### Log Book On 23-09-2024

#### **OBJECTIVE**

- 1. Set up the development environment
- 2. Begin work on AremaETL project, as per supervisor's guidelines.

### **ACTIVITIES**

- 1. Set up email, Microsoft Teams, Microsoft Office (Outlook), and other tools.
- 2. Reviewed the project guideline to understand the context of the project.
- 3. Installed appropriate software: DBeaver, ActiveMQ, Java, Maven, Postman etc.
- 4. Cloned AremaPortal and AremaETL repositories.
- 5. Created an Excel sheet to organize daily scripts.
- 6. Configured the software and ran scripts for Arema project.

#### **ACHIEVEMENTS**

- 1. Successfully set up the complete development environment.
- 2. Resolved configuration issues and successfully launched AremaPortal.
- 3. Executed all necessary SQL scripts for the project, contributing to my growth as a software engineer by enhancing my problem-solving skills, increasing my familiarity with enterprise tools, and deepening my understanding of ETL processes.

### Log Book On 24-09-2024

#### **OBJECTIVES**

- 1. Update the ETL installation guideline based on personal experience with AremaETL configuration ACTIVITIES
  - 1. Tracked steps and issues encountered during AremaETL configuration.
  - 2. Updated unclear instructions in the existing guideline.
  - 3. Added missing sections, such as SpringToolSuite installation within the development environment.
  - 4. Created a new section for AremaETL installation.
  - 5. Documented setup processes, including Apache Maven, ActiveMQ, Finexus SpringBoot Base jar, and Database Initialization & Data Insertion.
  - 6. Finalized and completed the ETL installation guideline.
  - 7. Sent the updated guideline to Mr. Soo.

### **ACHIEVEMENTS**

- 1. Successfully updated the ETL installation guidelines by clarifying instructions and adding new sections for improved comprehension.
- 2. Delivered the revised guideline to Mr. Soo.

### Log Book On 25-09-2024

### **OBJECTIVES**

- 1. Update the local database
- 2. Import dev database into local machine and test its connectivity

### **ACTIVITIES**

- 1. Updated the local database with new scripts from the Arema daily check-in ETL.
- 2. Exported and combined multiple SQL files into a single file to streamline the database import process, reducing setup time for future uses.
- 3. Received and completed Leeks Timesheet, including previous missed entries.
- 4. Gained access to the dev database and imported it into local DBeaver.

- 5. Tested the connection of dev database, by uploading a file to a defined ETL rule.
- 6. Continued reading project documentation and codebase.

#### **ACHIEVEMENTS**

- 1. Optimized the database setup process, significantly reducing the time required.
- 2. Completed and submitted the Leeks Timesheet.
- 3. Successfully connected to the dev database and did some testing, which results in success.

### Log Book On 26-09-2024

# **OBJECTIVES**

- 1. Configure the dev database and set up initial file configurations based on template.
- 2. Define a new company entry in the database for learning purpose

### **ACTIVITIES**

- 1. Continued configuring the dev database.
- 2. Attended a meeting with staff Mr Lim.
- 3. Created a custom company named TFQ (TAUFIQ) as a learning exercise to better understand the process of defining new clients within the database
- Created SQL scripts for several file configuration table (DELETE FROM, INSERT INTO).
- 5. Successfully initialized a file upload to the dev database under a demo company folder named TFQ

### **ACHIEVEMENTS**

- 1. Better understanding of the process Extract, Transform, Load
- 2. Successfully created SQL scripts to insert new company configuration, following the guideline.
- 3. Completed a demo file\_upload under the TFQ folder as a trial setup for future client configurations.

#### Log Book On 27-09-2024

### **OBJECTIVES**

1. Configure the dev database and set up file group configurations, ensuring successful file group record.

#### **ACTIVITIES**

- 1. Fix yesterday's scripts that did not match the expected format, for successful file group record.
- 2. Created several new scripts for file group configurations.
- 3. Updated the mg.properties to connect to a hosted invoice mg provider.
- 4. Successfully created an entry for the file group without any errors, with the status of 00.
- 5. Reviewed the MQ specification documentation for further understanding.

- Achieved a successful configuration of the file group table with correct script formatting.
- 2. Completed the creation of a file group entry without encountering any issues, allowing me to better understand the flow of ETL steps in the system.

### Log Book On 30-09-2024

#### **OBJECTIVE**

1. Gain understanding of ETL flow and dependencies in the AremaETL project.

#### **ACTIVITIES**

- 1. Visited the KL Branch and requested an access card for Finexus Campus.
- 2. Met with several other interns introduced by Ms. Hani, and had a tour of Finexus Campus (KL Branch).
- 3. Conducted self-study on the ETL format and process flow.
- 4. Continued reviewing ETL rules, focusing on common functions and building destination data.
- 5. Worked on understanding the dependencies between different tables in the ETL process.

#### **ACHIEVEMENTS**

- 1. Familiarized myself with the Finexus Campus environment and met key contacts.
- 2. Enhanced understanding of the structure and flow of the ETL process.
- 3. Developed a clearer understanding of table dependencies, preparing for more advanced tasks in the AremaETL project.

### Log Book On 01-10-2024

# **OBJECTIVE**

1. Continue configuring ETL scripts and resolving issues related to the AremaETL project.

#### **ACTIVITIES**

- 1. Worked on configuring ETL scripts at the KL Branch.
- 2. Successfully created data.body with the required configuration by extracting columns from the original Excel file and appending the necessary columns.
- 3. Continued studying the documentation to further understand the process.
- 4. Encountered an issue while creating an entry in the invoice database and troubleshooting the problem.
- 5. Had a discussion with team about how to verify file entry (view log) in invoice module database, by using Kubernetes

# **ACHIEVEMENTS**

- 1. Successfully configured the data.body, enhancing my ability to handle ETL script customizations.
- 2. Made progress in understanding the documentation for ETL, contributing to my knowledge base.
- 3. Identified a roadblock in the invoice database entry process, which will guide my focus for troubleshooting in the next session.

### Log Book On 02-10-2024

#### **OBJECTIVE**

1. Resolve script issues and establish a successful connection to the invoice (external) module in the AremaETL project.

### **ACTIVITIES**

- 1. Connected successfully to the external invoice module.
- 2. Fixed ETL scripts according to MQ specifications.
- 3. Resolved some misconfigurations in the scripts to ensure proper functionality.
- 4. Successfully created a database entry in the invoice database (SIT environment) for customer etl.

- 1. Established a connection with the invoice module, facilitating further integrations.
- 2. Corrected script errors as per MQ requirements, ensuring smoother data processing.

- 3. Fixed misconfigurations in the ETL scripts, improving overall workflow accuracy.
- 4. Successfully added an entry in the invoice database, demonstrating progress in handling data transactions within the system.

