

SW Engineering CSC648/848 Fall 2018
Fulda Buy & Sell (FBS)
WS2018_FD #3
Milestone #1
November 1, 2018

Version	Modification Description	Team member	Date
1.0	Document was created and Executive Summary was added	Shayna Thompson	October 29, 2018
1.1	Functional and Non Functional requirements were added	Zohaib	October 30, 2018
1.2	Competitive Analysis & High Level System Requirments	Samina, Wajahat	October 30, 2018
1.3	Use Cases & Data Definitions were added	Neha, Saeed	October 31, 2018
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Executive Summary

There are many challenges new students face when moving to a foreign country to further their education. Whether it be a 2 - 3 year program or even an exchange program for 1 semester, these students are faced with numerous processes: city registration, health insurance, enrollment at the university and last but not least, which has been proven to be the most stressful is accommodation. Therefore, living abroad comes with a lot of expenses and most foreign students are on a tight budget; they are always looking for the cheapest deals whether it be groceries, electronics, home appliances or clothing.

As a result, we at GSD3 have tried to alleviate this already difficult situation by developing a web-based solution which is designed especially for students. Fulda Buy & Sell (FBS) affords both new and graduating students the opportunity to easily search for items for which they are in need and for others to post items that they no longer need.

The main features of this solution includes:

1. Posting and sharing information about the items that are for sale
2. Browsing through a variety of available items that have been posted or searching for a specific item
3. Contacting the sellers for more information or arranging to receive the item
4. Reviewing and approving items before they are posted to the site

This solution provides several advantages for both the buyers and sellers of the system. Below are a few:

Buyer	Seller
Able to purchase from the comfort of their home at any time of day	Able to re-sell items that are no longer needed
Easier to compare prices of items	Increase sale opportunities by good reviews/rate from previous buyers
Good quality second hand items are available for sale at a cheaper price	
Avoid long cashier lines	
Overcome language barrier – able to change language of system	

Team GSD3 is made up of 6 international students who are currently enrolled at Hochschule Fulda in Germany. This global team consist of 4 students from Pakistan, 1 from India and 1 from Belize. Therefore, we have all just recently had first-hand experience of the difficulties mentioned above. Each member has a minimum of 2 years work experience and has a well rounded team as members have skill sets in front-end, back-end and database.

Personas

Users:

Users is a generic term for the persons who will be using the application. The three types of users are: Seller, Buyer and Admin. All users will have to complete their profiles after registering and upon logging in, their interfaces will be updated accordingly on the basis of the profile.

Admin User:

The Admin user has the ability to manage all content of the application. The admin must approve each Ad before it is posted and is able to modify/disable user accounts. Also the product image shall be approved by admin, making sure the product matches its exact category, image and other details provided.

Buyers:

The Buyer user is registered on the website and is interested to purchase an item. They are able to search for a specific item by name or category or browse the entire list of available items. When they find a product they are interested in, they can contact the seller for all the information required.

Sellers:

The Seller is the user who has registered on the website and has items for sale. These items that are for sale will be posted by the seller and he/she will provide all the information about the product and categorise it in the write category.

Use Cases

Register:

To be able to use the application, a user should define a unique username and password for his/her account along with providing some personal information like telephone number, email and contact number, city etc.

Login:

User should be able to login to the application with a unique username and password that was created when registering. The system validates the credentials entered and the user is taken to the interface of their choice which can be a buyer or seller.

Search for item:

All users of the application should be able to browse through all available items and search for a specific item by name or category. There are multiple categories for a product and searching for a product is much of categorising as per the requirement of the buyer.

Post item :

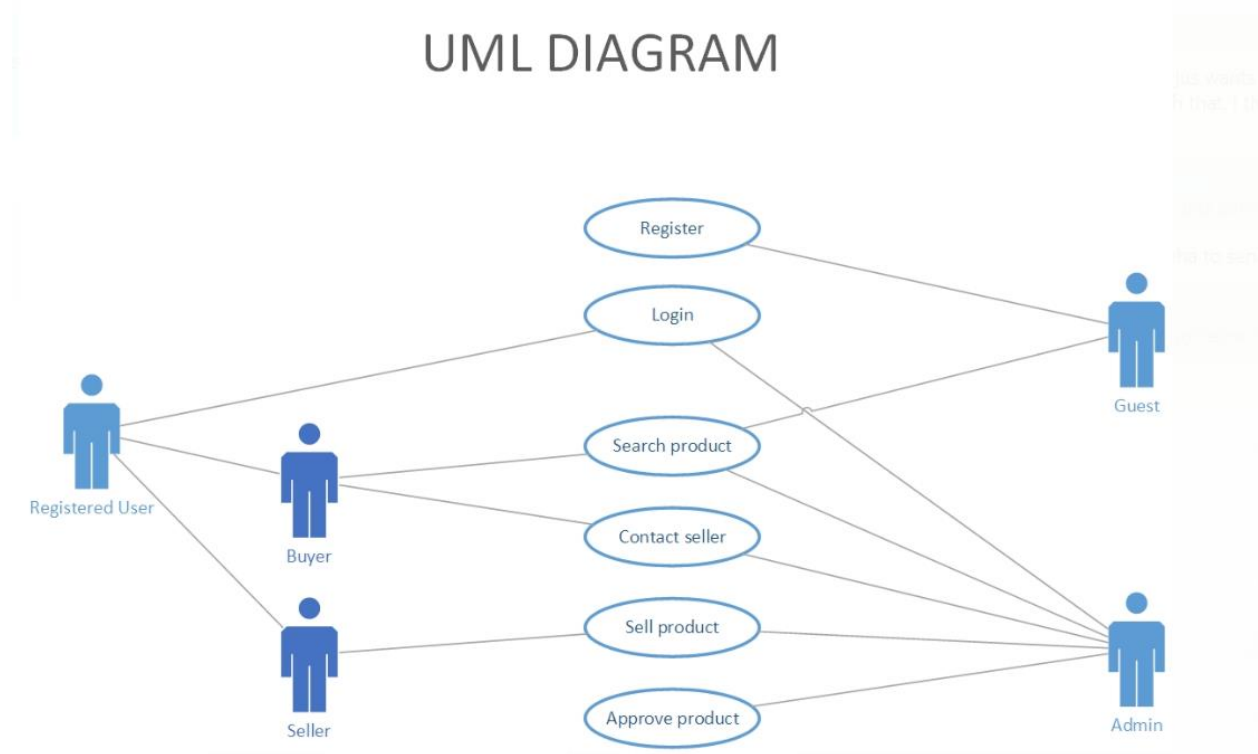
All the items that are available for sale can be posted by a Seller. When posting an item for sale, all necessary information must be provided. This information should include the condition, an image, price, category and the description of the item.

