

CSCE 5430: Software Engineering

Sprint-2 Report

Student Trading Connection

Group Number **8**

Team Member	Member ID
Kishan Kumar Zalavadia	11685261
Ajay Jatprol	11689329
Gowtham Sai Lendhra Narayananam	11709752
Pavanipriya Vuppalapati	11661784
Mohammed Shakeel	11701737

Scrum Master: Kishan Kumar Zalavadia

GitHub: https://github.com/Kishan-Kumar-Zalavadia/Student_Trading_Connection

GitHub Project Board: <https://github.com/users/Kishan-Kumar-Zalavadia/projects/2/views/1>

Progress along with the Project Sprints - Sprint 2

During Sprint 2, our team had a clear set of objectives, which primarily included the completion of the next two user stories. We are pleased to report that not only were these goals met successfully, but the sprint also proceeded without any notable deviations from the initial plan.

Planned Objectives:

- User Story-3:** "As a student buyer, I want to send an 'In-Person Inspection Request' to the seller with an instant purchase so that I can examine the product before making a purchase decision and purchase it on the spot if I like it."
- User Story-4:** "As a student user, I want the option to participate in group purchases for educational resources like e-books so that I can access these materials at a lower cost."

Additional Achievements:

- Data Validations:** We implemented checks to prevent sellers from purchasing their own products, maintaining platform integrity.
- Product Availability:** Products vanish when sold or under in-purchase inspection, ensuring up-to-date listings and clarity for buyers.
- Confirmation Options:** User actions like product deletion, in-person inspection requests, or purchases prompt confirmations for added security and clarity.

Deviation from Plan:

We are pleased to report that there were no significant deviations from our planned objectives during Sprint 2. The project progressed smoothly, and the team's efforts aligned with the initial sprint goals.

This successful sprint sets a positive precedent for the project, and we are motivated to continue our development journey in Sprint 3.

Scrum Meetings in Sprint 1: Dates and Summaries:

Scrum Meeting	Date, Time	Medium	Scrum Meeting Summary
Scrum Planning	10/19/2023 – 09:30	In-Person	1. Each one took up the tasks for this sprint. 2. Discussed ways to make sprint-2 better than sprint-1 by being punctual and working iteratively.
Daily Scrum	10/20/2023 – 09:30	Google Meet	1. Updated the database: Modifying the existing table by adding new headings. 2. Analyze the data storage in the database. New table for group purchases.
Daily Scrum	10/23/2023 – 09:30	Google Meet	1. Done with analyzing the database: Created a new table for group purchases. 2. Creating new HTTP requests for the new tables and creating add Product and Edit Product. Created a feature for user sellers to add and edit products (Backend and Front end).
Daily Scrum	10/24/2023 – 09:30	Google Meet	1. Done with add and edit Product feature. 2. Working on the front end of the login and register pages. We are currently in the process of building the frontend for the login and register pages using the Angular framework. This includes designing the user interface and ensuring a smooth and responsive user experience.
Daily Scrum	10/25/2023 – 09:30	Google Meet	1. Done with frontend for the login and register pages. The development of the user interface for the login and register pages is finished, ensuring a user-friendly and responsive experience. 2. Working on user story 3: Creating a button for in-person inspection requests.
Daily Scrum	10/26/2023 – 09:30	Google Meet	1. Done with the basic implementation of user story 3: Created backend and frontend for In-person inspection with a user confirmation before requesting. 2. Working on the backend for user story 4. Working on frontend and backend for group purchases.
Daily Scrum	10/27/2023 – 09:30	Google Meet	1. Done with the basic implementation of user story 4: Created backend and frontend for group purchase. 2. Working on improving the user experience. Making it more accessible and user-friendly.
Daily Scrum	10/29/2023 – 09:30	Google Meet	1. Done on improving the user experience: 2. Working on final integration.
Sprint-2 Review	10/31/2023 – 09:30	Physical	1. Done on complete project integration. 2. Product manager review: Got a positive review from the product manager.

Tasks assigned to each member:

All the tasks below are self-assigned tasks based on one's interest.

Kishan Kumar	Ajay	Gowtham	Pavanipriya	Shakeel
Analyzing the data storage in MySQL	Designing CSS for the login component page.	HTTP API testing	Creation and integration of Database	Worked on understanding Spring boot for backend of the application

Modifying the database to make it more meaningful and detailed.	Incorporating product selection on the buy page.	Working on CSS part at buy and sell page	Improving the Buy page along with Different Categories	Performing setup of the application in my system.
Feature for seller to add a new product.	Establishing integration between the login and buy pages with the backend.	Adding images to the product catalogue	Understanding the interrelation between Database tables	Performing integration of frontend, backend and database.
Feature for seller to edit the product.	Implementing a pricing module on the buy page.	Testing the project workflow	Testing of the project	Understood the workflow and the tools used
Cart added with division for a user to identify the status.	Testing functional HTTP requests	Double integration		
Sell page – the seller can see his listed products with their status.	Gaining insight into the interrelation of database tables			
In-Person inspection Front-end and back-end	Conducting unit testing for the project			
Group Purchase product indication.	Twice integration			
Confirmation popup for add, edit, in-person request, buy, etc. options.	Crafting the architectural design of the software.			
Seller can see the contact details of buyer when he sends an in-person review request for further communication.	Creating class and activity diagrams.			
Group purchase product seller can see the list of buyers who have purchased.	Compiling the project report documentation.			
Add images to the product in buy, sell, cart pages.				