### Log Book On 03-10-2024

#### **OBJECTIVE**

1. Expand knowledge of command-line tools and work on new ETL rules for the invoice module in the AremaETL project.

### **ACTIVITIES**

- 1. Downloaded and set up Putty for SSH access.
- 2. Learned how to use several command-line tools in Kubernetes (e.g., grep, ls, etc.).
- 3. Viewed and analyzed file logs to troubleshoot and monitor processes.
- 4. Created new ETL rules, having previously worked on customer profile rules.
- 5. Studied and applied common functions and conditions in the ETL rules.

#### **ACHIEVEMENTS**

- 1. Gained proficiency in using Putty and essential Kubernetes command-line tools, enhancing efficiency in managing the environment.
- 2. Successfully created ETL rules for the invoice module, expanding my contribution to different modules in the project.
- 3. Improved understanding of common functions and conditions, allowing for more sophisticated rule creation and configuration in ETL scripts.

### Log Book On 04-10-2024

#### **OBJECTIVE**

- 1. Enhance knowledge of security regulations
- 2. Continue working with common ETL functions.

### **ACTIVITIES**

- 1. Morning Attended an intern meeting focused on security and safety regulations.
- 2. Learned important precautions regarding information security awareness and best practices.
- 3. Afternoon Continue working on scripts and gained an understanding of the group common rule function and the SUM function in ETL.
- 4. Continued exploring and using other common ETL functions, such as MATH, SUM, and VALMAP.

- 1. Developed awareness of security protocols and practices, ensuring compliance with company regulations.
- 2. Improved understanding of group common rule functions and their applications in ETL scripts.
- Successfully applied various common functions (MATH, SUM, VALMAP), enhancing the complexity and functionality of ETL rule creation.

### Log Book On 07-10-2024

#### **OBJECTIVE**

1. Continue working on ETL rules and complete the first draft of necessary scripts for the AremaETL project learning.

### **ACTIVITIES**

- 1. Continued working on ETL rules and processes.
- 2. Imported Notepad++ macro to assist with scripting tasks, provided by team.
- 3. Worked on the rules using Excel for organizing and formatting.
- 4. Conducted revision and research on different types of invoicing and the invoicing process to better understand the implementation.
- 5. Completed the first draft of scripts for all configurations.

#### **ACHIEVEMENTS**

- 1. Successfully imported the Notepad++ macro, which improved scripting efficiency.
- 2. Completed the first draft of multiple ETL configuration scripts, which are key steps in the ETL rule creation process.
- 3. Gained a deeper understanding of invoicing processes, preparing for implementation of related ETL logic.

### Log Book On 08-10-2024

#### **OBJECTIVE**

1. Configure the ETL rules, troubleshooting for invoice file uploads and verify entry in invoice module.

### **ACTIVITIES**

- 1. Configured the ETL database locally after the hosted ETL database connection failed.
- 2. Tested the file upload for invoice, but it did not work due to missing initial configurations for the new local database.
- 3. Fixed the database configuration issue.
- 4. Uploaded the file into the system again, but the file was still not working due to other issues.
- 5. Fixed multiple file configuration issues (including typos, missing configurations, and incorrect configurations).
- 6. Submitted the file again to the system, resulting in an invoice being created in the invoice database, but with some exceptions.
- 7. Fixed the exception, ensuring the invoice is now created without any errors or exceptions.
- 8. Figured out how to use VALMAP common function to fetch data from table.
- 9. Fixed the invoice enrichment error.

#### **ACHIEVEMENTS**

- 1. Successfully set up the ETL database locally, allowing for further testing and configuration.
- 2. Resolved several critical configuration issues related to file upload and invoice creation.
- 3. Fixed exceptions in the invoice creation process, resulting in error-free invoice generation.
- 4. Improved understanding of the system's file upload and enrichment processes.
- 5. Identified future configurations that will improve robustness (null checks, thousands separator).

# Log Book On 09-10-2024

# OBJECTIVE

1. Continue ETL rule configuration, focusing on KCC rules, and test the invoice uploading process.

### **ACTIVITIES**

- 1. Uploaded an invoice for testing, and it was successful.
- 2. Self-studied the elnvoicing process to better understand its workflow and implementation Differences between consolidated, self billed and individual.
- 3. Read some news and information regarding LHDN e-Invoice requirements.
- 4. Received KCC rules and requirements from Mr. Lim. The task now involves configuring ETL rules for a client (KCC), moving beyond training and practice phases.
- 5. Started configuring the ETL rules for KCC.
- 6. Reviewed TECHNIP and COLGATE rules for reference and best practices.
- 7. Completed the file configuration scripts (etl rules not yet).
- 8. Created a template for configuring future ETL rules to standardize the process and improve efficiency.

### **ACHIEVEMENTS**

- 1. Successfully tested the invoice upload, ensuring proper functionality.
- 2. Gained a deeper understanding of the elnvoicing process, preparing for future configurations.
- 3. Completed initial KCC file configuration scripts as per client requirements.
- 4. Developed a reusable template for configuring ETL rules, streamlining future work.

### Log Book On 10-10-2024

### **OBJECTIVE**

1. Continue configuring KCC ETL rules and test it.

### **ACTIVITIES**

- 1. Continued configuring the KCC ETL rules.
- 2. Referred back to TECHNIP and COLGATE rules to ensure required columns.
- 3. Drafted the rules in Excel initially, then used Notepad++ with macros to streamline the scripting process.
- 4. Completed the scripts for all rule configurations related to the KCC project.
- 5. Fixed some misconfigurations found in the files during the process.
- 6. Requested the KCC file template to test the correctness of the configured rules and validate the implementation.

#### **ACHIEVEMENTS**

- 1. Finalized the scripts for all required KCC rule configurations.
- 2. Identified and resolved file misconfigurations, ensuring smoother testing in the next phase.

### Log Book On 11-10-2024

### **OBJECTIVE**

- 1. Self study.
- 2. Test KCC invoice file upload with SFTP (not achieved file not ready).

#### **ACTIVITIES**

- 1. Requested the client file template from my supervisor, and he contacted QA for the file.
- 2. QA was unable to provide the file that day.
- 3. Thus, as the file is not ready yet, I self study regarding the SQL file and rule configurations, read the MQ Specification (documentation for elnvoice creation).
- 4. I also did some research about SpringBoot and read the project code to understand the flow of the extract, transform and load process.

### **ACHIEVEMENTS**

1. Gained a deeper understanding of the ETL process from a code standpoint and the MQ Specifications for elnvoicing.

#### WEEK 4

# Log Book On 14-10-2024

#### **OBJECTIVE**

1. Practice creating invoices and prepare for SQL KCC file testing.

#### **ACTIVITIES**

- 1. Practiced creating invoices to solidify my understanding of the process.
- 2. Created an entry for a new FCSB invoice as part of ongoing training.
- 3. Developed a template for the KCC file, while still waiting for the actual file from the QA team.

# **ACHIEVEMENTS**

- 1. Gained further experience in invoice creation by using the Arema system.
- 2. Prepared the KCC file template ahead of time to expedite testing once the QA team provides the necessary file.

