

CSE 686 - IP Project Proposal

Project Topic: Trade Tunnel - Trade it your way...

Problem Statement:

To develop a Trading web application which allows the users to seamlessly buy and/or sell their items using this platform.

Goal / Purpose:

It is a common practice to give away or scrap the items which you don't need anymore. How about selling them instead? This web application gives a real - time opportunity to meet potential buyers of such products. It's an attempt to bridge the gap between the buyers and sellers who would want to sell and/or buy items online.

Motivation: It is not uncommon to notice students posting advertisements on social media pages of products they wish to sell or give away. Sellers often face problems meeting the potential and genuine buyers of the products. This Web Application is a software solution to address this issue as it serves as a mediator between the sellers and buyers.

Original Idea hovers around to create a platform for SU students to trade in the products they wish to. However, we decided to go beyond SU boundaries and allow anyone to use the service who wishes to trade.

Team Members:

1. Himanshu Chhabra (Team Lead)
2. Chetali Mahore
3. Krupa Mavani
4. Aarsh Patil
5. Sowmya Padmanabhi
6. Anagha Fatale
7. Vinu Kundnani
8. Sonali Ratnam

Features:

1. Login - Login feature will allow the users to login into the Web Application, login will be integrated with Google, Facebook login APIs and custom Sign up feature will also be provided.
 - The custom login feature shall request the user to verify the email id by clicking on the verification link dropped on the users mail box.
2. Buy and Sell products feature
 - 2a. Buy a Product - User is capable of browsing through the products using categories, location, and distance filters

- Integrating location based services using Google Maps, and the view shall display the items within the specified distance range (application will have pre-defined distance radius on loading)
- Web App allows the user to filter the products based on categories and/or location and/or nearby products with respect to distances.
- User shall get a custom search option and can apply the filter on top of the search results rendered.
- A Mini Map shall show the estimated distance between the buyer and seller (optional feature)

2b. Sell a Product – User is capable to post an advertisement about the product which the user is willing to sell. The web app shall request the user to provide following product attributes:

- The Name of the product
- Select a predefined category / sub category of the product
- Estimated Expected Cost of the product
- Upload Photos of the product (min 1 and max 5 photos)
- The application shall assist the user to set a price/cost range for the product by providing the average costs.
- These product attributes can be amended whenever user wishes to.

- Recent Products and Price Filter– Web application allows the user to view the products based on its date of posting
 - Essentially a filter option to view the products which are posted few days ago, a week ago, a day ago, few hours ago, few mins ago.
 - Application provides option to view the products based on price ranges
- Notification feature (We call it I'm interested feature)– The buyer can contact the seller via sellers contact information on file either via email or phone number
 - In order to show interest over a product the buyer has the ability to type in a brief message for the seller and on submitting the same an email shall be sent to the seller.
- Wish List feature: The Buyer can prepare a wish list of the products
 - Buyer can add the products in which it is interested into its wish list.
 - User shall receive periodic emails about the products in the wish list (optional Feature)
- Chat Box (optional feature) - The buyer and seller shall be able to communicate with each other through the chat box.
 - The seller shall receive a notification via an email once a buyer initiates the chat.
 - Seller shall receive a link on the email which will redirect the user to the chatting platform.
- User profile – The user is allowed to amend the user profile to maintain the upto date information
 - History – The application shall maintain a list of products sold and purchased by the user. The user shall view these under the user profile option.
 - Filter to view recent items based on date, sort items based on date (optional feature)
- Custom Search Suggestion Feature (Optional Feature) - The buyer on triggering a search shall receive a list of suggestions.

Development Stack:

1. Frontend Technologies - HTML 5, CSS 3, Bootstrap 4 , Javascript , AJAX , JQuery
2. Backend Technologies – Spring MVC, Spring ORM (Hibernate), Spring Boot(optional), REST based Web - services (optional)
3. Relational Database: MySQL Data base, MySQL Workbench as a client for MySQL Db
4. Application Server: Tomcat 9
5. Building Tool: Maven
6. Version control: Bitbucket

Timeline:

1. Agile development Approach

- 1 week Sprints
- Daily Sprint Meeting for Updates
- Weekly scheduled design Meetings
- Incremental Demos after every sprint

2. We have strategized to have 3 different Agile Scrum Teams: Each group working on features, the frontend and backend tasks are divided amongst the teams. Team 1 and Team 2 with 3 members each and Team 3 with 2 members

3. 23rd March to 26th March

- All Teams familiarize on how frontend and backend will communicate
- Increase knowledge about the technologies and tools as described in the development stack
- The Learning process shall continue across the development phase

4. Estimated Weekly Schedule

Week	Feature
26 th March – 1 st April	<ol style="list-style-type: none">1. Teams 1, 2, 3 -<ul style="list-style-type: none">- Design Home page UI and Website Template, take color palate decisions- Team 1 start Home page UI development based on design decisions- Start Dev for login feature, integrate with google and Fb login APIs2. Team 2 and 3 -<ul style="list-style-type: none">- Identify relational Databases and prepare ER Diagrams- Prepare Db creation scripts

	<ul style="list-style-type: none"> - Take Backend Design Decisions - Prepare and setup the development environment - Develop Backend Controllers for Login feature, (might use REST WS to implement the same) <p>Unit Testing and Demo at the end of Sprint 1</p>
2 nd April – 8 th April	<ol style="list-style-type: none"> 1. Team 1 - <ul style="list-style-type: none"> - Design and Dev Buyers UI page based on template decisions taken. - Design and Dev custom search UI component, wishlist component, User profiles Page - Develop Location Services to detect the location set it as location filter, trigger event and render the view as returned from backend using JS 2. Team 2 and 3- <ul style="list-style-type: none"> - Design and Develop location based Filter Handlers on Backend to return the appropriate model and view (Team 2) - Dev backend controllers to manage the User profile Page, wishlist (Team 3) - Backend – Design and Dev of controllers for custom search based on regular expression typed into the search field, also handle persistence of wishlist (Team 2 and Team 3) <p>Unit and Regression Testing , Demo at the end of Sprint 2</p>
9 th April – 15 th April	<ol style="list-style-type: none"> 1. Team 1 <ul style="list-style-type: none"> - Design and Develop Filter Modal to provide, category, Date, Recent Posts, Distance, price range based filters - Design and Dev Sellers Page, Design the form which inputs products information as name, category, description, price and photos of the product 2. Team 2 - Design and Develop Filter Handlers on Backend to return the appropriate model and view 3. Team 3 - Design and develop controllers to manage sellers post requests on backend. (Team 2 to assist with the same) <p>Unit and Regression Testing, Demo at the end of Sprint 3</p>

16 th April – 22 nd April	<ol style="list-style-type: none"> 1. Team 1 <ul style="list-style-type: none"> - Working on Notification feature on UI, to trigger an email notification when the buyer is interested - Develop the history component in the user profiles page to review the items sold and purchased 2. Team 2 - Work on backend side to render the appropriate email IDs based on the request from UI 3. Team 3 - Work on backend side for history feature <p>End of Sprint 4</p>
23 rd April – 29 th April	<ol style="list-style-type: none"> 1. All Teams clear up the backlogs if any 2. Integration Testing 3. Attempt to incorporate additional features