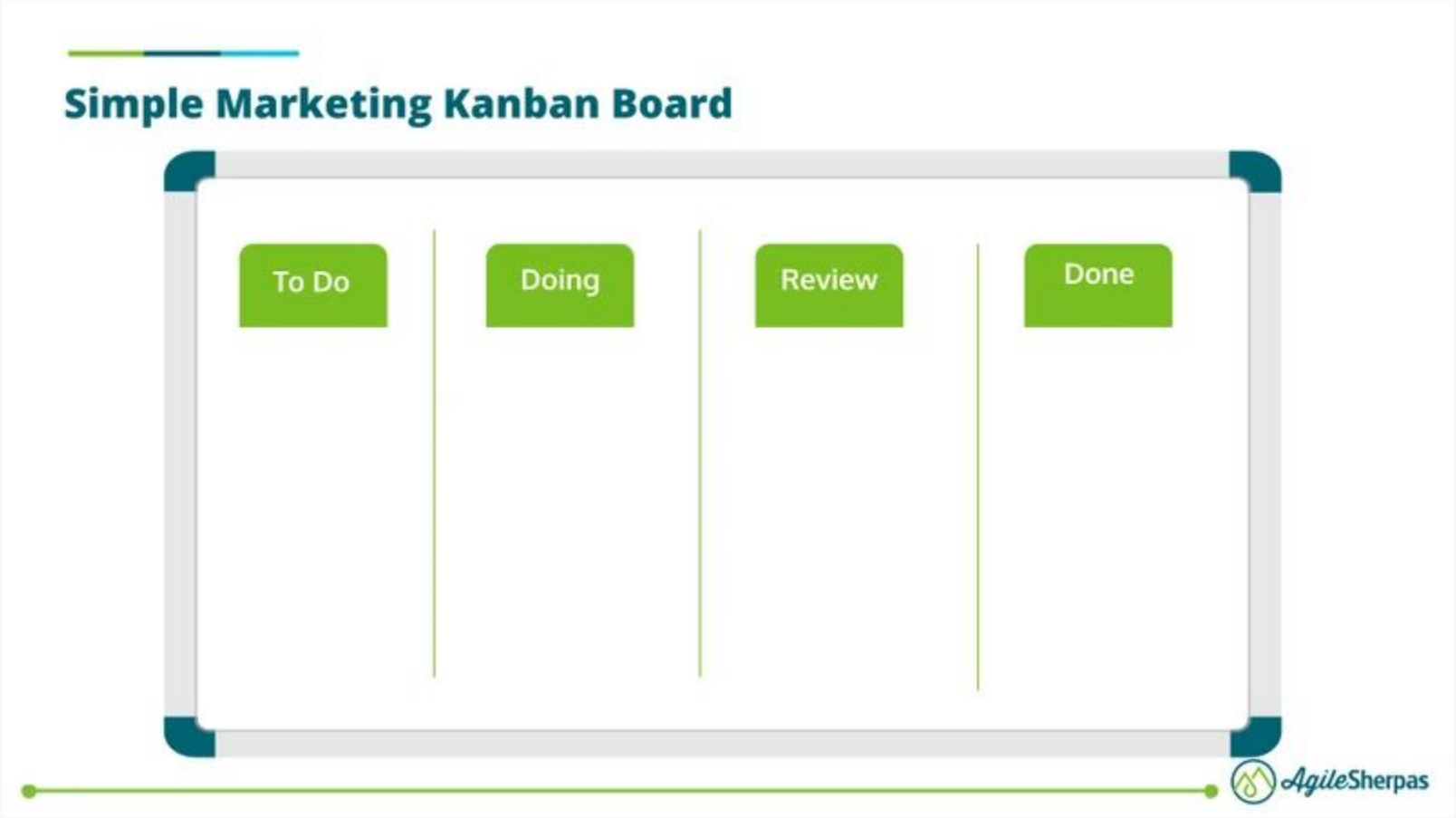
What is their mission?

- Empower Malaysians to **achieve financial wellness**
- Help Malaysians **make the most of their money**

What is the development process?