Sprint-2 Milestones: User Stories and Descriptions:

Project Workflow:

The implementation of the user story involved a comprehensive project workflow:

- Technology Stack:** Angular for the frontend, Spring Boot for the backend, and MySQL for the database.
- Pages and Features:** Different pages were developed within each portal to support specific actions:
 - Buy Page:** This page is designed for users who want to purchase products. It lists all available products for sale.
 - Sell Page:** Users can add their products for sale and also view the status of their listed products.
 - Cart:** The cart acts as a repository for all products that the buyer intends to purchase or has requested an in-person review. Products are categorized by their status, including those requested for in-person review, reviews accepted, products purchased, or group purchases.
 - Buyer Details:** When a product is requested for an in-person review, the seller has the option to view the buyer's details and contact them for further discussion. Sellers can also accept or reject the in-person review request, providing a streamlined communication process for both parties involved.

3. Data Flow:

- Angular Frontend:** Handles the user interface and user interactions.
- Spring Boot Backend:** Manages the application logic and data processing.
- MySQL Database:** Stores and retrieves data.

4. Data Communication:

- HTTP Requests:** Spring Boot communicates with the Angular frontend through HTTP GET, POST, PUT, PATCH, and DELETE requests.

5. Controllers and Services:

- Controllers:** Spring Boot controllers handle HTTP requests and route them to the appropriate services.
- Services:** Spring Boot services manage business logic and interact with external data sources, including the MySQL database.

6. Workflow:

- Data flows from the user interface in Angular to Spring Boot using HTTP requests.
- Spring Boot controllers route requests to the relevant services.
- Spring Boot services handle business logic and interact with the MySQL database.
- MySQL Database stores and retrieves data efficiently.
- The processed data is presented in the frontend UI, allowing users to interact with the system.

User Story-3:

As a student buyer, I want to send an 'In-Person Inspection Request' to the seller with an instant purchase so that I can examine the product before making a purchase decision and purchase it on the spot if I like it.

Implementation:

Frontend Interface:

- A dedicated interface was created within the "Buy Page" where students can view product listings.
- A new button labeled "Request In-Person Inspection" was added to each product listing, providing an intuitive option for students to initiate the inspection process.
- When a student decides to request an in-person inspection, the frontend interface promptly displays a confirmation dialogue to verify the user's intent, ensuring that the request is deliberate and clear.
- Upon confirmation by the buyer, the system seamlessly initiates the in-person inspection request process by sending the request to the respective seller. This step streamlines the buyer's request, preventing accidental or unintended actions.
- For the seller, upon receiving the inspection request, the front end provides a clear interface with options to either accept or reject the request. This gives sellers the flexibility to manage incoming requests in accordance with their availability and preferences.
- Additionally, the frontend interface facilitates further communication by granting the seller access to the buyer's contact details. This feature promotes transparent and direct interaction between the buyer and seller, enabling them to discuss and coordinate the in-person inspection effectively.
- The frontend implementation ensures that the process of requesting in-person inspections is user-friendly, and secure, and fosters transparent communication between buyers and sellers on the platform.

Data Interaction:

- **Product Availability:** The frontend continuously queries the backend database to retrieve real-time data regarding the availability of products listed for sale. This data includes product status, such as whether a product is available for purchase, has an active in-person inspection request, or has already been sold.
- **User Details:** To enable communication between buyers and sellers, the frontend requests and displays relevant user details. This includes the buyer's contact information and the seller's contact information if necessary. These details are fetched from the MySQL database and displayed in a secure and privacy-conscious manner.
- **HTTP Requests:** The data exchange between the front end and the back end is facilitated through HTTP requests. When a user initiates an action, such as requesting an in-person inspection or confirming a purchase, the front end sends the relevant HTTP request to the backend. The backend processes the request, updates the database accordingly, and responds to the front end with the latest data and status updates.

Explanation:

The objective of this user story is to empower student buyers with the ability to request in-person inspections of products they are interested in purchasing. The process is enriched with an option for instant purchase, allowing students to make on-the-spot buying decisions after examining the product. Here's the breakdown:

- **In-Person Inspection Request:** Students, as buyers, can initiate an in-person inspection request for a product they want to buy. This request serves as a means for students to assess the product's condition and suitability before finalizing their purchase decision.
- **User-Driven Intentions:** The system is built around the principle of user-driven intentions. Students have the autonomy to make choices based on their goals. Whether they want to request an in-person inspection or proceed with an instant purchase, the platform offers a clear and intuitive path to follow, making the user experience more intuitive and goal-oriented.
- **Efficient Data Flow:** The platform's data flow is designed with efficiency in mind. Data is exchanged between the front end and back end through HTTP requests, ensuring that actions can be performed promptly without delays. This data flow is instrumental in providing a responsive and seamless user experience.
- **Controller-Service Collaboration:** Spring Boot controllers and services work together harmoniously. Controllers handle user inputs and interactions, while services manage data processing and validation. This clear separation of responsibilities enhances the platform's maintainability and comprehensibility, contributing to a robust and efficient user experience.

User Story-4:

As a student user, I want the option to participate in group purchases for educational resources like e-books, so that I can access these materials at a lower cost.

Implementation:

Frontend Implementation:

- **Group Eligibility Indication:** Within product listings, eligible e-books or educational resources are indicated with a visible icon or label, signaling that these items are available for group purchases.
- **Purchase Process:** To participate in a group purchase, students can click on the indicated icon or label within the product details page. This straightforward process ensures that buying a product in a group purchase is as easy and convenient as purchasing a regular product.

