

Trading Post Requirements Specification

A Bartering System Web Application
Version 1.0
September 23, 2015

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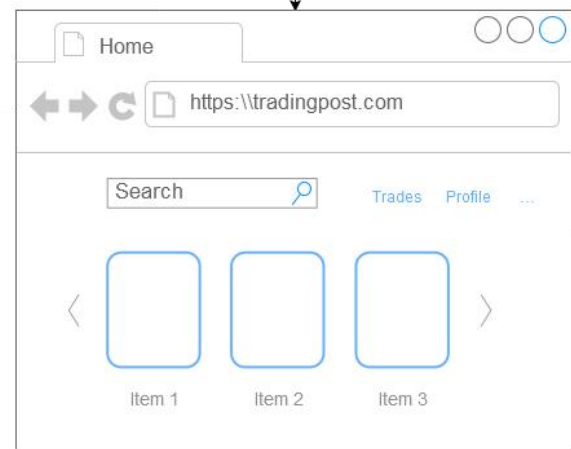
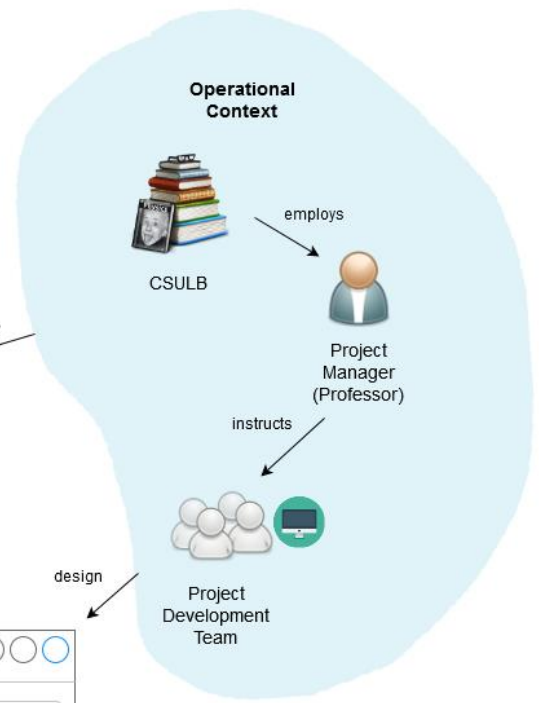
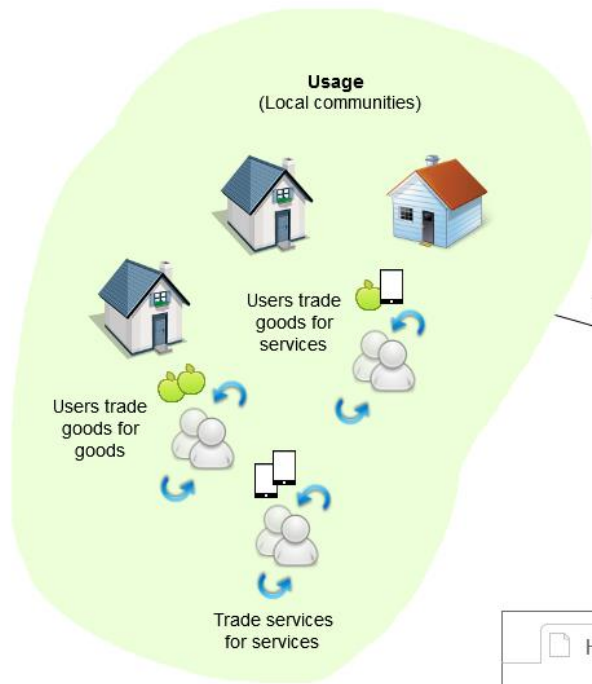
ABSTRACT

History illustrates that an economic collapse is unpredictable; identifying the causes and the extent to which various factors can impact the economy is challenging. What will we do if unforeseen circumstances obstruct our economy? There must be an alternative to the monetary system we have in place, and one alternative is a bartering system. Bartering is the process of trading goods or services and does not involve a monetary exchange. This process typically takes place within local neighborhoods, increasing communication and thereby strengthening bonds between members of the community. With the growing impact of technology, the unpredictability of economic behavior, and the human need for strong relationships, there becomes a need for a web-based bartering system to facilitate trade.