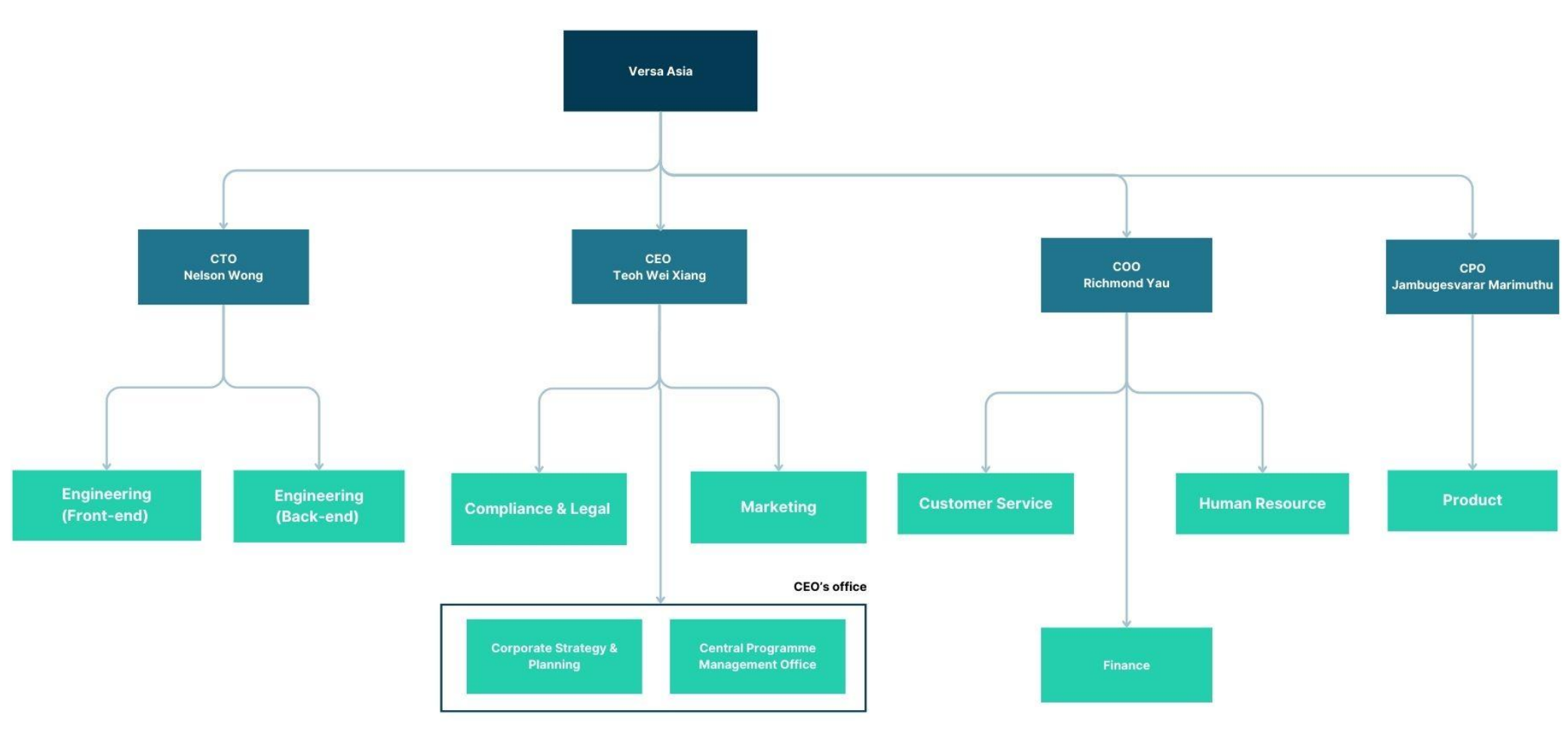
- Agile methodology
- Kanban practices
- Confluence for hosting documentations

Kanban Board



Company Overview

Versa's Organizational structure



My role

Position

Developer Intern (Backend)

Key Responsibilities & Task Assigned

- Research on features and bugs
- Implementation and development
- Enhancing current system

Key Projects

1. Enhancing Inbox API

Key Projects

1. Enhance existing **Inbox API**

What is inbox?

- Inbox is a feature in Versa mobile app where users can see their past notifications

Is current inbox sufficient?

- Current inbox only has a title and a text description
- Lack of interactivity and contents

What are the effects?

- Marketing team may not be able to fully engage with users
- Could potentially decrease user retention on the application

Key Projects

1. Enhance existing **Inbox API**

Issues

- Current inbox does not contain banner, highlights and CTA.
- Lack of interactivity and contents

Solution

- Modify the current API response to include banner, highlights and CTA

Knowledge acquired

- Reduce redundancy of codes in the codebase
    - Removed same interface type across numerous files
    - Applied one global type in a single file that can be used throughout the whole codebase

Outcome

- Having more rich-content and user-friendly inbox notification
- Helps marketing team to send more engaging content
- Helps retain app's rating

2. Stuck Transaction Project

Key Projects

2. Stuck Transaction Project

What is transaction?

- Transfer of user's money into or out from Versa
- Cashing in, cashing out and switching funds
- Usually will take multiple business days to be fully processed

What is stuck transaction?

- A transaction that has not been processed for multiple business days
- Could happen due to fault in Versa's internal system or from AHAM's system

What are the effects?