### Log Book On 15-10-2024

### **OBJECTIVE**

1. Study invoicing, elnvoice requirements, and gain a better understanding of AREMA as a system.

#### **ACTIVITIES**

- 1. Learned about the invoicing process and how it integrates with ETL.
- 2. Studied the elnvoice requirements according to LHDN.
- 3. Read various online articles and watched videos to learn more about invoicing and taxation.
- 4. Gained a comprehensive understanding of the invoice process, from ETL, through creation, to reporting.
- 5. Watched several AREMA-related videos created by Finexus (accessed via LinkedIn) to understand how AREMA operates as a system used by clients.

### **ACHIEVEMENTS**

- 1. Developed a solid understanding of the elnvoice process and LHDN requirements.
- 2. Improved my knowledge of the full invoice lifecycle, from ETL through to reporting.
- 3. Enhanced understanding of the AREMA system, its purpose, and how it benefits clients.

### Log Book On 16-10-2024

# **OBJECTIVE**

1. Test KCC invoice configuration and gain exposure to SECURITYWORKS interface.

#### **ACTIVITIES**

- 1. Attended Finexus Campus.
- 2. Received the MPI template for further work, as a reference for KCC.
- 3. Extracted the invoice details from the MPI template to input into KCC for testing purposes.
- 4. Was introduced to the invoice web interface and details relevant to the KCC project.
- 5. Fixed several scripts that did not align with the correct rules, such as: sheet name corrections, modifying SELECT statements and adjusting the itemuuid() function usage.

### **ACHIEVEMENTS**

- 1. Gained practical experience with the invoice web interface for KCC.
- 2. Successfully extracted and input invoice details for testing in KCC.
- 3. Corrected important script issues, ensuring better adherence to project requirements.

Log Book On 17-10-2024 OBJECTIVE 1. Input legacy data (other client data) for testing purposes.

#### **ACTIVITIES**

- 1. Finalized some of the rules for KCC testing.
- 2. Used one of the other client's entries to input data for KCC testing.
- 3. The test resulted in a successful entry, though some parts encountered exceptions as certain rules and requirements are still pending clarification (TBC by the client).

### **ACHIEVEMENTS**

- 1. Successfully completed a test entry for rules configured showing there is no issue logic wise with the rules.
- 2. Identified areas where rules need further refinement once client feedback is provided.

### Log Book On 18-10-2024

### **OBJECTIVE**

1. Understand and prepare for the implementation of the updated KCC rules.

#### **ACTIVITIES**

- 1. Received a new update to the KCC rules.
- 2. Reviewed the updated KCC rules to understand the recent changes.
- 3. Noted down specific configurations required for the updated rules.
- 4. Conducted self-study on the rules to ensure accurate implementation.

- 1. Developed a comprehensive understanding of the new KCC rule updates.
- 2. Documented necessary configuration changes to streamline the implementation process.

### Log Book On 21-10-2024

#### **OBJECTIVE**

1. Implement updates to the template rules.

#### **ACTIVITIES**

- 1. Received a new task to update the template rules.
- 2. Created several new SQL configurations / rules for the template, including a rule to check totalCount.
- 3. Reviewed other scripts to ensure the accuracy and consistency of the rules.
- 4. Continued configuring the rules have not tested yet

#### **ACHIEVEMENTS**

- 1. Successfully created and updated rules to enable totalCount checks.
- 2. Verified rule configurations against other scripts for correctness.

### Log Book On 22-10-2024

#### **OBJECTIVE**

1. Debug issues in the updated template scripts.

#### **ACTIVITIES**

- 1. Began debugging issues in the template scripts/rules.
- 2. Downloaded several software like BareTail, to debug the log file.
- 3. Continued debugging, but the error still persists, from morning to evening; work on template rules is currently on hold to prioritize KCC tasks.

#### **ACHIEVEMENTS**

- 1. Got to learn how to debug with STS more efficiently.
- 2. Learn how to use software like BareTail to debug efficiently with the Highlight feature and others.

### Log Book On 23-10-2024

### **OBJECTIVE**

1. Continue configuring KCC rules and test new script implementations.

### **ACTIVITIES**

- 1. Continued configuring KCC rules based on recent updates.
- 2. Added new scripts according to the latest rules.
- 3. Updated the Excel file to document changes and configurations.
- 4. Fixed several existing scripts to align with updated requirements.
- 5. Tested the rules by uploading a file into the invoice module.
- 6. Invoice module server/db was down in the evening (~530pm), so need to wait for tomorrow to test the rules.

### **ACHIEVEMENTS**

- 1. Successfully implemented new configurations for KCC rules.
- 2. The updated KCC rules are ready to be sent to the QA team after testing.

### Log Book On 24-10-2024

### **OBJECTIVE**

1. Finalize KCC rule configurations and resume work on debugging template rules issues.

#### **ACTIVITIES**

1. Continued configuring KCC rules and deleted outdated scripts unrelated to the updated rules.

- 2. Adjusted file input columns and overall input structure.
- 3. Conducted multiple tests, and after several iterations, the test was successful.
- 4. Compiled and sent the finalized KCC scripts to the supervisor, marking the task complete for now.
- 5. Resumed work on the template configuration task, focusing on identifying issues in the database or scripts.
- 6. Attended a meeting with the supervisor for guidance and troubleshooting support on the template rules.

### **ACHIEVEMENTS**

- 1. Successfully completed the KCC rule configurations and confirmed functionality through testing.
- 2. Made progress on the template task with supervisor assistance, further identifying areas needing attention.

# Log Book On 25-10-2024

### **OBJECTIVE**

1. Complete debugging and finalize the FINTANI scripts for transaction and cancellation processes.

#### **ACTIVITIES**

- 1. Continued debugging template scripts, focusing on error resolution.
- 2. Cleaned the project by fixing dependencies and imports.
- 3. Conducted a thorough debugging session to identify issues.
- 4. Found the root issue within the scripts for delflag scripts.
- 5. Fixed the identified issue.
- 6. Finalized the scripts for both transaction and cancellation processes.

#### **ACHIEVEMENTS**

1. Successfully resolved the issue in the template scripts.

#### WEEK 6

### Log Book On 28-10-2024

#### **OBJECTIVE**

1. Work on creating SQL rules for full invoice template configuration.

#### **ACTIVITIES**

- 1. Spent the entire day working on creating new full invoice rules.
- 2. Developed rules that encompass both buyer and supplier requirements. Buyer Role, Supplier Role of invoice
- 3. Focused on ensuring the buyer and supplier rules were correctly implemented to match the full invoice process.

### **ACHIEVEMENTS**

- 1. Successfully created the full invoice rules, covering both buyer and supplier configurations.
- 2. Made significant progress in aligning the new rules with the invoice process.

### Log Book On 29-10-2024

#### **OBJECTIVE**

1. Work on template scripts/rules and prepare for testing.

#### **ACTIVITIES**

- 1. Spent the entire day working on template rules.
- 2. Set up the necessary files for the template folder to enable testing.
- 3. Fixed the transaction and cancellation scripts.