- **Real-Time Updates:** The front end continues to provide real-time updates on the status of group purchases, including the number of participants. This information allows students to monitor the progress of group purchases for specific resources.

Backend Implementation:

- **Database Integration:** A dedicated SQL table has been implemented to efficiently track the participation of users and the products they have acquired within group purchases. This ensures comprehensive and transparent tracking of group participation and product acquisition.
- **Group Management Logic:** Backend logic controls the group purchase process, ensuring the accuracy of user and product data in the dedicated SQL table. This logic is essential for maintaining transparent and organized group purchases.
- **Seller-User Visibility:** Sellers can access a list of all users who have purchased a particular product sold by them within a group purchase. This visibility ensures that sellers have a clear understanding of their product's audience and can engage with their customers effectively.

Explanation:

- **Comprehensive User and Product Tracking:** The backbend's dedicated SQL table plays a crucial role in tracking and maintaining records of all users and products purchased within group purchases, ensuring transparency and organized group participation.
- **Seller-Customer Interaction:** The system allows sellers to view and interact with customers who have purchased their products through group purchases. This feature promotes effective communication between sellers and their customers, fostering a sense of community and trust.
- **Seamless Group Purchase Process:** The implementation emphasizes the ease and convenience of buying a product within a group purchase. Students can do so from the product details page, making it as straightforward as purchasing any regular product.
- **User-Friendly Experience:** By indicating group eligibility and providing a direct process for participation, the platform enhances the user experience, making it hassle-free for students to access educational resources at a lower cost.

Sprint-3 Focus: User Stories and Revised Goals:

As we move into Sprint-3, our primary goal is to further elevate the user experience by implementing two dynamic features that cater to the unique needs of our student community:

1. Boosting Profiles with Bonus Points:

- User Empowerment:** We are introducing a "Boosting Profiles with Bonus Points" feature, allowing students to earn points with every sale or purchase they make. This feature empowers users to enhance their profiles and achieve distinguished levels like gold, silver, or platinum.
- Unlocking Rewards:** As users ascend through these levels, they unlock rewarding benefits and showcase their achievements. This feature enhances the platform's gamification elements, motivating students to participate and excel actively.

2. Admin Page for Platform Management:

- Efficient Oversight:** The implementation of an "Admin Page for Platform Management" ensures that administrators have the necessary tools to manage user accounts and monitor platform activity effectively.
- Smoother Operation:** Admins can effortlessly oversee user account management, including details, roles, and access permissions. The real-time display of platform activities further streamlines the platform's smooth operation.

- In Sprint-3, our unwavering commitment to enhancing the user experience continues as we bring these engaging features to life. These features are tailored to the specific needs of our student community, aligning with our dedication to user-centric platform development.

Revised Goals for Sprint-3:

As we embark on Sprint-3, our primary goals are straightforward and user-centric:

- **Enhanced User Experience:** Elevate the overall user experience by introducing features that empower and engage students, making their interactions with the platform more enjoyable and meaningful.
- **Timely Development:** Ensure that the development of new features aligns with the sprint timeline, enabling a seamless transition to the next development phase and maintaining project progress.

GitHub Project Page:

Q GitHub Project Board: <https://github.com/users/Kishan-Kumar-Zalavadia/projects/2/views/1>

List of Issues worked on:

- Completed Issues in Sprint-2:
https://github.com/Kishan-Kumar-Zalavadia/Student_Trading_Connection/issues?q=is%3Aissue+is%3Aclosed
- Work to be completed in Sprint-3:
 - As an admin, I want access to an admin page where I can manage user accounts and to an admin page where I can manage user accounts, monitor platform activity, and ensure the platform's smooth operation.
 - As a student, I want to earn bonus points with every sale or purchase that I do, so that I can boost my profile to levels like gold, silver, or platinum, showcasing my achievements and unlocking rewarding benefits.

Database Schema:

Table 1: User

Field	Type	Null	Key	Default	Extra
id	int	NO	PRI	NULL	auto_increment
address	varchar(255)	YES		NULL	
email_id	varchar(255)	YES		NULL	
password	varchar(255)	YES		NULL	
phone	varchar(255)	YES		NULL	
profile_level	varchar(255)	YES		NULL	
user_name	varchar(255)	YES		NULL	
bonus_points	int	NO		NULL	
user_type	int	NO		NULL	