- Lost trust of users
- Company's reputation at risk

Key Projects

2. Stuck Transaction Project

Issues

- Versa's internal team does not have a list of stuck transactions
- Increasing reports of stuck transactions

Solution

- Create a cron script that automatically sends stuck transactions daily.
- Include remarks to help Versa's internal team figuring out why the transaction is stuck

Knowledge acquired

- Understanding financial flows
    - Gained knowledge regarding how Versa processes the transaction
- Enhancing communication skills
    - Collaborated and discussed with engineering team on potential solutions

Outcome

- Improved transaction integrity
- Improved user satisfaction
- Minimized potential company's reputational risk with unprocessed transaction

3. Manual PRS Transaction

Key Projects

3. Manual PRS Transaction

What is PRS?

- Private Retirement Scheme
- Comparable to KWSP and EDF
- Enjoy tax relief

How is it manually created?

- User deposited outside of Versa but in AHAM
- Transactions are then recorded in AHAM's database

What are the effects?

- Users are not able to see the PRS transaction in their application
- Having no transaction shown in app could decrease user friendliness

Key Projects

3. Manual PRS Transaction

Issues

- Manually created PRS transactions can not be seen in user's app

Solution

- Insert the manually created PRS transactions into Versa's DB
- Show the transactions in user's application

Knowledge acquired

- Concurrency and Google Pub/Sub
    - Gained knowledge regarding how to design codebase that is immune to concurrency issues
    - Event-driven architecture
- User-centric mindset
    - Able to understand user's needs and deliver transaction record on their mobile application

Outcome

- Increased user experience
- Reduce user confusion regarding PRS transaction
- Increased user's accuracy in transaction records

Things I’ve learned

From university and applied in industry

Technical Skills

Things I've learnt, pt I

Applied from university

1. **Basic programming syntax**
    a. Conditionals
    b. Functional programming
2. **Data Structure and Algorithms**
    a. Queue structure
3. **Web Programming**
    a. REST API
4. **Database**
    a. Data relations
5. **System Design**
    a. Sequence Diagram
    b. Flowchart
    c. Pseudocode

Soft Skills

Things I've learnt, pt I

Applied from university

1. **Communication skills**
    a. Engaged in discussion
    b. Contribute own opinion to the discussion
2. **Problem solving**
    a. Identify issues in codebase step-by-step
3. **Critical thinking**
    a. Researching articles and project assignments to come up with solutions

Things I’ve learned

From industry and not in university

Things I've learnt, pt II

Obtained from industry

1. **NoSQL database**
    a. Document-type database
    b. Unique query
2. **Typescript language**
    a. Language built on top of Javascript
    b. Introduced typing to Javascript
3. **Code convention and efficiency** *
    a. Coding style for easier debugging (readable and understandable)
4. **Architecture** *
    a. Microservices
    b. Google Cloud Platform features
5. **GitHub management** *
    a. Pull Requests
    b. Proper flow
6. **CI/CD**
    a. Jenkins and deployment
    b. Kubernetes
    c. Dev/Ops

Soft Skills

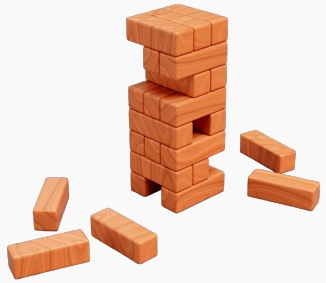
Things I've learnt, pt II

Gained from the industry

1. **Problem solving in Real World scenarios**
    a. Dealing with problems that don't have textbook solutions
    b. Think two steps ahead before deploying to thousands of users
2. **Professional environments**
    a. Hands on experience with specialized tools
    b. Learning proper flows and processes unique to the organization
3. **Understanding business metrics**
    a. Deeper understanding regarding users needs and wants
    b. Understanding of different teams needs in the organization

Challenges and Overcoming Them

Challenges and insight



Challenges	Approach
Adapting to the work environment	Observe how the team works, and provide more context in daily standup regarding tasks and ask guidance from senior engineers
Lack of Familiarity With Technologies Used	Research using numerous sources on internet and experimenting with each knowledge earned
Time Management	Prioritizing tasks based on difficulty and urgency helps tasks completion within time given

Future Goals

Future Goals

Short term goals

- Continue learning in software engineering
- Strengthen soft skills

Long term goals

- Lead team or my own startup
- Contribute innovations to the community

Career Aspirations

- To become a skilled software engineer
- To lead innovative projects in future business opportunity

Q & A session


Welcome back,
Elizabeth
Total Assets
RM8,717.06
Versa Cash
RM3,518.38
Versa Invest
RM5,199.06
Get RM10 for
& your
Challenge
13,000!

Thank You