#### **ACHIEVEMENTS**

- 1. Successfully prepared the template scripts and files for testing.
- 2. Made key fixes to the transaction and cancellation scripts, improving their functionality and validation processes.

# Log Book On 30-10-2024

### **OBJECTIVE**

1. Finalize template rules based on updated requirements.

### **ACTIVITIES**

- 1. Worked on template rules throughout the day.
- 2. Managed several changes in requirements from the QA team.
- 3. Received the necessary file from QA for further adjustments.
- 4. Finalized the template rules according to the updated requirements.
- 5. Did some testing on the rules.
- 6. Sent the completed template rules to the supervisor for review.

### **ACHIEVEMENTS**

- 1. Successfully implemented the updated requirements for the template rules.
- 2. Completed and sent the final version of the rules to the supervisor.

### Log Book On 01-11-2024

## **OBJECTIVE**

Day of Leave

### **ACTIVITIES**

Family matter

# ACHIEVEMENTS

1. N/A

### Log Book On 04-11-2024

#### OBJECTIVE

1. Expand knowledge about Unit Testing (mainly focusing on Java - JUnit test case).

#### **ACTIVITIES**

- 1. Conducted additional testing for the template file to verify that the rules are correctly implemented (previous week work verification).
- 2. Learned Unit Testing fundamentals to enhance test coverage.
- 3. Studied the concept of Mockito for creating mock objects in Unit Tests.
- 4. Researched Unit Testing methods specifically for file browse and file group browse functions.

#### **ACHIEVEMENTS**

- 1. Verified the accuracy of the template file rules through testing.
- 2. Developed a foundational understanding of Unit Testing and Mockito.

### Log Book On 05-11-2024

#### **OBJECTIVE**

- 1. Understand the code structure of Arema ETL browse method
- 2. Complete KCCP configuration.

#### **ACTIVITIES**

- 1. Reviewed the code for the browse and other related methods to grasp the underlying concepts.
- 2. Analyzed and documented conditions and outlined test cases for effective coverage.
- 3. Got another task to work on KCCP configuration (previously focused on KCCC configuration).
- 4. Did KCCP configuration accordingly
- 5. Sent the completed KCCP configuration to the supervisor for feedback.
- 6. Continued learning about test case development to enhance testing skills.

### **ACHIEVEMENTS**

- 1. Developed a deeper understanding of the browse method and relevant code structure.
- 2. Successfully completed and submitted the KCCP configuration to the supervisor.
- 3. Progressed in test case formulation, building foundational skills in testing.

### Log Book On 06-11-2024

#### **OBJECTIVE**

1. Begin developing test cases for FileBrowse & FileGroupBrowse and deepen understanding of test case design.

### **ACTIVITIES**

- 1. Started writing test cases for FileBrowse, focusing on different conditions and expected outcomes.
- 2. Continued learning about test case design principles for improved coverage and effectiveness.
- 3. Reviewed the codebase to understand the program flow and identify areas critical for testing.
- 4. Engaged in a discussion with Mr. Lim Swee Keong to clarify concepts and best practices in test case formulation.

### **ACHIEVEMENTS**

- 1. Initiated the creation of some test cases for FileBrowse.
- 2. Gained insights into effective test case design through study and guidance from Mr. Lim.

Log Book On 07-11-2024

**OBJECTIVE** 

- 1. Test case development for FileBrowse and FileGroupBrowse
- 2. Update template scripts

#### **ACTIVITIES**

- 1. Continue writing test cases for FileGroupBrowse, focusing on thorough condition coverage.
- 2. Developed parameterized test cases to streamline testing and improve flexibility.
- 3. Learned from Mr. Lim Swee Keong about advanced topics, including test cases, dependency injections, and the builder design pattern.
- 4. New task received Updated the template scripts to reflect changes requested by QA, specifically modifying the Internal Group Code.
- 5. Sent the finalized test cases to Mr Lim.

#### **ACHIEVEMENTS**

- 1. Finished the test cases and sent for verification.
- 2. Enhanced understanding of design patterns and testing techniques through discussions with Mr. Lim.
- 3. Successfully updated template scripts to align with new requirements.

### Log Book On 08-11-2024

### **OBJECTIVE**

1. Gain foundational knowledge of Apache Spark and explore the factory design pattern.

#### **ACTIVITIES**

- 1. Studied Apache Spark, focusing on its core components and operation.
- 2. Watched videos to understand how Spark processes data and its core functionalities.
- 3. Wrote a small Java program using Spark that reads from a CSV file and calculates the occurrence of each word in the file.
- 4. Explored the factory design pattern in depth to enhance software design skills.

- 1. Acquired a solid understanding of Apache Spark's fundamentals and core components.
- 2. Successfully implemented a basic word count program in Java using Spark.
- 3. Strengthened knowledge of the factory design pattern for application in future tasks.

### Log Book On 11-11-2024

#### **OBJECTIVE**

1. Set up testing files and experiment with performance comparisons between Excel and CSV.

#### **ACTIVITIES**

- 1. Configured new testing file configuration for performance evaluation.
- 2. Planned and initiated an experiment to compare the performance of Excel files versus CSV files.
- 3. Encountered a configuration issue with the Excel footer and proceeded with the experiment without implementing footer format.
- 4. Tested the CSV file using a dataset of 90k rows, but faced limitations due to laptop processing power.

#### **ACHIEVEMENTS**

1. Completed the initial configuration of testing files.

### Log Book On 12-11-2024

#### **OBJECTIVE**

- 1. Continue performance experiments.
- 2. Understand process and fix bug of Insert Transaction URN.

#### **ACTIVITIES**

- 1. Code bug
  - 1. Read the code and gained a deeper understanding of its workflow.
  - 2. Created a new branch for testing and bug replication.
  - 3. Received a file to replicate a reported error and began addressing it.
- 2. File Experiment
  - 1. Continued the performance experiment by reducing data volume.
  - 2. Tested with 3.5k rows across 10 files rather than 9k records across 10 files.
  - 3. Laptop handled up to the 8th file before encountering an out-of-memory error.
  - 4. Presented the experiment's output and failure findings to Mr. Lim for feedback.

### **ACHIEVEMENTS**

- Successfully initiated the process before fixing the insert transaction URN bug.
- 2. Progressed with the performance testing and presenting findings to Mr Lim.

### Log Book On 13-11-2024

### **OBJECTIVE**

- 1. Resolve JIRA issues fix file template (previously was misconfigured by me :< ) SQL
- 2. Fix Insert TRX bugs Java code

#### **ACTIVITIES**

- 1. Fix template configuration
  - 1. Received a JIRA issue related to template configuration.
  - 2. Updated the template configuration based on the reported issue.
  - 3. Conducted experiments with the checkAmount function to ensure its correctness and functionality.
- 2. Fix bug
  - 1. Created a new branch to address the bug in the insert transaction URN process.
  - 2. Fixed the code for the bug and created a pull request for review.

