



SW Engineering CSC648/848 Fall 2018

Milestone 2

Team 15 (global)

Jonas Kühle, Eric Groom, Mariko Sampaga, Nay Lin Min

jkuehle@mail.sfsu.edu

Oct 18 2018

Revision History Table		
Version 0.1	Submitted for Review	Oct 18 2018

1. Data Definitions V2	2
2. Functional Requirements V2	3
3. UI Mockups/Storyboard (high level)	4
3.1 Seller (student)	4
3.2 Buyer	6
3.4 Seller (faculty)	8
3.5 Moderator	10
4. High Level Architecture, Database Organization	12
5. High-level UML diagrams	17
5.1 Class Diagram	17
5.2 Component Diagram	18
5.3 Deployment Diagram	19

1. Data Definitions V2

Item:

- Title: String
- Description: String
- Category: Enum
- Price: Decimal
- Seller: User
- Image(s): [Image], png, path to image in file system, between 1 and 5 inclusive per item.
- Status: Enum
- OnlyVisibleToFaculty: Bool

User: // unregistered users won't be in the database so this is only for registered users

- First Name(s): String
- Last Name(s): String
- Email: String
- HashedPassword: String
- ItemsForSale: [Item]
- WishlistItems: [Item]
- IsFacultyMember: Bool
- IsModerator: Bool
- IsBlacklisted: Bool

Message:

- Recipient: User
- Sender: User
- Date: DateTime
- Item: Item
- Content: String || Location

Location:

- Location: String
- Map: Image // will have a different map Image for each location with a pin marking the location

Category:

- Title: String
- isBook: Bool
- CourseNumber: String // only if isBook == true, null otherwise

Image:

- ImagePath: String
- ThumbnailPath: String

2. Functional Requirements V2

Moderators have all rights of Registered Users and Registered Users have all rights of Unregistered Users.

Priority 1:

- Unregistered Users
 1. Shall be allowed to browse posted items
 2. Shall be allowed to go through with the posting process
 3. Shall not be able to complete the posting process to sell an item until they sign up.
 4. Shall be able to filter items by category
 18. Shall be able to sort items by price
- Registered Users
 7. Shall have access to complete the posting process to sell one or more items.
 8. Shall have access to the seller's dashboard where they can see the status of their item(s) and received messages.
 9. Shall be able to be contacted by seller(s) by providing their phone number.
- Moderators
 11. Shall have access to moderator dashboard where they can approve/deny items being posted.

Priority 2:

- Unregistered Users
 5. Shall be able to search.
Will use %like text search including title, category, description
 16. Shall be able to search for books by SFSU course number.
- Registered Users
 13. Shall be able to message each other through intrasite messaging.
- Moderators
 12. Shall be able to blacklist users.

Priority 3:

- Unregistered Users
 19. Shall be able to filter by color
- Registered Users
 14. While messaging about an item users shall be able to specify a meetup location from a predetermined list of on-campus locations.
 15. Shall be able to keep a wishlist, a list of items being sold that the user wishes to track.
- Moderators
 17. Shall be able to give an user a reason for why their item posting was denied.

3. UI Mockups/Storyboard (high level)

3.1 Seller (student)

[Sign In](#) [Register](#)

GatorGoods

Post Item

Categories ▼

Q Search...

Recent Posts

Title
Description ...
Contact Seller
Price

Title
Description ...
Contact Seller
Price

Title
Description ...
Contact Seller
Price

1 | 2 | 3

[Sign In](#) [Register](#)

GatorGoods

Post Item

Categories ▼

Q Search...

Post Items

Title

Price

Sofa\$75.00

Category

Furniture ▼

Description

Used sofa for sale. Like-new condition

Upload an image (up to 5)

Upload

Post

[Cancel](#)

[Sign In](#) [Register](#)

GatorGoods

Post Item

Categories ▼

Q Search...

Post

Title

Sofa

Catagory

Furniture

Description

Used sofa

Sign In Page

Email address

Email Address

Password

Email Address

Sign In

[Forgot password](#)

New to GatorGood?

Register

Upload an image (up to 5)

Upload

Post

[Cancel](#)

[Sign In](#) [Register](#)

GatorGoods

Post Item

Categories ▼

Q Search...

New User Registration

First Name

Sarah

Last Name

Johnson

Email Address

sjohnson@mail.sfsu.edu

Password

Re-enter Password

☒ Student

☐ Faculty

Captcha

☐ User Agreement [Link](#)

Register

[My Account](#)

GatorGoods

Post Item

Categories ▼

Q Search...

Post Items

Title

Sofa

Price

\$75.00

Catagory

Furniture ▼

Description

Used sofa for sale. Like-new condition

Upload an image (up to 5)

Upload

Post

[Cancel](#)

[My Account](#)

GatorGoods

Post Item

Categories ▼

Q Car

Thank you, you have sucessfully submitted your posting. Please allow up to 24 hours for your posting to be approve/deny.