SYSTEM VISION

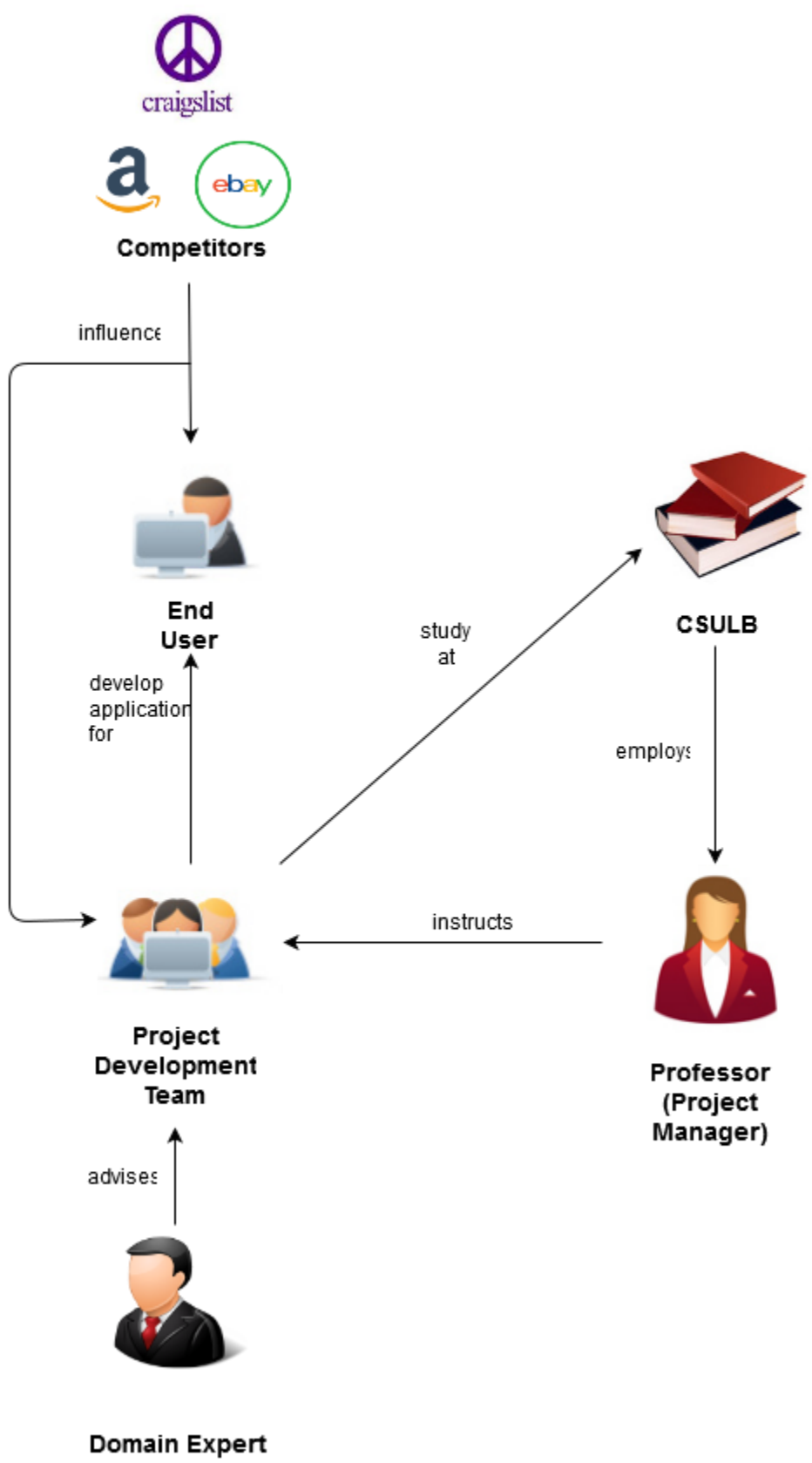
The system vision diagram demonstrates the total scope of the bartering system. It depicts stakeholders in different contexts and shows how they interact with each other. On the left, the green area depicts the usage context – a local community in which its inhabitants can trade goods for goods, goods for services, or services for services. In this context, the houses illustrate that the trading takes place within neighborhoods.