#### **ACHIEVEMENTS**

1. Successfully made progress on the template configuration - have not completed yet.

- 2. Gained insights from experimenting with the checkAmount function.
- 3. Completed and submitted a pull request for the insert transaction URN bug fix.

### Log Book On 14-11-2024

### **OBJECTIVE**

- 1. Finalize template configuration
- 2. Continue performance experiments.

### **ACTIVITIES**

- 1. Did some finishing touch to the template configuration
- 2. Completed and submitted the configuration to the supervisor.
- 3. Continued the performance experiment, testing with adjusted data sizes, allocate different memory for the IDE.
- 4. Encountered limitations due to excessive memory consumption, as the laptop was not powerful enough to handle the dataset efficiently.
- 5. Reported the experiment's findings and challenges to Mr. Lim for further guidance.

### **ACHIEVEMENTS**

- 1. Successfully finalized and sent the template configuration to be reviewed in SIT.
- 2. Identified key performance issues during the experiment and shared findings for resolution planning.

# Log Book On 15-11-2024

### **OBJECTIVE**

1. Take an annual leave

#### **ACTIVITIES**

1. Attending family matter

#### **ACHIEVEMENTS**

1. Attended family matter

### Log Book On 18-11-2024

#### **OBJECTIVE**

1. Install and configure SonarQube and SonarScanner for code quality analysis.

#### **ACTIVITIES**

- 1. Installed SonarQube and SonarScanner for continuous integration and code quality checks.
- 2. Configured SonarQube and SonarScanner for the project.
- 3. Requested details for SonarQube configuration to ensure proper setup.
- 4. Completed the configuration for both SonarQube and SonarScanner, ensuring proper integration for code quality monitoring.

#### **ACHIEVEMENTS**

- 1. Successfully installed and configured SonarQube and SonarScanner.
- 2. Ensured all configurations were completed and access was requested to integrate the tools into the development workflow.

### Log Book On 19-11-2024

### **OBJECTIVE**

 Understand the relationship between @ConditionalOnProperty and ApplicationContext.getBean().

### **ACTIVITIES**

- Conducted an experiment on the behavior of ApplicationContext.getBean() with @ConditionalOnProperty.
- 2. Created a simple Spring Boot project to test and verify findings regarding bean initialization.
- 3. Documented and shared the findings with Mr. Lim.

#### **ACHIEVEMENTS**

- 1. Discovered that if @ConditionalOnProperty evaluates to false, attempting to retrieve the bean using ApplicationContext.getBean() results in a "bean not found" error.
- 2. Gained a deeper understanding of Spring's conditional bean management.

### Log Book On 20-11-2024

### Objective

1. Take MC

# Activities

- 1. Go to clinic
- 2. Rest

### Achievement

1. Body recovery

### Log Book On 21-11-2024

### **OBJECTIVE**

1. Develop and test STRUCT and LISTSTRUCT common functions.

### **ACTIVITIES**

- 1. Assigned two new tasks: implementing STRUCT and LISTSTRUCT common functions.
- 2. Analyzed the existing codebase to understand the process flow and integration points.
- 3. Began working on the STRUCT common function.
- 4. Started writing test cases for the STRUCT function to ensure correctness and coverage.

- 1. Gained insights into the implementation of STRUCT and LISTSTRUCT functions.
- 2. Initiated development and testing of the STRUCT function.

### Log Book On 22-11-2024

### **OBJECTIVE**

- 1. Complete the STRUCT common function and integrate it into the system.
- 2. Create new branch for bugfix into UAT branch.

### **ACTIVITIES**

- 1. STRUCT Common Function
  - 1. Completed the STRUCT common function and developed comprehensive unit test cases (using parameterized test cases and good test case practices).
  - 2. Requested necessary access permissions for repository operations.
  - 3. Created a pull request for the Arema ETL Gateway branch, to merge the changes.
- 2. Bugfix
  - 1. Created a new branch from the Arema ETL UAT branch to address additional issues.
  - 2. Updated code to fix a bug identified during development.
  - 3. Submitted a pull request to the Arema ETL UAT repository.

- 1. Successfully implemented and tested the STRUCT common function.
- 2. Contributed to bug resolution.

### Log Book On 25-11-2024

#### **OBJECTIVE**

1. Develop the LISTSTRUCT common function and ensure functionality with unit tests.

#### **ACTIVITIES**

- 1. Started coding the LISTSTRUCT common function.
- 2. Spent the day implementing the function and writing corresponding unit tests.
- 3. Identified areas to refine and improve, with plans to continue the task the following day.

#### **ACHIEVEMENTS**

1. Made significant progress on the LISTSTRUCT function and its unit tests, laying the groundwork for completion.

### Log Book On 26-11-2024

#### **OBJECTIVE**

- 1. Finalize the LISTSTRUCT common function
- 2. Begin enhancements for the configuration template.

### **ACTIVITIES**

- 1. Completed the LISTSTRUCT common function with detailed unit test cases (incorporating parameterized testing and effective test case practices).
- 2. Submitted a pull request for the Arema ETL gateway.
- 3. Assigned a new task: Development of foreign entity fields for customer profile and transaction files in the ETL template.
- 4. Enhanced the ETL template for improved clarity and usability.

### **ACHIEVEMENTS**

- 1. Successfully completed the LISTSTRUCT function with robust testing practices.
- 2. Initiated work on foreign entity field enhancements, ensuring seamless integration into the ETL process.
- 3. Improved the overall template design, contributing to better workflow efficiency.

### Log Book On 27-11-2024

### OBJECTIVE

1. Enhance and finalize the template file for improved functionality and future usability.

### **ACTIVITIES**

- 1. Completed work on the template file.
- 2. Added and refined the required columns to align with updated requirements.
- 3. Ensured the file structure supports seamless integration and future scalability.

#### **ACHIEVEMENTS**

- 1. Delivered an optimized template file tailored for improved clarity and usability.
- 2. Enhanced the file structure to facilitate future use and reduce rework efforts.

# Log Book On 28-11-2024

# OBJECTIVE

1. Begin configuration for a new client.

### **ACTIVITIES**

- 1. Received assignment to configure for the new client SQL configuration.
- 2. Reviewed and analyzed the provided requirements in detail.

3. Listed out all necessary configurations and organized them into a structured format for clarity and planning.

#### **ACHIEVEMENTS**

- 1. Developed a clear understanding of the Cheil requirements.
- 2. Created a structured steps to approach the configuration process effectively.

# Log Book On 29-11-2024

### **OBJECTIVE**

1. Refine and validate code updates to meet current requirements while maintaining code quality. ACTIVITIES

- 1. Adjusted a previously submitted pull request to align with updated requirements.
- 2. Utilized SonarQube and SonarScanner to detect and resolve potential errors or bugs in the modified code.
- 3. Verified that no additional bugs were introduced during the fixes.
- 4. Participated in the company's annual dinner event evening.

