SA 48

TEAM 8 CONTRIBUTION REPORT

[**Koh Zhen Xiang**](#_yk26o24tt187) **3**

[**Antonio**](#_emd3bw1b391u) **4**

[**Udaya Bhaskar Reddy**](#_96bf7vcksdit) **5**

[**Kotha Prasanth Reddy**](#_2n9iu0lqj39h) **6**

[**Kyaw Sithu**](#_r0qv8pda95g2) **8**

[**Neo Wei Sheng**](#_yd1a6wlst9hj) **9**

[**Wee Hui Ching**](#_5qiyxz4ff4a7) **10**

[**Harbinder Singh Gill**](#_qkfuc3r9oi2r) **11**

# Koh Zhen Xiang

Roles and responsibilities : Programmer/UI Designer

1. Prototype UI
2. Requirement Analysis
3. Coding
4. Testing
5. Integration

Deliverables :

1. Prototype UI :
   1. UI prototype for Stock Card, CRUD/Listing for Purchase Order, CRUD/Listing for Disbursement List, Inventory Retrieval
2. Requirement Analysis :
   1. User Story (Store side)
   2. Use Case Diagram
   3. Activity Diagram
   4. Sequence Diagram
3. Coding :

*Features:*

* 1. Implemented Purchase Order on the store side for the Store Clerk to perform CRUD Operations
  2. Added advanced functionality to automatically generate Disbursement List for easy checking by store staff
  3. Disbursement list is automatically generated upon confirmation of items withdrawal.
  4. Purchase order item code is selectable via dropdown menu, and items are already pre-filtered by supplier

Major Challenges and Resolution :

1. Prototype UI
   1. Design inconsistencies that occurred during the integration of the application. Resolved by coalescing as a team and through long, consistent effort.
2. Coding
   1. Discrepancies in code that arise out of database inconsistencies. Resolved by aligning the code fragments using version control.

Quantum :

1. Requirement Analysis : 3 days
2. UI Prototyping,Use case : 3 days
3. Coding : 12 days
4. Testing and Integration: 8 days

Experience :

1. Usage of version control, github for the project
2. Usage of mock flow for prototype design
3. Usage of different styles of writing javascript (raw javascript, JQuery) for front end to reduce calls to server
4. Integration of two large modules into a smooth, single application (Store and Department)

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# Antonio

Roles and responsibilities :

1. Prototype UI
2. Requirement Analysis
3. Coding
4. Report/Documentation
5. Functional Testing
6. Slides

Deliverables :

1. Prototype UI : UI prototype for Product catalogue, Supplier List and Department details
2. Requirement Analysis :
   1. User Story (Store side)
   2. Use Case and Activity Diagram
   3. Sequence Diagram
   4. Class Diagram
   5. Statechart Diagram
3. Coding : Maintaining Product Catalogue, Supplier List and Department Details
4. Report/Documentation : Test Plan (Store side)
5. Slides for presentation : Store Side

Major Challenges and Resolution :

1. UI Prototyping

*Challenges* : Ensuring the business logic to be captured while creating the prototype UI. *Resolution* : Discussion among the group to ensure the business logic is captured.

1. Coding

*Challenges* : Querying from different tables to obtain certain information .

*Resolution* : Searching online for reference and create a new class to obtain desired result.

Quantum :

1. UI Prototyping : 4 man-days
2. Requirement Analysis : 4 man-days
3. Coding : 4 man-days
4. Report / Documentation : 2 man-days
5. Functional Testing : 1 day
6. Presentation slides : 1 day

Experience :

1. Using a different prototyping tools when creating the UI prototype.
2. Using entity framework for the coding part
3. Querying data from different table using LINQ
4. Conducting a test plan helps the team to find a bug

# Udaya Bhaskar Reddy

Roles and responsibilities : Programmer/UI Designer

1. Prototype UI
2. Requirement Analysis
3. Coding
4. Machine Learning/Trend Analysis

Deliverables :

1. Prototype UI :
   1. UI prototype for Adjustment Voucher, Approve/Reject form, Inventory Report, Low Stock Report, Stationery Trend Analysis and Prediction, Charting
2. Requirement Analysis :
   1. User Story (Store side)
   2. Use Case Diagram
   3. Activity Diagram
   4. Sequence Diagram
3. Coding :