In relation to the system scope, people in local communities use the bartering application to facilitate such trades. The bartering system interface has listings of goods and services posted by the users, and each user shall have a profile on the application. On the right, the blue area depicts the operational context – the CSULB professor and the project development team (students), who work together to design and develop the bartering system. Overall, each context is connected to the system scope.



STAKEHOLDERS

A stakeholder is anyone who is involved with the bartering system, and the stakeholder diagram depicts all of the stakeholders in this system. The project manager (the CSULB professor) manages the development team (students). These students are advised by a domain expert and work on developing the bartering application for the end user. The competing web applications are also involved, as they may influence the end user and consequently the development team.



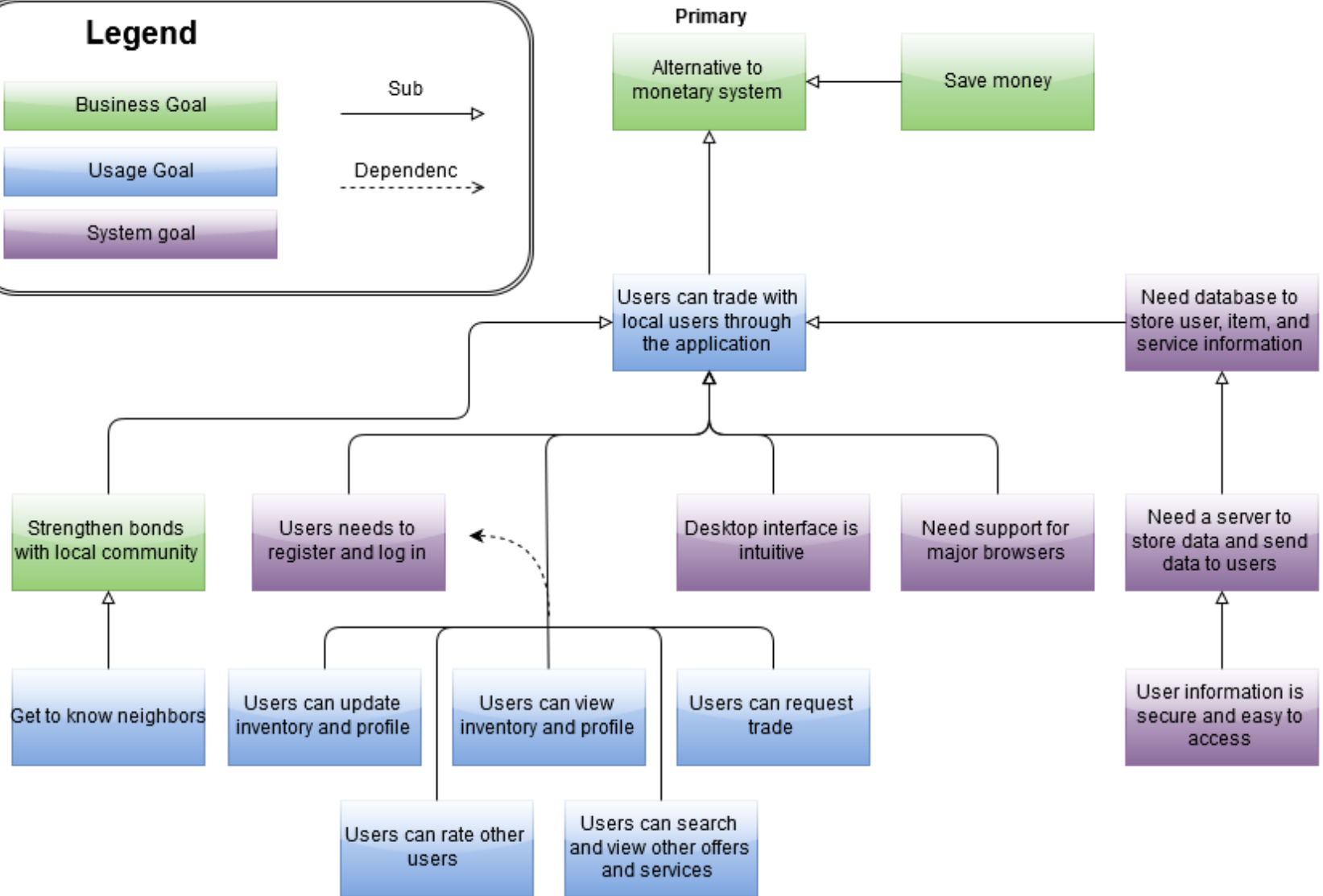
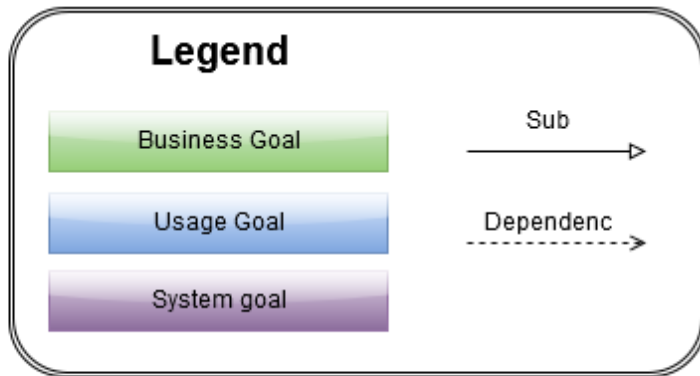
GOALS