- 1. Successfully updated the pull request to meet the latest requirements.
- 2. Ensured code quality and stability through static analysis tools.
- 3. Enjoyed team bonding and celebrations at the annual dinner.

### Log Book On 02-12-2024

#### **OBJECTIVE**

1. Develop and configure rules for CHEIL to extract state information accurately from addresses.

#### **ACTIVITIES**

- 1. Configured CHEIL customer profile and supplier profile to extract state information from address fields.
- 2. Implemented regex to perform state extraction while handling different scenarios.
- 3. Conducted research and deepened understanding of regular expressions, focusing on some cases such as street names containing state names (e.g., Jalan Perak, KL).

#### **ACHIEVEMENTS**

- 1. Successfully implemented a regex-based solution to address the challenging requirement for state extraction.
- 2. Gained advanced knowledge of regex to handle complex address parsing scenarios effectively.

### Log Book On 03-12-2024

### **OBJECTIVE**

1. Complete configuration tasks for CHEIL's customer and supplier profiles.

#### **ACTIVITIES**

- 1. Finalized the configuration for CHEIL customer profile and supplier profile, ensuring compliance with the requirements.
- 2. Reviewed and tested the configurations for accuracy and completeness.
- 3. Submitted the completed configurations to Mr. Swee Keong for review.

### **ACHIEVEMENTS**

- 1. Delivered the CHEIL profile configurations to Swee Keong for review.
- 2. Ensured the configurations align with client requirements and organizational standards.

### Log Book On 04-12-2024

#### **OBJECTIVE**

1. Fix and refine the CHEIL customer and supplier profile configurations.

### **ACTIVITIES**

- 1. Identified a missed requirement in the previously submitted configuration.
- 2. Fixed the issue to align with CHEIL's requirements.

#### **ACHIEVEMENTS**

1. Ensured the CHEIL configuration met all requirements and resolved any discrepancies.

### Log Book On 05-12-2024

### **OBJECTIVE**

1. Test and refine the CHEIL configuration, addressing any issues identified during testing.

# ACTIVITIES

- 1. Performed testing on the CHEIL configuration to ensure it met the required standards.
- 2. Addressed and fixed issues in the previous pull request based on the testing results.
- 3. Met some problems and debugging the issue.
- 4. Used Putty to debug the process and identify any underlying issues in the configuration.

- 1. Ensured that the CHEIL configuration was fully functional by identifying and fixing errors.
- 2. Debugged effectively using Putty, reading the log through Kubernetes interface.

# Log Book On 06-12-2024

### OBJECTIVE

- 1. Merged bugfix code done last week to UAT branch.
- 2. Finalize CHEIL customer profile configuration.

### **ACTIVITIES**

- 1. Pull request is reviewed and accepted.
- 2. Merged the pull request into the UAT branch.
- 3. Completed the customer profile configuration for CHEIL.
- 4. Sent the updated configuration to Mr. Swee Keong for review.

- 1. Successfully completed the configuration and bug fix.
- 2. Ensured the customer profile was finalized and submitted for further review.

### Log Book On 09-12-2024

#### **OBJECTIVE**

- Complete KCC IGC update
- CHEIL invoice configuration.

### **ACTIVITIES**

- Completed the KCC IGC update and related rule configurations.
- Worked on the CHEIL invoice configuration.
- Sent the rule to Mr. Swee Keong for forwarding to the SIT database.

### **ACHIEVEMENTS**

- Finalized updates for KCC IGC
- Made progress for CHEIL invoice configuration.
- Ensured the rule was forwarded for SIT testing.

### Log Book On 10-12-2024

#### OBJECTIVE

• Continue working on CHEIL configuration.

#### **ACTIVITIES**

- Continue configuring CHEIL rule.
- Encountered a requirement that doesn't align with MQ specs (impossible to be implemented as for the current system).
- Asked QA for clarification regarding the requirement.
- Continued working on other parts of the CHEIL configuration while waiting for the response.

### **ACHIEVEMENTS**

 Made progress on the CHEIL configuration, addressing other aspects while awaiting QA feedback.

### Log Book On 11-12-2024

### **OBJECTIVE**

• Continue CHEIL configuration and align its requirements with MQ specs.

### **ACTIVITIES**

- Reviewed the CHEIL configuration with QA for completeness and accuracy.
- Reconfirmed the requirements to ensure consistency.
- Proposed adjustments to align the conflicting requirement with MQ specs.
- Tested the CHEIL transaction configuration for functionality and correctness.

### **ACHIEVEMENTS**

Completed the base CHEIL configuration and do some testings.

### Log Book On 12-12-2024

### **OBJECTIVE**

• Adapt to updated requirements and prepare for implementation.

### **ACTIVITIES**

- Reviewed the recent requirement changes to ensure clarity and feasibility.
- Planned the SQL logic to accommodate the new requirements effectively.
- Continue doing the updated requirements.

#### **ACHIEVEMENTS**

• Established a clear plan for implementing the updated requirements.

# Log Book On 13-12-2024

### **OBJECTIVE**

• Implement and adapt to new requirement changes.

### **ACTIVITIES**

- Received updated requirements following the QA meeting with CHEIL clients.
- Reviewed and analyzed the changes to ensure alignment with the system's specifications.
- Updated configurations and rules to accommodate the new requirements.
- Fixed several parts of the existing implementation to address compatibility and completeness issues.

- Successfully integrated the new requirements into the configuration.
- Resolved minor issues to improve overall implementation quality.

### Log Book On 16-12-2024

#### **OBJECTIVE**

• Finalize the CHEIL requirements implementation.

#### **ACTIVITIES**

- Worked on completing the CHEIL configuration according to the provided requirements.
- QA informed about missing requirements.
- Updated the configuration to include the missing aspects.

#### **ACHIEVEMENTS**

• Completed and refined the CHEIL configuration to meet all specified requirements.

### Log Book On 17-12-2024

#### **OBJECTIVE**

• Address CHEIL updates and start working on a newly assigned bug fix.

### **ACTIVITIES**

- Updated the CHEIL configuration to incorporate the revised country list.
- Submitted the updated scripts to Mr Swee Keong.
- Assigned a new task to fix a reported bug in the system.
- Awaiting the necessary file to replicate the error for testing purposes.

### **ACHIEVEMENTS**

• Successfully updated and delivered the CHEIL country list configuration.

### Log Book On 18-12-2024

### **OBJECTIVE**

- Address updates for CHEIL
- Reading code to begin enhancing the SendService functionality.

### **ACTIVITIES**

- Received a new update for CHEIL requirements.
- Modified the rules and configuration to align with the updated requirements.
- Assigned a new task to enhance the SendService code.
- Started analyzing the existing SendService implementation to plan improvements.

#### **ACHIEVEMENTS**

- Successfully updated the CHEIL configuration with the latest changes.
- Began groundwork for enhancing the SendService functionality.

### Log Book On 19-12-2024

#### **OBJECTIVE**

• Enhance the SendService functionality and update the KCC rules based on new requirements.

