

The logo for WeTrade features the word "WeTrade" in a sans-serif font. The "We" is in red, and "Trade" is in blue. A vertical line separates the "e" and "T". Above this line, a blue arrow points left and a red arrow points right.

WeTrade

Project Proposal

1. Operational Concepts

WeTrade is a classified advertising website based on social networking. The target users of our website are mainly people who want to sell, buy or exchange small items to/from someone they trust without having to go through the hassle of shipping and e-payment. Users will be able to exchange items within different circles of their social network. Like other classified advertising websites, our website will allow the users to search on a global scale. However, we will also allow more refined searches by location and social proximity, for example, search for an item in Seattle and/or among friends of friends. This will encourage face-to-face trading with trusted persons, which will eliminate the threat of scammers and the need for credit cards or PayPal.

2. System Requirements

The users will be able to access the interface through our website where they can see their profile, look for (buy) or post (sell) items, browse their friends' profiles, send/receive message from other users, and change their privacy settings.

Users will be able to search by keywords and categories. Keywords are custom tags given to items by sellers to identify the item, while categories are more general term to classify the item. Search results will be based upon both the tags and the description supplied by the seller. In addition, users may refine their search within a geographical proximity, for instance, to a 30-mile radius from their zip code. Furthermore, users can search within a specified social proximity on their social network. For example, users may look for items from just their friends, or may expand this search to include friends and their friends (friends of friends). We'll identify a direct-friends relationship as one "degree", friends of friends as two "degrees", and so on. To clarify, a user searching for items within two degrees on their social network will be searching among friends and their friends. This way, users can obtain a personal reference for a buyer/seller when making an exchange, which enhances user security.

The posting system will be minimal and efficient. While a general category and at least one tag are required, multiple tags and a description may be used to further specify each listing. Users may also post a picture of the item and a price, but both of these are optional.

To further increase their security, users will be able to limit each of their profile details and items to a chosen degree on their social network. Alternatively, users set this to "global" to display to profile details and items to everyone, to maximize selling potential.

Essential features

User profile

- Contact Info (Name, Email, Phone number and Address. Visibility will be controlled in the privacy settings)

- Picture (User's picture)
- Friends list (List of first degree friends)
- List of items posted (Items the user has posted for sales)

Messages

- Inbox (Messages sent to user)
- Outbox (Messages sent by the user)

Search – for items to buy or trade while specifying the following search parameters

- Keywords (Book title, CD name, artist name)
- Item type/category (Type of item, book, CD, DVD, etc.. this field will be optional for search)
- Location proximity (Search within certain city and/or state)
- Social proximity (Search for items within your social network boundary, first, second or third degree friends)

Post – an item to sell or trade

- Tags (Lists of keywords for items to make items searchable)
- Item type/category (Sales item type/category)
- Description (Optional)
- Picture (Optional)
- Price (Optional)

Browse profiles

- Search your friends' lists for easily accessible items
- Shop by convenience, not by specificity

Privacy settings – for limiting who can see your profile details and items

- Profile
- Picture
- Email
- Phone
- Street Address
- City, State
- Posted items
- Friends lists

3. System and Software Architecture

Our application will be divided into three sections, user interface, back-end application and database. Users will communicate with the application through a web interface. The application will be connected to a database where the users profiles, postings, and settings will be saved (see Figure 1). We have yet to decide on how we are going to implement the searching algorithm within a social proximity. Much of the implementation is dependent upon the tools we're going to be using.

We haven't decided on the programming languages that we will be using yet. We deferred that decision until the rest of our team is complete. When the team is complete it will be better to decide on the tools we will be using since we will take into consideration the team members' expertise. However, we discussed our options and some of the pros and cons of using each of the options.