Table 2: Product

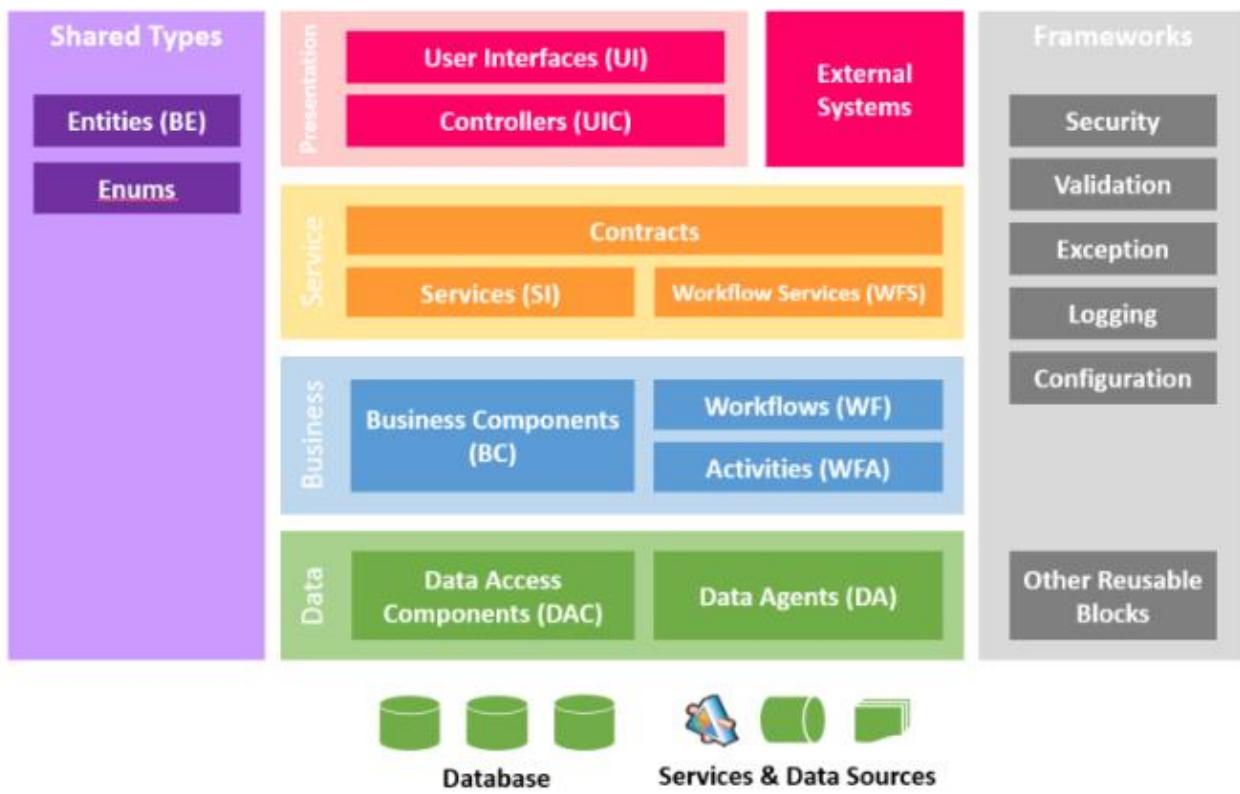
Field	Type	Null	Key	Default	Extra
productid	int	NO	PRI	NULL	auto_increment
buyerid	int	NO		NULL	
category	varchar(255)	YES		NULL	
description	varchar(255)	YES		NULL	
is_group_purchase	int	NO		NULL	
price	int	NO		NULL	