*Features:*

* 1. Implemented the Adjustment Voucher feature on the store side for the Store Clerk to create
  2. Added filtering functionality to pass voucher list to the Staff based on their login credentials
  3. Approve/Reject functionality for the Store Manager/ Supervisor
  4. View Inventory feature for the staff
  5. Generate low stock report for the staff

*Machine Learning:*

* 1. Data Cleaning and Preprocessing
  2. Train and test data for predictive analysis using different models
  3. Setting up the python/Flask server
  4. Implemented the .Net Code to retrieve the JSON response
  5. Used Chart.js to generate the chart

1. Project Management:
   1. Providing regular project updates, communicating with team members and resolving any discrepancies

Major Challenges and Resolution :

1. Prototype UI

*Challenges* : Design inconsistencies that occurred during the integration of the *Resolution* :Resolved by coalescing as a team and through long work hours.

1. Coding

*Challenges* : Discrepancies in code that arise out of database inconsistencies.

*Resolution* : Resolved by aligning the code fragments using version control.

1. Machine Learning

*Challenges* : Trying to arrive at a suitable model for predictive analysis.

*Resolution* : Resolved by training and testing several models for accurate predictions.

*Challenges* : Setting up the localhost server API to communicate with the Controller. *Resolution* : Resolved by enabling the local host to run on the same ports to communicate and receive responses.

Quantum :

1. Requirement Analysis : 4 days
2. UI Prototyping,Use case : 4 days
3. Coding : 7 days
4. Machine Learning : 4 days
5. Testing: 1 day
6. Testing (Charting): 1 day

Experience :

1. Usage of version control, github for the project
2. Usage of mock flow for prototype design
3. Usage of LINQ query for database access
4. Setting up the python server API using flask
5. Usage of Chart.js for generating the charts
6. Entity framework for application development.

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# Kotha Prasanth Reddy

Roles and Responsibilities:

1.Prototype UI

2.Requirement Analysis

3.Coding

4.Machine Learning

Deliverables :

1.Prototype UI : UI prototype for Store (Generating the consolidated requests form by date ,view the list of iems )

2.Requirement Analysis :

User Story (Store side)

Use Case and Activity Diagram

Sequence Diagram

Class Diagram

3.Coding : CRUD Operations for Store Clerk (Consolidated Requests Form with date and status)

4.Machine Learning: Created Training dataset for the Machine Learning model and involved in building machine learning model

Major Challenges and Resolution :

1.UI Prototyping

*Challenges* : Ensuring the business logic to be captured while creating the prototype UI. *Resolution* : Discussion among the group to ensure the business logic is captured.

2.Coding

*Challenges* : Collecting data from different tables in the database .

*Resolution* : Searching online for reference and create a new viemodelclass to obtain desired result.

3.Machine Learning

*Challenges* : Choosing the suitable machine learning model for the data present.

*Resolution* : Analyse the data present and working together to come up with the suitable model

Quantum :

1.Requirement Analysis : 4 man-days

2.UI Prototyping,User Story,Use case : 4 man-days

3.Coding : 4 man-days

4.Machine Learning : 4 man-days

Experience :

1.Using mockflow tool when creating the UI prototype.

2.Using entity framework for the coding part

3.Using LINQ queries for working with database

4.Building and training machine learning model

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# Kyaw Sithu

Roles and responsibilities :

1. Requirement Analysis
2. Prototype UI
3. Coding
4. Testing
5. Integration

Deliverables :

1. Prototype UI : UI prototype for Department (Stationery Requisition Form), Main UI design and integration
2. Coding : CRUD for Stationery Requisition Form, Main Integration for both Department and Store
3. Entity Relation Diagram

Major Challenges and Resolution :

1. UI Prototyping

*Challenges* : Ensuring the business logic to be captured while creating the prototype UI, application of similar look and feel to all UIs to maintain consistency

*Resolution* : Discussion among the group to ensure the business logic is captured, integration of UI after UI mock up approval

1. Coding

*Challenges* : Integration of source codes, expansion of DB tables for additional functionalities, Building front and back end

*Resolution* : Sit down with team to understand logic for better integration, shared git access for team push/pull

Quantum :

1. UI Prototyping : 3 days
2. Coding : 12 days
3. Testing and Integration: 10 days

Experience :

1. Using entity framework for the codes
2. Querying data from different table using LINQ
3. Integration and testing with source codes handed over by team
4. Usage of different .js for front end to reduce calls to server
5. Integration of two large modules into a smooth, single application (Store and Department)
6. Usage of version control, github for the project

# Neo Wei Sheng

Roles and Responsibilities:

1. Prototype UI
2. Requirement Analysis
3. Coding (ASP.NET and Android)
4. Documentation and Reporting

Deliverables :

1. Prototype UI: UI prototype for Department (Collection Point & Detailed Order status)
2. Requirement Analysis:
   1. User Story (Department Staff)
   2. Use Case and Activity Diagram
   3. Class Diagram
3. Coding: CRUD for Collection Point, Android Development for Login and Main Menu that interfaces from Android to .NET into SQL

Major Challenges and Resolution :

1. Requirement Analysis

*Challenges* : Ensuring that all business logic is captured properly to ensure that prior to development, major classes/boundaries/DAO/DTO are in place

*Resolution* : Discussion with team to properly ensure that all necessary entities are in place before starting on development

1. Coding

*Challenges* : Android and .NET interfacing to pull same user information from DB to allow user to log in from Android App

*Resolution* : Searching online for reference and create a new class to obtain desired result.

Quantum :

1. UI Prototyping: 2 days
2. Requirement Analysis: 3 days
3. Coding: 6 days
4. Testing and Bug Fixes: 2 days
5. Report and Documentation: 5 days

Experience :

1. Using Entity Framework for ASP.NET coding
2. Interfacing with Android and ASP.NET and SSMS
3. Testing and bug fixes prior to integration
4. Querying data from different tables using LINQ
5. Usage of version control, github for the project
6. Usage of different .js for front end to reduce calls to server

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# Wee Hui Ching

Roles and Responsibilities:

1. Prototype UI
2. Requirement Analysis
3. Coding (ASP.NET and Android)
4. Documentation and Reporting

Deliverables :

1. Prototype UI: UI prototype for Department (Appoint Representative/Authorize Staff)
2. Requirement Analysis:
   1. User Story (Department Staff)
   2. Use Case and Activity Diagram
   3. Class Diagram
3. Coding: CRUD for Appointing Representative and Authorizing Staff, Android Development for above 2 features that interfaces from Android to .NET into SQL

Major Challenges and Resolution :

1. Requirement Analysis

*Challenges* : Ensuring that all business logic is captured properly to ensure that prior to development, major classes/boundaries/DAO/DTO are in place

*Resolution* : Discussion with team to properly ensure that all necessary entities are in place before starting on development

1. Coding

*Challenges* : Android and .NET interfacing to save and retrieve information from DB to allow user to view list of staff. Authorization and Appointment on Android to be saved into DB as well.

*Resolution* : Callback to ASP method once Android submit button is pressed to enable values to be saved into DB from android.

Quantum :

1. UI Prototyping: 2 days
2. Requirement Analysis: 3 days
3. Coding: 8 days
4. Testing and Bug Fixes: 3 days
5. Report and Documentation: 4 days

Experience :

1. Using Entity Framework for ASP.NET coding
2. Interfacing with Android and ASP.NET and SSMS
3. Testing and bug fixes prior to integration
4. Usage of different .js for front end to reduce calls to server
5. Usage of version control, github for the project

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# Harbinder Singh Gill

Roles and Responsibilities:

1. Prototype UI
2. Requirement Analysis
3. Coding (ASP.NET)
4. Documentation and Reporting

Deliverables :

1. Prototype UI: UI prototype for Department (Stationery Catalog, Approval of Stationery Requisition Form)
2. Requirement Analysis:
   1. User Story (Department Staff)
   2. Use Case and Activity Diagram
   3. Class Diagrams
   4. Sequence Diagrams
3. Coding: View Stationery Catalog in ASP.NET, Approval of Stationery Requisition Form when request comes in, CRUD of Value Added Feature for Favoriting Orders for staff to re-order easily

Major Challenges and Resolution :

1. Sequence Diagram

*Challenges* : Ensuring that all business logic flows properly as this determines the development portion

*Resolution* : Discussion with team to properly ensure that all necessary entities and flows are in place before starting on development

1. Coding

*Challenges* : Saving multiple data from one request was creating multiple ids instead of one id.

*Resolution* : Created a new table which assisted in being able to save the single form with multiple data.

Quantum :

1. UI Prototyping: 2 days
2. Requirement Analysis: 4 days
3. Coding: 7 days
4. Testing and Bug Fixes: 3 days
5. Report and Documentation: 4 days

Experience :

1. Using Entity Framework for ASP.NET coding
2. Testing and bug fixes prior to integration
3. Querying data from different table using LINQ