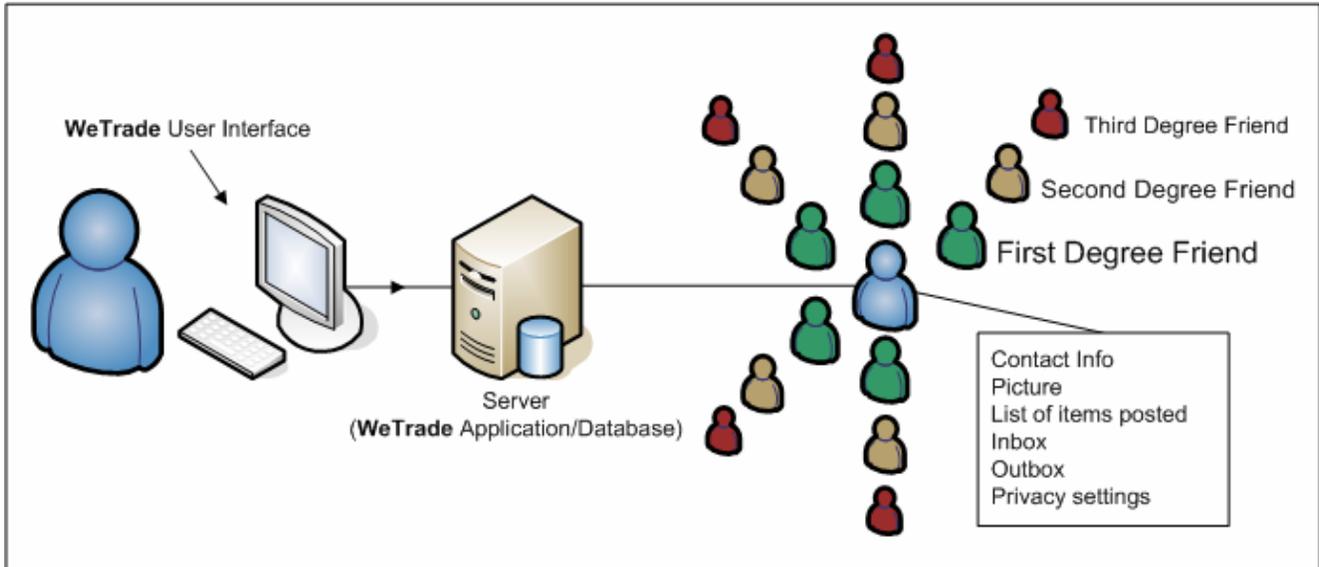


Figure 1

4. Lifecycle Plan

Our project schedule is based on a modified waterfall model with subprojects and overlapping architectural design and detailed design stages.

The major work goals are the artifacts produced at the end of each main stage, including the functional requirements, architectural and detailed design documents, integration of each subproject, testing, and releases. The dates for completion are dictated in the table above.

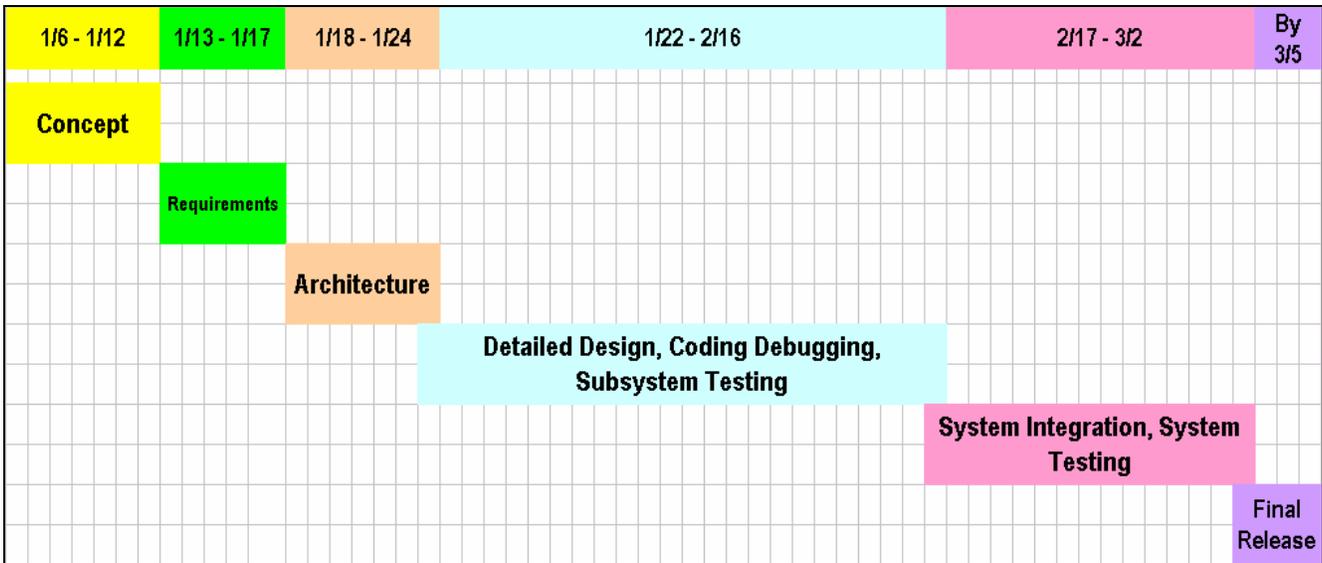


Figure 2

In terms of workers, our team will have one project manager, and s/he will be in charge of scheduling, monitoring each team member, and helping integrate all the components together at the end. Also, we will have four back-end developers and two user interface developers during the coding phase. We will further divide the back-end developers to accomplish subprojects in parallel during the coding phase. During the testing phase, we will have a back-end development lead, a user interface lead, and a system testing lead while the rest of the team do system testing.

5. Feasibility Rationale

We are confident that this project will be completed successfully. We have a realistic project plan based upon a proven software development lifecycle model that maps out our project over the next eight weeks. One of the strengths of our team is that we have some experience with web application back-end development and UI design. Also, even if only a subset of the requirements is implemented, the project can still be a success; all of the requirements are not necessary for a complete a functional web site. Our current team members have all also had project experience outside of school in a professional setting. We have also had direct experience working together, so we know each others' personality type. All team members are excited about the project concept, and we are determined to keep morale high through team building events and active communication.

There are many risks that exist in our project. Although some of our team members have worked with web programming, none of us have extensive experience, so there will be a bit of overhead to possibly learn a new language and framework. In addition, since most of the team members are inexperienced in a large group work environment with a project plan, we might have risks of individual developers disregarding requirements, developer gold plating, motivation problems, and insufficient planning. Because we have to deal with artificial class deadlines, it may not fit in well with our project plan, which may cause us to be forced to complete work in an inefficient manner. Furthermore, some of the social networking aspects of the project will present challenging problems that will require bulletproof algorithms to ensure performance that users would find acceptable.