sellerid	int	NO		NULL	
status	int	NO		NULL	
title	varchar(255)	YES		NULL	

Table 3: Group Purchases

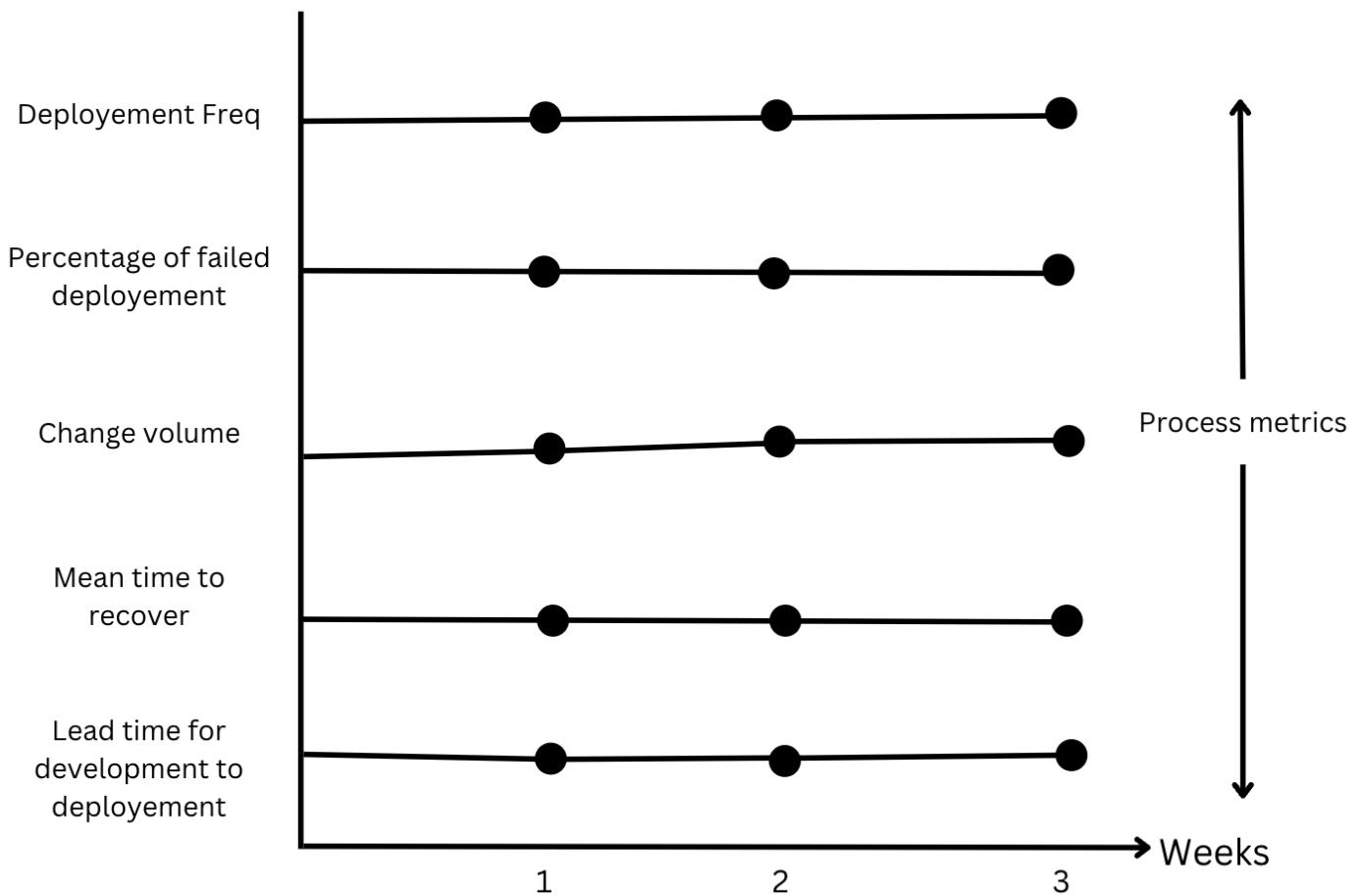
Field	Type	Null	Key	Default	Extra
group_purchase_id	int	NO	PRI	NULL	auto_increment
buyerid	int	NO		NULL	
productid	int	NO		NULL	