Contact Seller:

Any buyer who is a registered user and is interested in a particular item on the site can contact the seller. The seller information is already available and seller can be contacted via email (not via the website) and contact number.

Approve item:

Before being officially posted to the website, the Admin user must review the content and images of the item being posted and decide whether it meets the requirements by approving the item or rejecting it.



Data Definitions

User :

User is a generic term used for all the types of users accessing the application.

Sellers,Buyers,Guest Users are categorised under User entity with multiple access roles and interfaces. A user entity must be provided with all the required information of the use as well as con

Product:

Products are here categorised in multiple categories. User is able to search products on the basis of multiple categories. These categories or verticals are added by admin. All the categorisation is managed by admin. Admin has access roles to delete or add a categories. Seller is supposed to add products for selling on the basis of categories only. Admin has access rights to map products to particular categories on the basis of categories while the product is under screening.

Administrator :

Administrator is someone who manages all the roles for different users. Admin is something who gets all the requests to approve for products and all types of users. Admin has manages the whole content of the application.

Functional Requirements

1. Users shall register for the website
2. Users shall be able to login
3. Users shall be able to change the language of the system
4. Registered users shall be able to post an Ad for the item for sale
5. Seller shall be able to maintain/modify the Ad before it has been approved by the admin
6. Buyer shall be able to search products
7. Buyer shall be able to view the seller's details for contact
8. Buyer shall be able to rate seller
9. Buyer shall be able to search for items by category
10. Buyer shall be able to put an item in a wishlist
11. Buyer shall be able to call the seller via the website
12. Admin shall be able to approve the Ad on the basis of content
13. Admin shall be able to manipulate Ad (e.g. after specific time Ad's deletion)
14. Admin shall be able to maintain users
15. System shall be able to rank users Ad's

Non Functional Requirements

1. Application shall be developed, tested and deployed using tools and servers approved by Class CTO and as agreed in M0 .
2. Application shall be optimized for standard desktop/laptop browsers e.g. must render correctly on the two latest versions of all major browsers: Mozilla, Safari, Chrome.
3. Selected application functions must render well on mobile devices
4. Data shall be stored in the team's chosen database technology on the team's deployment server.
5. No more than 50 concurrent users shall be accessing the application at any time
6. Privacy of users shall be protected and all privacy policies will be appropriately communicated to the users.
7. The language used shall be English.
8. Application shall be very easy to use and intuitive.

9. Google analytics shall be added
10. No e-mail clients shall be allowed
11. Pay functionality, if any (e.g. paying for goods and services) shall not be implemented nor simulated.
12. Site security: basic best practices shall be applied (as covered in the class)
13. Modern SE processes and practices shall be used as specified in the class, including collaborative and continuous SW development
14. “Software Engineering Project Fall 2018. For Demonstration Only” at the top of the WWW page. (Important so as to not confuse this with a real application).
15. System shall be able to scalable

Competitive Analysis

Planned Features	Competitive Features
User Registration and Authentication	Discount and Promotion Management
Posting item	Call Seller
Category Management	Seller Feedback
Search for item	Order Management
Contact the Seller	
Admin Approval to Post	
Financial transactions are done face to face and not via the system	
Items can be saved to wish list	

Listed above are the features that were derived after doing the competitive analysis with (Amazon.de,OLX.com,wg-gesucht.de). Some competitors allow user to not only see the Ad, but they are also able to contact to seller and order online. However, as instructed FB&S restricts online payment handling therefore we may not add this feature. This restriction can also be an advantage as a lot of students do not have a credit card or paypal account and would preferring paying in cash. Seller Feedback associated with sellers so this is advantage,can be added in planned features. FS&B should also be able to call the seller via the website when accessing the site on a mobile device. Another feature would be that users are able to save an item to their wish list for future references.

High Level System Architecture

Front End:

- Language: Angular,
- Responsiveness: Bootstrap
- Browsers: Google Chrome, Safari.
- Server: Amazon AWS S3, CloudFront.

Back End:

- Technologies: Node JS
- Server: Amazon AWS EC2
- Database: MySql

Team

- **Shayna Thompson** – Team lead and Back End Developer
- **Neha Thawani** – Database Administrator, Back End Developer
- **Wajahat Khan** – Git Master, Front End Lead
- **Samina Zahid** – Front End Developer
- **Zohaib Jamshaid** – Front End developer
- **Muhammad Saeed** - Back End Lead

Checklist

Task	Status
Team found a time slot to meet outside of the class	Done
Github master chosen	Done
Team decided and agreed together on using the list of SW tools and deployment server	Done
Team ready and able to use the chosen back and front end frameworks	On track
Team lead ensured that all team members read the final M1 and agree/understand it before submission	Done