The goal model illustrates the different types of goals and how they are connected to the primary goal of the system. The primary goal of the bartering system is to provide an alternative to the current monetary system. By bartering, people can save money (since no money is involved), a business sub goal of the primary goal. Another sub goal of the primary goal is that users can trade with other users in local communities through the bartering application. This usage goal is the parent of all of other business, usage, and system goals.

There are several system goals related to this usage goal. To develop this application, a database is needed to store information about the users, the items they post, and the services that they post. Because there may be a large number of users, a server is needed to store data and send data to users. On the server, user information shall be secure and easy to access.

When users trade to the application, the application must be supported by major browsers and the interface must be intuitive to provide ease-of-use. To use the bartering application, users need to register and login. There are also several actions/goals that depend on logging into the system. Once the user has registered, a user must login and then can update his/her inventory and profile, view inventories and profiles, request a trade, search offers, or rate other users.

Finally, when users trade with this application, they get to know their neighbors and strengthen bonds with the local community.



REQUIREMENTS

FUNCTIONAL REQUIREMENTS

Features

The usage features of this application include:

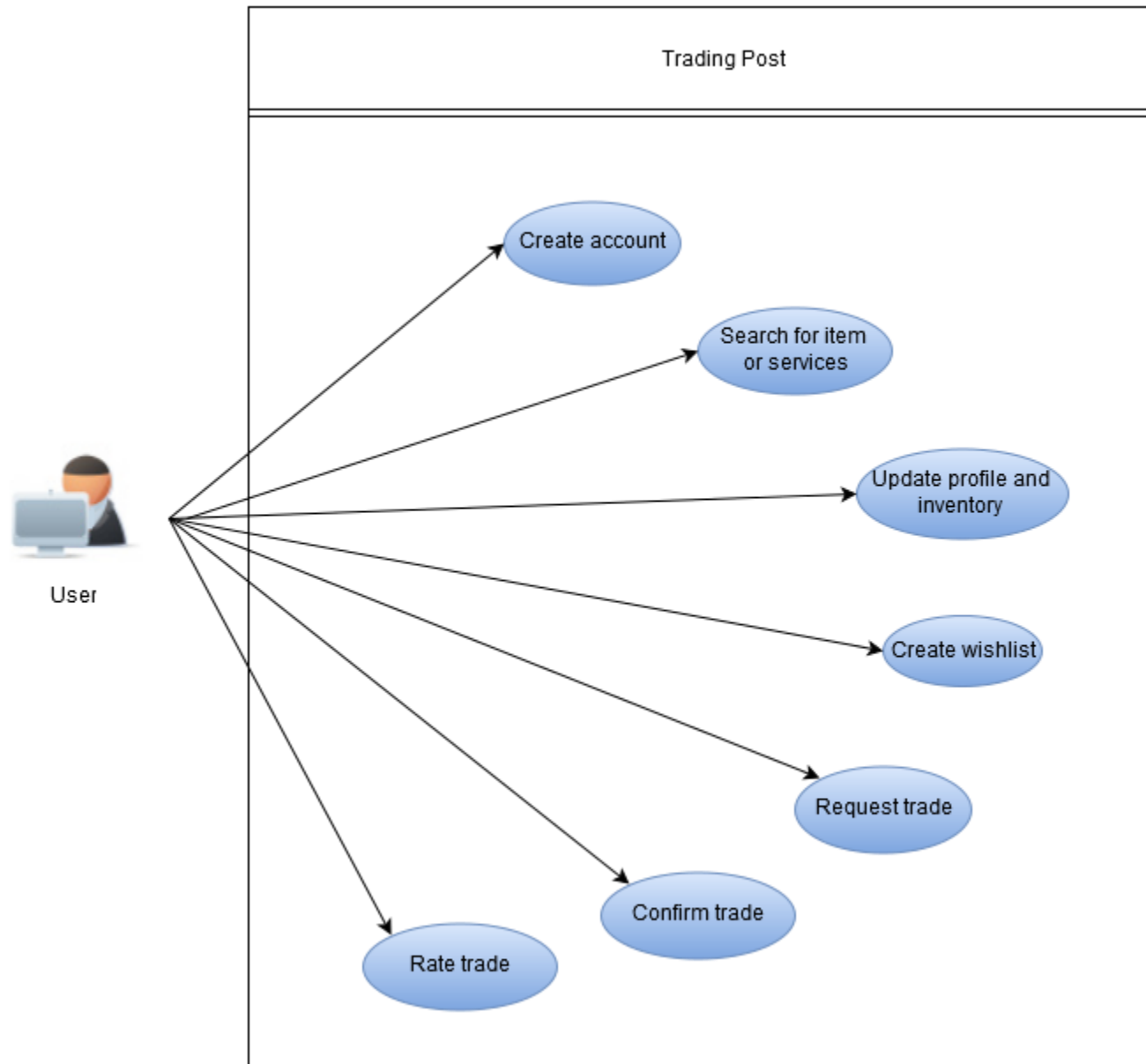
- Search for goods and services using a search bar
- Choose a category to search for goods or services
- Browse most recent posts on the home page
- Create an account
- Message other users
- Request to trade with another user
- Confirm a trade with another user
- Rate a trade
- Fill out a profile of inventory and services
- Create a wishlist

Other system features:

- Check text for inappropriate content
- Match trades based on proximity of users (zip codes)