Architecture:

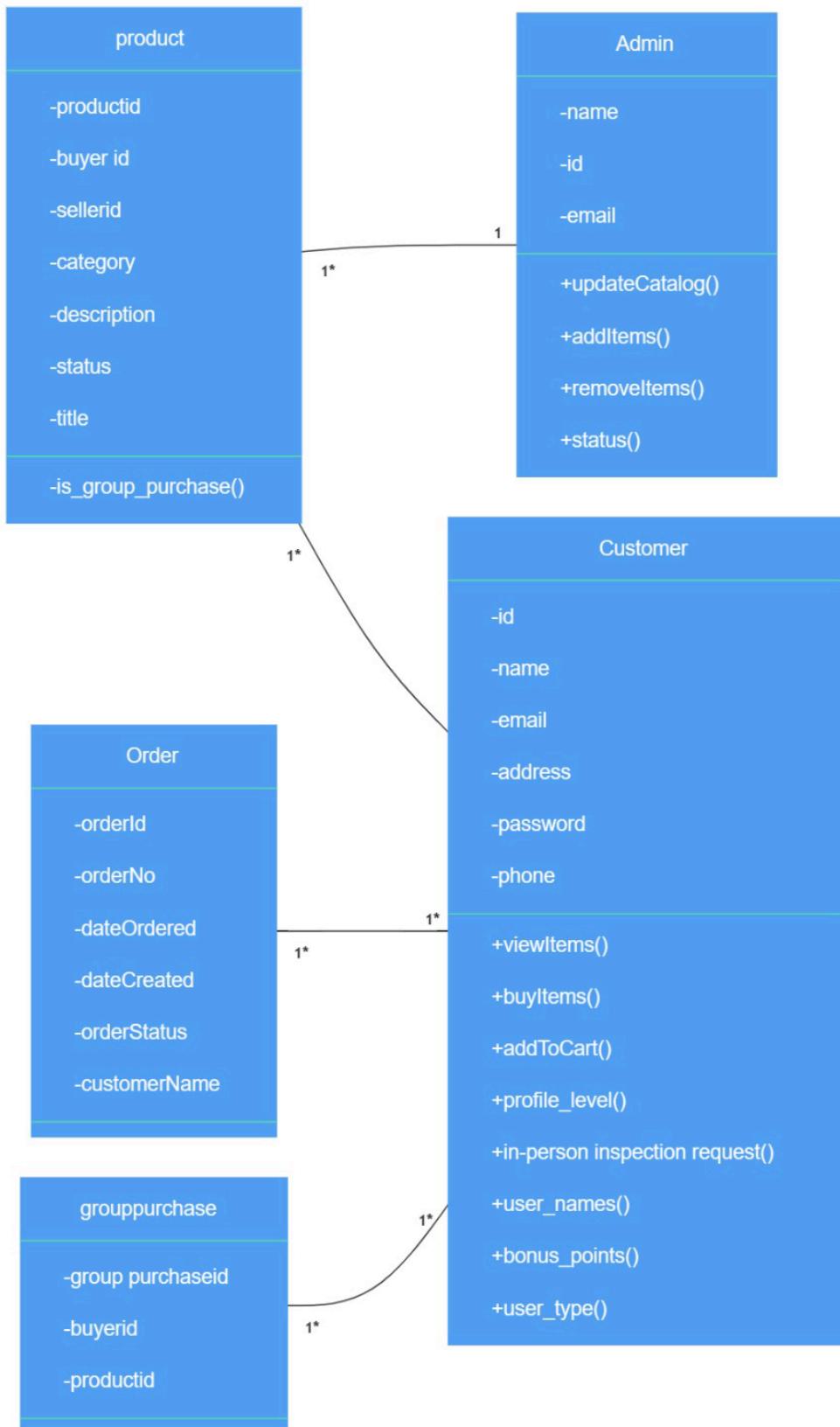
Layered Architecture



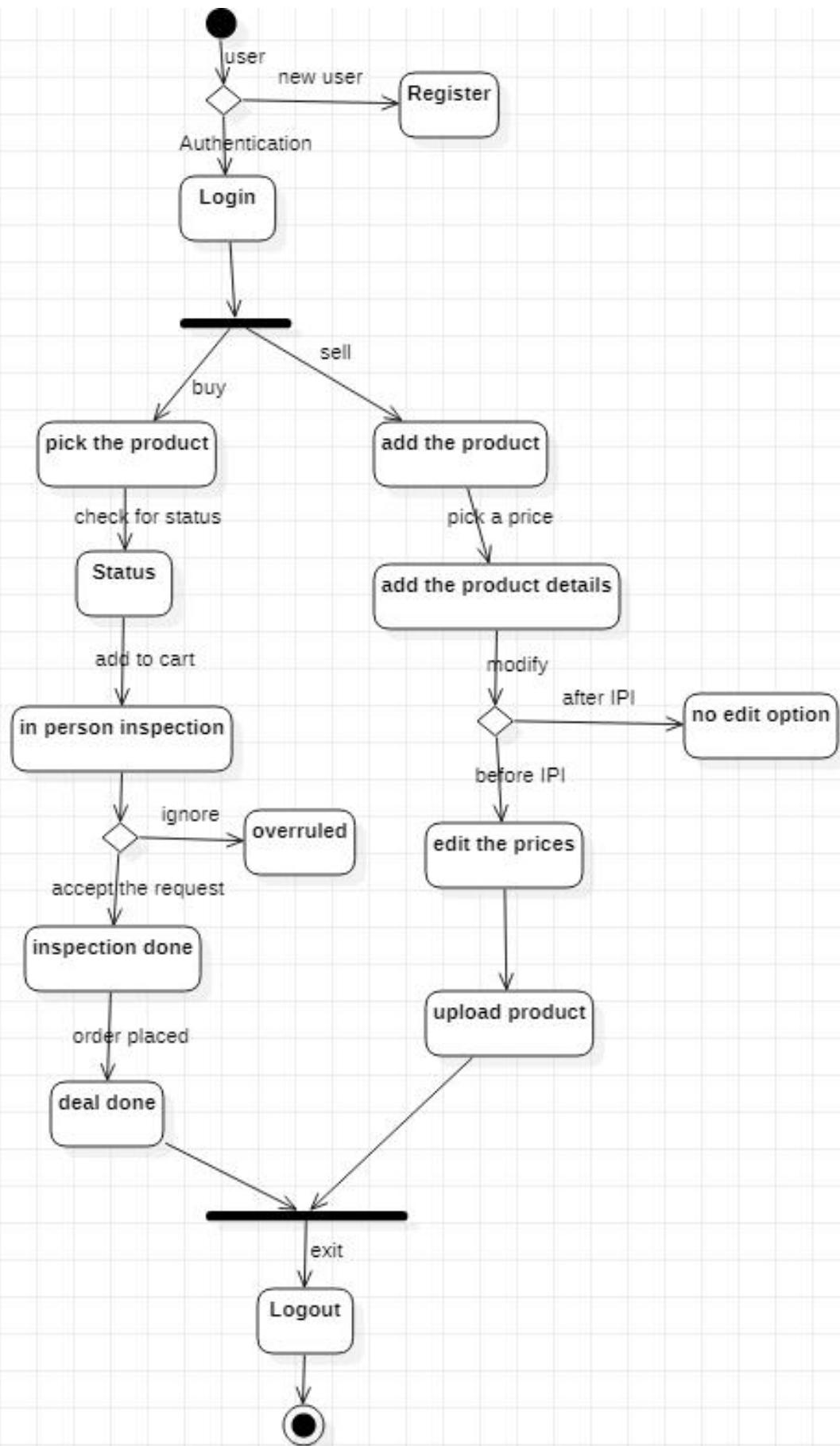
Metrics:



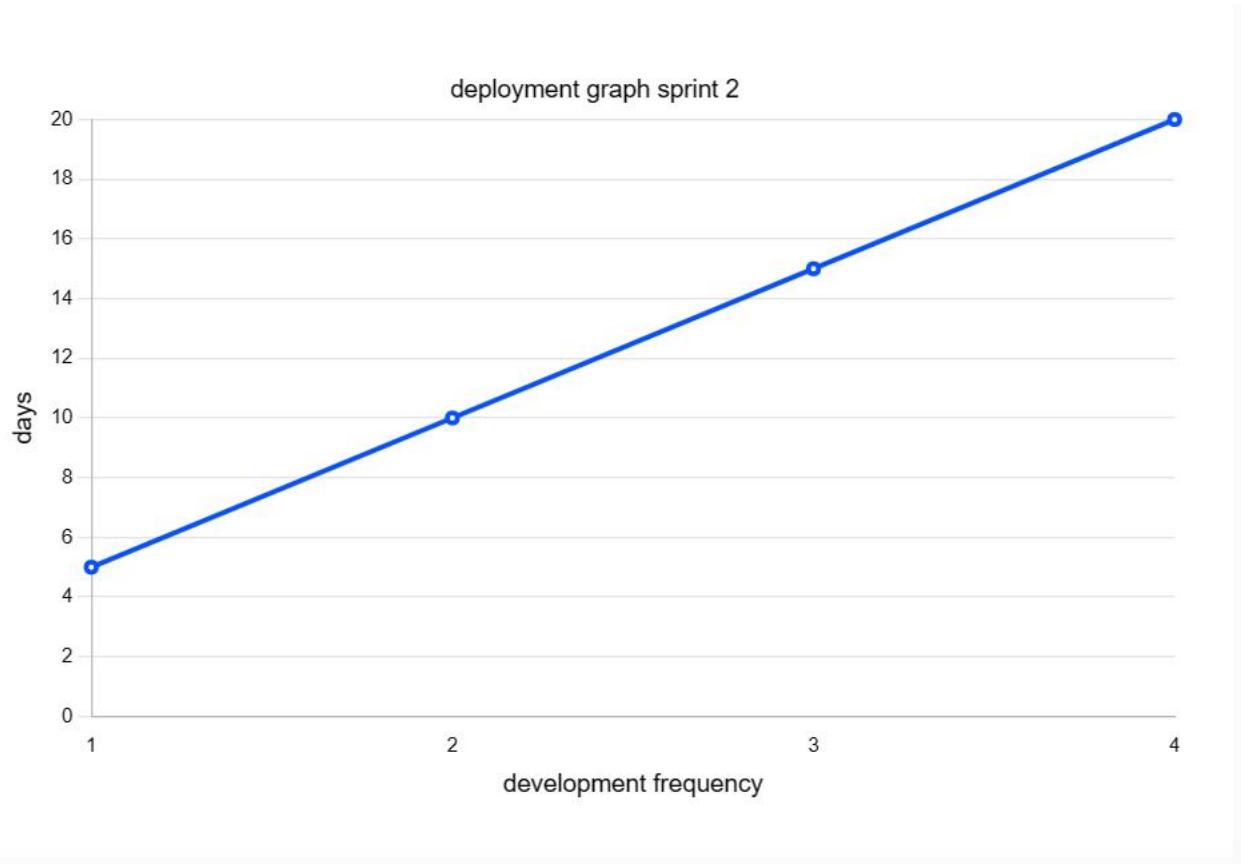
UML Diagrams:
Class Diagram:



Use case Diagram:



Development Graph:



Demo Project Images:

Display user confirmation

localhost:4200 says

Are you sure you want to request in-person inspection for this product?

[Cancel](#) [OK](#)

Table
Price: \$12
Description: Wooden Table

[Back to Home](#) [View Seller Details](#) [In-Person Inspection Request](#) [Buy](#)

Display the product, status vise.

The interface displays three main sections:

- For sale**: A product titled "Computer Algorithm" is listed for \$29. It includes a "Group Purchase" indicator, an "Edit" button, a "Delete" button, and a "View Buyers" button.
- Accepted In-Person Inspection**: A product titled "Tables" is listed for \$15.
- Sold Products**: A product titled "Mercedece" is listed for \$310000. It includes a "Delete" button.

Add new products

The interface shows a central "Add Product" form with the following fields:

- Title:** (Input field)
- Description:** (Input field)
- Price:** (Input field)
- Category:** (Input field)
- Is Group Purchase:** (Dropdown menu with option "No")

Below the form is a large blue "Add Product" button.

Group purchase product indication

STC

Buy

Sell

Kishan

cart

Log Out

Macbook air M2

Price: \$999

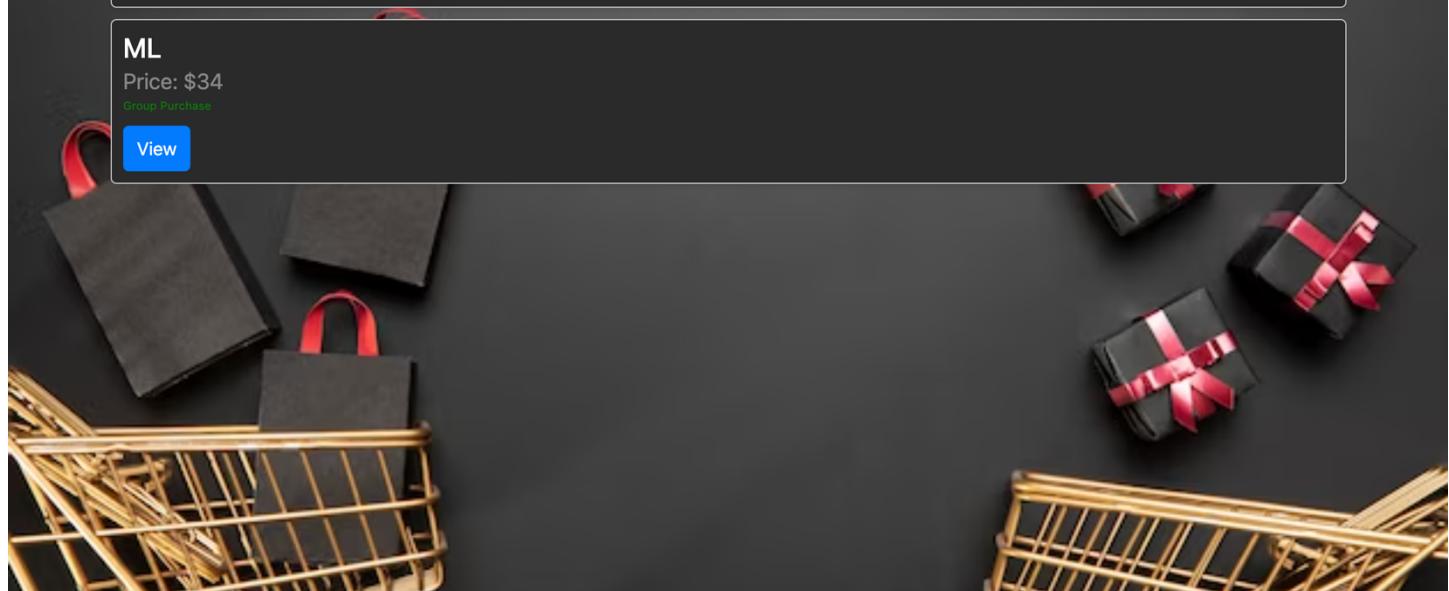
[View](#)

ML

Price: \$34

Group Purchase

[View](#)



Seller can accept the request and view buyer option to see the buyer details.