### **ACTIVITIES**

- 1. Continued working on the SendService code
  - o Analyzed and tested the existing implementation
  - Made initial enhancements but identified the need for deeper understanding of the system for further improvements.
- 2. Received an update for the KCC rules.
  - Give the KCC rule update a read.

#### **ACHIEVEMENTS**

Progressed in enhancing the SendService functionality.

Planned tomorrow's work for KCC.

### Log Book On 20-12-2024

### OBJECTIVE

- Ensure system stability through regression testing (KCC)
- Continue configuring CHEIL requirements.

# **ACTIVITIES**

- Conducted regression testing for the updated KCC requirements:
  - Verified compliance with new requirements.
  - o Ensured no regressions or issues were introduced to previous configurations.
- Worked on implementing the CHEIL requirements:
  - o Analyzed and updated the configuration based on the latest instructions stuck on error.

### **ACHIEVEMENTS**

• Confirmed that the KCC configuration changes met the new requirements without impacting existing functionality.

### Log Book On 23-12-2024

#### **OBJECTIVE**

Do testing for CHEIL requirements and address encountered issues.

#### **ACTIVITIES**

- Tested the CHEIL requirements implementation.
- Faced an error during testing due to dev database downtime I cant do anything :( have to wait.
- Continued testing CHEIL requirements once the database was operational.

#### **ACHIEVEMENTS**

• Identified potential issues for further refinement.

### Log Book On 24-12-2024

#### **OBJECTIVE**

• Resolve issues with CHEIL and KCC configurations and finalize the requirements.

#### **ACTIVITIES**

- Fixed the configuration for CHEIL to meet updated requirements.
- Encountered a problem with a previous KCC requirement:
- Discussed the issue with Swee Keong.
- Found the cause- one of the previous scripts was not ran. Implemented the necessary fixes.
- Updated and completed the CHEIL requirement after addressing the outstanding tasks.

#### **ACHIEVEMENTS**

- Successfully resolved the KCC requirement issue through collaboration.
- Finalized and delivered the CHEIL configuration.

# Log Book On 26-12-2024

### **OBJECTIVE**

 Fix unconsumed messages in ActiveMQ and transition retry handling to ActiveMQ instead of hardcoding retries.

#### **ACTIVITIES**

- Received new task to address unconsumed messages in ActiveMQ.
- Current process uses manual retry backoff; task is to transition retry handling to ActiveMQ's built-in functionality.
- Watched tutorials on ActiveMQ to understand retry handling mechanisms.
- Continued learning about Spring Boot and microservices to better implement the solution.

### **ACHIEVEMENTS**

- Gained a deeper understanding of ActiveMQ and its retry capabilities.
- Expanded knowledge of Spring Boot and microservices for the implementation of the solution.

### Log Book On 27-12-2024

### **OBJECTIVES**

• Progress for unconsumed message JIRA issue

### **ACTIVITIES**

- Watched videos on ActiveMQ to better understand its flow and retry handling mechanisms.
- Studied the concepts of message consumption, retry strategies, and how to optimize the system using ActiveMQ's built-in features.
- Refactored some codes, using try with resource block new concept learnt!

- Gained insights into enhancing the system by leveraging ActiveMQ's automatic retry capabilities.
- Refactored some codes and pushed to new branch.

### Log Book On 30-12-2024

#### OBJECTIVE

Optimize queue destination method for activeMQ.

#### **ACTIVITIES**

- Received the ActiveMQ XML configuration from Mr Swee Keong.
- Studied the XML code to deepen understanding of the system's current configuration.
- Conducted experiments with the ActiveMQ XML to test various configurations and parameters, specifically focusing on the queue destination settings.

### **ACHIEVEMENTS**

- Enhanced knowledge of ActiveMQ XML structure and how it interacts with the queue system.
- Identified potential configurations to include in the queue destination parameter for better customization and performance.

### Log Book On 31-12-2024

#### **OBJECTIVE**

• To optimize system performance by understanding and implementing activeMQ configurations related to storage and failover mechanisms.

#### **ACTIVITIES**

- Researched ActiveMQ documentation focusing on:
  - o storageHighUsageWaterMark: Determines the threshold for high storage usage.
  - o sendFaillfNoSpace: Configures behavior when storage space is insufficient.
- Continued experimenting with the configurations to test their impact on performance and reliability.
- Developed and refined code to implement the learned configurations effectively.

### **ACHIEVEMENTS**

- Gained deeper insight into ActiveMQ's storage management and failover settings.
- Made progress for the code.

# Log Book On 02-01-2025

### **OBJECTIVE**

 Continue enhancing system's message queue by researching and implementing improvements for activeMQ configuration.

#### **ACTIVITIES**

- Read ActiveMQ documentation to understand its configurations and optimization strategies.
- Conducted research on enhancing the message queue's performance and scalability.
- Continue coding to implement the configuration.

### **ACHIEVEMENTS**

- Gained a deeper understanding of ActiveMQ's message queue configurations.
- Identified potential improvements for performance optimization and reliability.

### Log Book On 03-01-2025

#### **OBJECTIVE**

 To optimize ActiveMQ message handling by implementing an internal queue using BlockingQueue and adjusting configurations for destination-based queues.

#### **ACTIVITIES**

- Changed the code to utilize an internal queue (BlockingQueue) for more efficient message processing.
- Updated ActiveMQ XML configuration to set up destination-based queues for better message routing.

# **ACHIEVEMENTS**

• Made some progress on the code.

### Log Book On 06-01-2025

#### **OBJECTIVE**

• To debug and refactor existing code to resolve issues with @Value annotation in Spring Boot while pushing to SIT environment.

### **ACTIVITIES**

- Attempted to push the changes to SIT but encountered issues related to the @Value annotation.
- Refactored unused code for optimization and better structure.
- Debugged existing code to understand why Spring Boot was not handling the object correctly
  with @Value. (This is because, the object created was not instantiated automatically by Spring,
  but it was created manually through new keyword. Thus Spring wont do dependency injection
  for that particular object)

#### **ACHIEVEMENTS**

• Successfully identified areas to refactor and began debugging to resolve @Value-related issues in the Spring Boot application.

### Log Book On 07-01-2025

#### **OBJECTIVE**

- To fix issues with @Value annotation
- Correct database configuration for CHEIL BAQA request.

#### **ACTIVITIES**

- Created a pull request for the enhancement addressing the @Value annotation issue.
- Fixed the CHEIL configuration by correcting the mistyped orilnvNo in the database.

### **ACHIEVEMENTS**

 Successfully addressed the @Value annotation issue and fixed the CHEIL configuration for proper database handling.

### Log Book On 08-01-2025

#### **OBJECTIVE**

• To fix the infinite waiting issue and implement retry backoff for the current fix, while also sending the orilnvNo fix to Swee Keong.

#### **ACTIVITIES**

- Identified and addressed the infinite waiting issue in the current fix.
- Updated pull request.
- Worked on implementing retry backoff to ensure proper handling of failed attempts.
- Sent the corrected oriInvNo fix to Swee Keong.