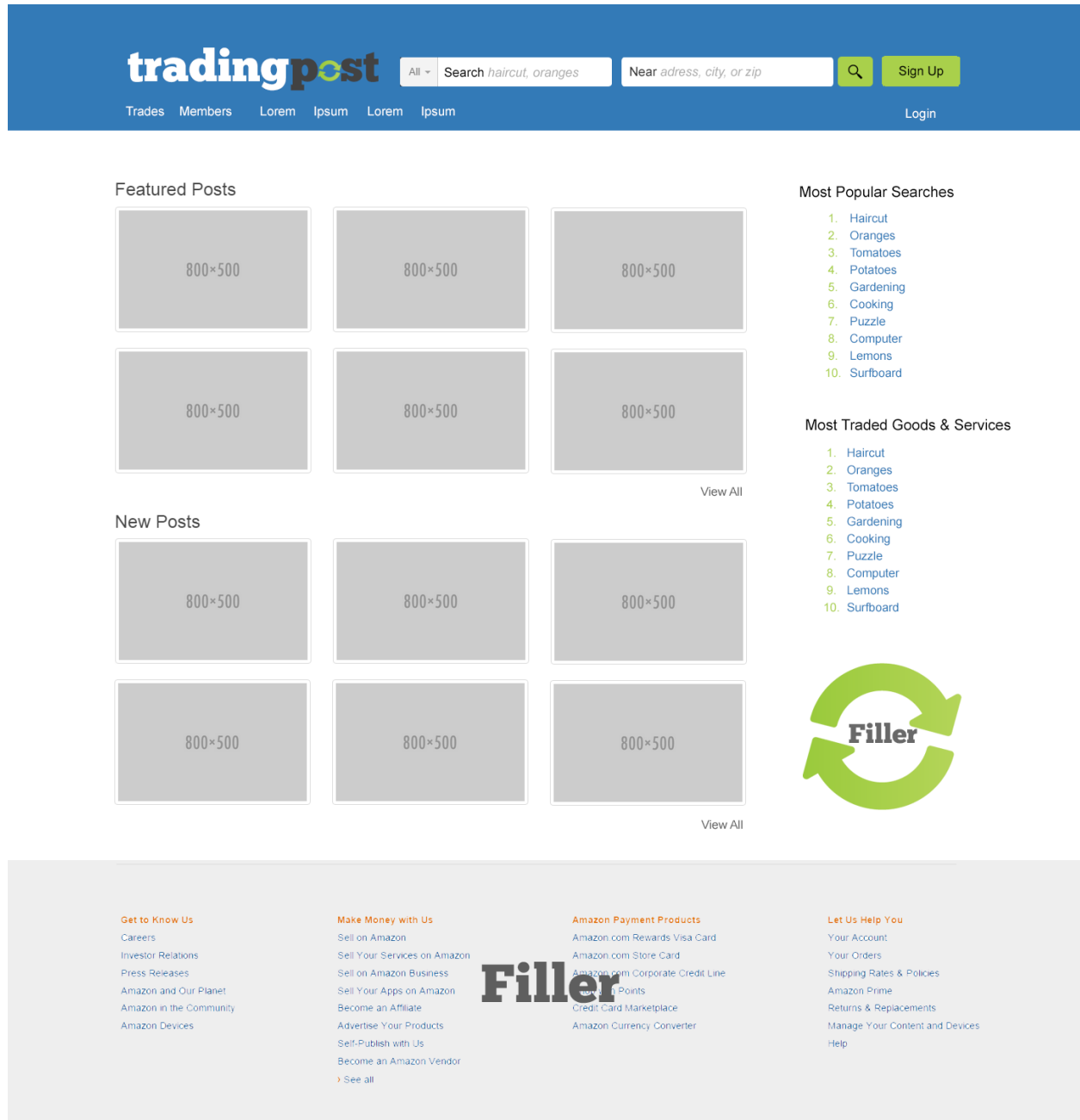
Usage Model

The usage model demonstrates how users interact with the web application and lists the important features of the application.



UI Design

This is a sample home page of the user interface. It showcases the main features of the application – viewing for goods and services through the search bar or featured posts.