Price:

Category:

Is Group Purchase:

 No

[Add Product](#)

For sale

Macbook air M2

Price: \$999

[Edit](#)

[Delete](#)

[View Buyers](#)

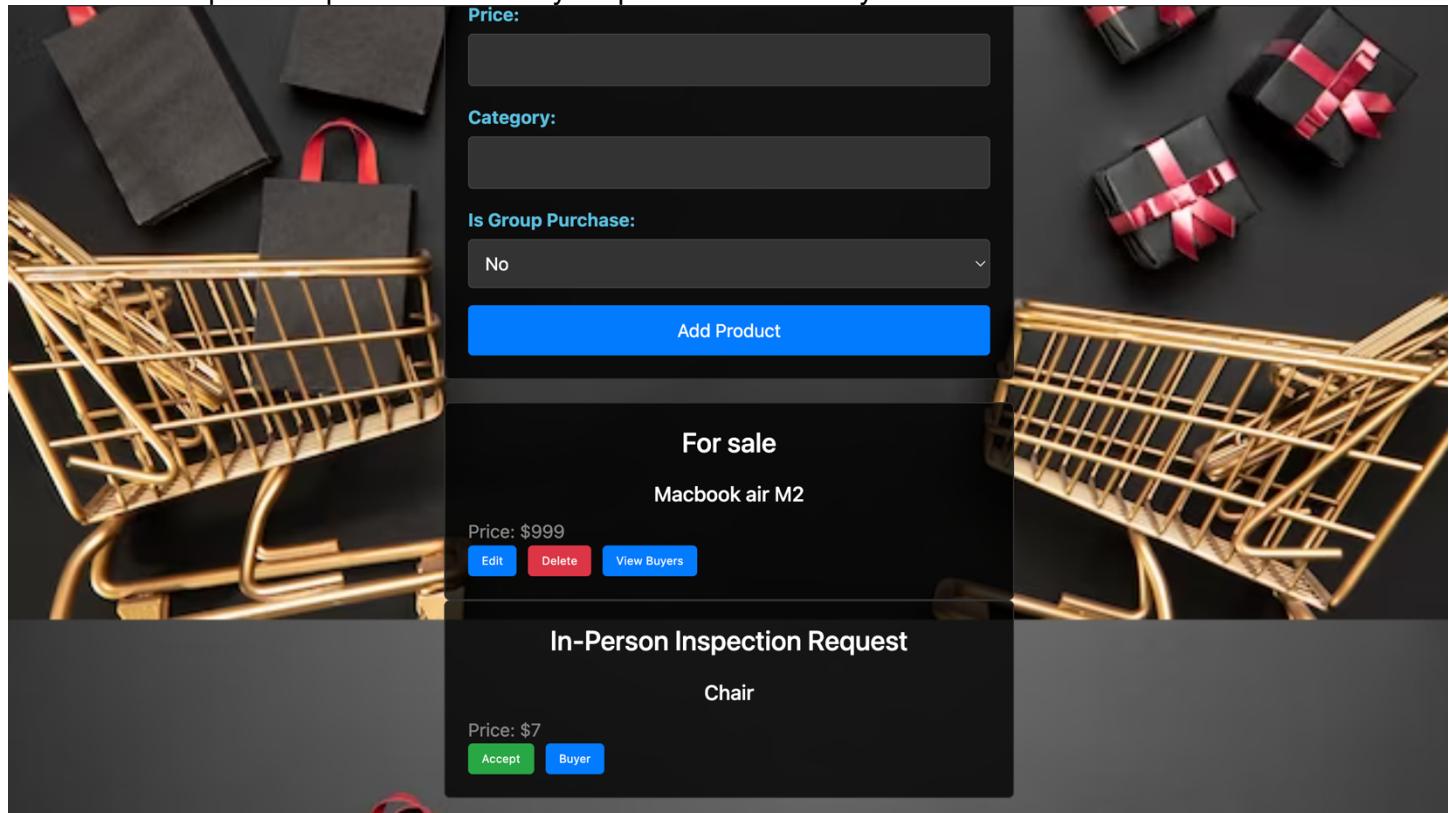
In-Person Inspection Request

Chair

Price: \$7

[Accept](#)

[Buyer](#)



Seller can see the products in different status

Requested for In-Person Inspection:

Table

Price: \$12

[View](#)

In-person Request Approved:

Tables

Price: \$15

[View](#)

Products Ordered:

Mercedece

Price: \$310000

[View](#)

Group Purchased Products:

Computer Algorithm

Price: \$29

For group purchase the seller can see all the buyer of a product.

User: User

Email: user@gmail.com

Phone: (940) 384-2934

Address:

Oaks community

Profile Level:

Bronze

User: Macula

Email: macula@gmail.com

Phone: (940) 384-2934

Address:

Near UNT Union

Profile Level:

Bronze

[Back](#)