#### **ACHIEVEMENTS**

- Progressed in resolving the infinite waiting issue and retry mechanism
- Sent CHEIL fix to Swee Keong.

### Log Book On 09-01-2025

# **OBJECTIVE**

- To fix the code issue by updating error handling
- Plan for addressing a new CHEIL requirement change.

### **ACTIVITIES**

 Fixed the code issue by updating the logic to throw the error to the parent, stopping further progress.

- Received a new CHEIL error, which is actually a requirement update.
- Started planning the approach to fix the new CHEIL requirement change.

#### **ACHIEVEMENTS**

• Successfully updated the error handling in the code and began planning the solution for the new CHEIL requirement change.

# Log Book On 10-01-2025

### **OBJECTIVE**

• To implement all the requirements for the ActiveMQ enhancement task and refactor old code while working on CHEIL configuration.

### **ACTIVITIES**

- Fixed the code to implement all the requirements for the ActiveMQ enhancement task.
- Created a pull request for the ActiveMQ enhancement.
- Received a new task to refactor old code.
- Continued working on the CHEIL configuration.
- Create new branch for UAT for another pull request

- Completed the ActiveMQ enhancement and refactored the necessary code.
- Began progress on the new task and continued working on the CHEIL configuration.

### Log Book On 13-01-2025

#### **OBJECTIVE**

 To continue progress on CHEIL configuration, perform regression testing on the ActiveMQ code, and implement updates for retry backoff.

### **ACTIVITIES**

- Continued with CHEIL configuration.
- Performed regression testing on previous progress, specifically the runSendMsg code.
- Updated the code to utilize retry backoff, identified this after regression testing.
- Received confirmed requirements from CHEIL QA and proceeded with the updates.

### **ACHIEVEMENTS**

Successfully completed regression testing and implemented the necessary fixes for retry backoff.
 Continued progress on CHEIL configuration based on confirmed requirements from QA.

# Log Book On 14-01-2025

#### **OBJECTIVE**

- To complete the CHEIL configuration
- Start working on code refactoring for Apache Spark Initialization.

#### **ACTIVITIES**

- Sent the completed CHEIL configuration to Swee Keong.
- Received a new task for code refactoring.
- Reviewed the code to understand what needs to be fixed and added, and studied the flow of the process.

### **ACHIEVEMENTS**

- Successfully completed the CHEIL configuration
- Began the refactoring process by analyzing the code flow.

### Log Book On 15-01-2025

#### **OBJECTIVE**

• To refactor the existing code by understanding its flow and making necessary improvements.

### **ACTIVITIES**

- Studied the code to understand its structure and identify areas for improvement.
- Started refactoring the code, focusing on optimization and enhancing readability.

#### **ACHIEVEMENTS**

 Progressed with the code refactoring task, focusing on improving the code quality and performance.

# Log Book On 15-01-2025

### OBJECTIVE

• To refactor the existing code by understanding its flow and making necessary improvements.

#### **ACTIVITIES**

- Studied the code to understand its structure and identify areas for improvement.
- Started refactoring the code, focusing on optimization and enhancing readability.

#### ACHIEVEMENTS

 Progressed with the code refactoring task, focusing on improving the code quality and performance.

# Log Book On 17-01-2025

### OBJECTIVE

• To complete the refactoring task, ensure code quality, and address identified issues.

### **ACTIVITIES**

- Created a pull request for the refactored code.
- Fixed some identified issues in the code reviewed by Swee Keong.
- Ran the code through SonarQube for static analysis.
- Addressed and fixed SonarQube bugs.
- Created an updated pull request with fixes.

# **ACHIEVEMENTS**

• Successfully completed the refactoring task, ensuring code quality through SonarQube analysis and making necessary fixes.

### Log Book On 20-01-2025

#### **OBJECTIVE**

Take annual leave

#### **ACTIVITIES**

• Family matter

#### **ACHIEVEMENTS**

Relationship bonding

### Log Book On 21-01-2025

### **OBJECTIVE**

• Ensure the UAT deployment process is smooth by resolving any bugs and verifying the code through thorough testing.

#### **ACTIVITIES**

- Merged the pull request for SIT and proceeded with the UAT deployment.
- Submitted a pull request for UAT after verifying initial changes.
- Conducted extensive testing to validate the implementation.
- Identified a bug during testing and implemented a fix.
- Resubmitted updated pull requests for both SIT and UAT.
- Awaiting code review and approval.

#### ACHIEVEMENTS

Progressed the changes to UAT while maintaining code quality through testing and debugging.

### Log Book On 22-01-2025

#### OBJECTIVE

• Ensure the program runs without errors and begin implementing the newly assigned task.

### **ACTIVITIES**

- Captured and documented the program output, confirming successful file processing with no errors.
- Shared the output with Mr. Soo Keun Fei for verification.
- Received a new task assignment and reviewed its requirements.
- Analyzed the underlying concept to understand the implementation approach.
- Started coding the initial parts of the task, testing different implementations.

#### **ACHIEVEMENTS**

 Verified program correctness, communicated progress, and initiated development on the new task.

### Log Book On 23-01-2025

### **OBJECTIVE**

• Refactor the getConfiguration code while exploring advanced Spring Boot functionalities.

#### **ACTIVITIES**

- Continued working on the task, focusing on refactoring getConfiguration.
- Experimented with Spring Boot features, including Immutable, OneToMany, and read-only restrictions.
- Received approval for a previous pull request.
- Requested Swee Keong to test the approved changes.

• Enhanced understanding of Spring Boot functionalities and progressed with the refactoring task.

# Log Book On 24-01-2025

# OBJECTIVE

- Continue working on the task
- Faculty supervisor visit

# **ACTIVITIES**

- Continue debugging the code
- Tracking the code flow with debugger
- Did a 1 to 1 session with Swee Keong to better understand the code
- After solat Jumaat, presented the Industrial Training Visit presentation to Dr Norhaida
- Next, continue working on the task

- Made progress for the task
- Successfully presented the industrial training slide to supervisors.

#### **WEEK 19**

### Log Book On 27-01-2025

### **OBJECTIVE**

• Refactor the getConfiguration code for improved efficiency and clarity.

#### **ACTIVITIES**

- Continued refining the getConfiguration logic to enhance maintainability.
- Gained a deeper understanding of the code through extensive analysis.

### **ACHIEVEMENTS**

- Improved comprehension of the existing implementation, aiding in effective refactoring.
- Progressed further in optimizing the getConfiguration functionality.

### Log Book On 28-01-2025

### **OBJECTIVE**

• Optimize the getConfiguration functionality by improving data structure handling.

### **ACTIVITIES**

- Implemented the planned changes and validated the functionality.
- Restructured the HashMap to retrieve conditions and results from the rule parent instead of creating a new parent for cond and rst.

- Improved data retrieval efficiency by optimizing HashMap structure.
- Ensured the implemented changes function correctly without introducing new issues.