Use Cases

The use cases show how a user shall interact with the system. Note that these use cases are nonexhaustive.

USE CASE: Create account and profile

CHARACTERISTIC INFORMATION

Goal in Context: To create a user account and profile of inventory

Scope: Trading Post (bartering system)

Level: Primary task

Preconditions: User must be 18 or over (require ID information)

Success End Condition: User will be able to trade with other users

Failed End Condition: User is not able to create an account

Primary Actor: User

Trigger: System prompts user to log in

MAIN SUCCESS SCENARIO

1. User creates new user account.
2. Upload user's items and services (to be traded) into inventory section.

RELATED-INFORMATION

Priority: Critical

Performance Target: 15 minutes

Frequency: Once per user

Channel to primary actor: Interactive (mouse pad)

SCHEDULE

Due date: December 2015

USE CASE: Search for item or services

CHARACTERISTIC INFORMATION

Goal in Context: To list results of what user typed in search box

Scope: Trading Post (bartering system)

Level: Primary task

Preconditions: User must have an account before searching for items/services

Success End Condition: Results of searched items will display on page

Failed End Condition: There are no results of searched items

Primary Actor: User

Trigger: User types in wanted item into search box and hits submit

MAIN SUCCESS SCENARIO

1. User types wanted item/services into search box.
2. System displays the results of items/services.

EXTENSION

- 2a. User can search another item.

SUB-VARIATION

1. User uses a drop-down menu to choose a category of a certain item or service type.

RELATED-INFORMATION

Priority: Critical

Performance Target: 5 minutes

Frequency: Every time a user wants to find an item

Channel to primary actor: Interactive

SCHEDULE

Due date: December 2015

USE CASE: Create wishlist

CHARACTERISTIC INFORMATION

Goal in Context: User adds items wanted into their wishlist

Scope: Trading Post (bartering system)

Level: Primary task

Preconditions: User must have an account before adding items to wishlist

Success End Condition: Wishlist will have at least one item

Failed End Condition: User is not able to add wanted item to wishlist

Primary Actor: User

Trigger: User types wanted item into wishlist

MAIN SUCCESS SCENARIO

1. User goes on their wishlist.
2. System displays wishlist page and prompts user if they want to add an item.
3. User types a wanted item.
4. System adds the wanted item to user's wishlist.

RELATED-INFORMATION

Priority: Critical

Performance Target: 3 minutes

Frequency: Every time a user wants to add an item

Channel to primary actor: Interactive

SCHEDULE

Due date: December 2015

USE CASE: Request trade

CHARACTERISTIC INFORMATION

Goal in Context: User requests to trade item

Scope: Trading Post (bartering system)

Level: Primary task

Preconditions: User must have an account before requesting a trade

Success End Condition: User was able to send a request to trade item with another user

Failed End Condition: User cannot place the trade request

Primary Actor: User

Trigger: User clicks the "Trade" button

MAIN SUCCESS SCENARIO

1. User clicks the "Trade" button on wanted item.
2. System prompts user to trade with which item or service.
3. User confirms trade.

EXTENSION

- 1a. If item/service is no longer available, system will prompt user with an error message.
- 3a. Before successfully trading, the user must wait for the other user to respond via trade confirmation or email.

RELATED-INFORMATION

Priority: Critical

Performance Target: 5 minutes

Frequency: Every time a user wants trade an item

Channel to primary actor: Interactive

SCHEDULE

Due date: December 2015

USE CASE: Confirm trade

CHARACTERISTIC INFORMATION

Goal in Context: User confirms trade

Scope: Trading Post (bartering system)

Level: Primary task

Preconditions: User must have an account before confirming trade

Success End Condition: User was able to confirm trade with another user

Failed End Condition: User cannot confirm trade

Primary Actor: User

Trigger: User opens trade requests from other users

MAIN SUCCESS SCENARIO

1. User navigates to requests page from other users.
2. System displays requests.
3. User chooses which item/service to confirm.
4. System prompts user to trade an item/service from inventory.
5. User chooses item and clicks submit.

EXTENSION

- 5a. User will have to wait for other user to respond either via trade confirmation or email.

RELATED-INFORMATION

Priority: Critical

Performance Target: 5 minutes

Frequency: Every time a user wants to find an item

Channel to primary actor: Interactive

SCHEDULE

Due date: December 2015

USE CASE: Rate Trade

CHARACTERISTIC INFORMATION

Goal in Context: User rates trade

Scope: Trading Post (bartering system)

Level: Primary task

Preconditions: User must have an account rating trade

Success End Condition: User was able to rate their recent trades

Failed End Condition: User cannot rate trade

Primary Actor: User

Trigger: User clicks on "Rate trade" button

MAIN SUCCESS SCENARIO

1. User clicks on "Rate trade" button
2. System displays a form which includes a rating and comments section.
3. User rates recent trade by giving a 1-5 and commenting.
4. System displays user feedback.

RELATED-INFORMATION

Priority: Critical

Performance Target: 5 minutes

Frequency: Every time a user rate an item

Channel to primary actor: Interactive

SCHEDULE

Due date: December 2015

USE CASE: Message other users

CHARACTERISTIC INFORMATION

Goal in Context: User messages other users

Scope: Trading Post (bartering system)

Level: Primary task

Preconditions: User must have an account before being able to message other users

Success End Condition: User was able to communicate with other users

Failed End Condition: User is not able to connect to server

Primary Actor: User

Trigger: User sends message

MAIN SUCCESS SCENARIO

1. User checks inbox.
2. System displays messages.

EXTENSION

- 2a. User can choose to reply back to message from other users.

RELATED-INFORMATION

Priority: Critical

Performance Target: 5 minutes

Frequency: Every time a user opens inbox

Channel to primary actor: Interactive

SCHEDULE

Due date: December 2015

QUALITY REQUIREMENTS

Performance

The performance for navigation of the user interface shall be of typical speeds.

Usability

The application shall be easy to use, providing the users with clear information and a concise method of navigation. The application shall have a similar layout to that of typical web sites, so users shall be familiar with the navigation style. As a user performs actions, he or she shall receive direct feedback. Content on the site shall be honest, precise, and relevant.

Privacy

Sensitive user information not required for the application shall be private unless otherwise authorized by the user. User data shall not be used for purposes other than to facilitate trade within the application.

Portability

The application should be able to easily transfer to between different operating systems and major internet browsers. The functionality and content of the application should remain the same throughout other systems.

Maintainability

The maintainability of an application is measured by how long it takes to fix the application and how adaptive it is to the environment after making changes. Making changes to the application should not be difficult and time-consuming.

Data Integrity

Data integrity corresponds to the quality of data that lies in the databases of the application. The data in the database should be accurate and be able to function with the application.

Functional Suitability

The application should provide functions that meets standard when used under specified conditions. The application should also include a set of functions that covers specified tasks and user objectives, correct results with the needed degree of precision, and facilitate the accomplishment of specified tasks

CONSTRAINTS

Supported Operating Systems

This web application shall run on all major operating systems:

- Windows 7, 8
- Mac OS X
- Linux

Supported Internet Browsers

This web application shall run on all major browsers:

- Google Chrome
- Mozilla Firefox
- Internet Explorer

Programming Languages

This web application shall be programmed using the MEAN Javascript software bundle.

MEAN stands for Mongo DB, ExpressJS, and AngularJS, which run on NodeJS. The MVC (model-view-controller) software architectural pattern shall also be used for implementation.

DEVELOPMENT PROCESS

Deadlines

The deadline for project completion is December 8, 2015.

Deliverables

The deliverables for this application are the course deliverables:

- Requirement specification
- Design Specification
- Implementation
- Documentation
- Presentation
- Test Specification