Recent Posts



Title

Description ...

Contact Seller

Price



Title

Description ...

Contact Seller

Price

3.2 Buyer

[Sign In](#) [Register](#)


GatorGoods


Post Item

Categories ▼

🔍 Search...

Recent Posts

	Title Description ...
Contact Seller	Price

	Title Description ...
Contact Seller	Price

	Title Description ...
Contact Seller	Price

1 | 2 | 3

[Sign In](#) [Register](#)

GatorGoods


Post Item


Categories ▼


🔍 Math Books

Most relevant search result

Sort ▼

	Math Book1 Description ...
Contact Seller	\$10

	Math Book2 Description ...
Contact Seller	\$50

	Math Book3 Description ...
Contact Seller	\$75

1 | 2 | 3

[Sign In](#) [Register](#)

GatorGoods

Post Item

Categories

Books

Most relevant search result

Sign In Page

Email address

dwilliams@mail.sfsu.edu

Password

Sign In

[Forgot password](#)

New to GatorGood?

Register

Description ...

Contact Seller

Price

1 | 2 | 3

[My Account](#)

GatorGoods

Post Item

Categories

Books

Most relevant search result

Message

Hi, I would like to buy the math book. Please let me know if the location selected is okay and what time you are available to meet up.

Thanks.

Library 1st Floor - Peets

Cancel

Send

Title

Description ...

Contact Seller

Price

1 | 2 | 3

3.4 Seller (faculty)

[Sign In](#) [Register](#)

GatorGoods

Post Item

Categories ▼

🔍 Search...

Recent Posts

Title

Description ...

Contact Seller

Price

Title

Description ...

Contact Seller

Price

Title

Description ...

Contact Seller

Price

1

 |

2

 |

3

[Sign In](#) [Register](#)

GatorGoods

Post Item

Categories ▼

🔍 Search...

Post Items

Title

Teacher's pointer stick

Price

\$5.00

Category

Miscellaneous ▼

Description

Slighlyt used pointer stick for teachers. Great for pointing stuff out.

Upload an image (up to 5)

Upload

Post

[Cancel](#)

[Sign In](#) [Register](#)

GatorGoods

Post Item

Categories ▼

Search...

Post

Title

Teacher's

Catagory

Miscell

Descrip

Slightly

Sign In Page

Email address

montfermeil@mail.sfsu.edu

Password

Sign In

[Forgot password](#)

New to GatorGood?

Register

Upload an image (up to 5)

Upload

Post

[Cancel](#)

[My Account](#)

GatorGoods

Post Item

Categories ▼

Search...

Post Items

☒ Faculty only

Title

Teacher's pointer stick

Price

\$5.00

Catagory

Miscellaneous ▼

Description

Slightly used pointer stick for teachers. Great for pointing stuff out.

Upload an image (up to 5)

Upload

Post

[Cancel](#)

[Sign In](#) [Register](#)

GatorGoods

Post Item

Categories ▼

Car

Thank you, you have successfully submitted your posting. Please allow up to 24 hours for your posting to be approved/denied.

Recent Posts



Title

Description ...

Contact Seller

Price



Title

Description ...

Contact Seller

Price

3.5 Moderator

[Sign In](#) [Register](#)

GatorGoods

Post Item

Categories ▼

Q Search...

Contact Seller

Title

Description ...

Price

Contact Seller

Title

Description ...

Price

Contact Seller

Title

Description ...

Price

1 | 2 | 3

[Sign In](#) [Register](#)

GatorGoods

Post Item

Categories ▼

Q Search...

Contact Seller

Title

Description ...

Price

Contact Seller

Title

Description ...

Price

Contact Seller

Title

Description ...

Price

1 | 2 | 3

Sign In Page

Email address

Marcthemod@gmail.com

Password

Sign In

[Forgot password](#)

New to GatorGood?

Register

[My Account](#)

GatorGoods

[Post Item](#)[Categories](#) ▼

Title

Description ...

[Contact Seller](#)

Price



Title

Description ...

[Contact Seller](#)

Price



Title

Description ...

[Contact Seller](#)

Price

1 | [2](#) | [3](#)

[My Account](#)

GatorGoods

Pending Posts

▼ Post	▼ User	▼ Post Action	▼ User Action
New Sofa	Sarah	Approve Deny	Blacklist User
Teaching Pointer	Montfermeil	Approve Deny	Blacklist User
Used Xbox One	John	Approve Deny	Blacklist User
Explosive Fireworks	Wes	Approve Deny	Blacklist User

Blacklisted User

▼ Users	▼ Action
Bobby	Reactivate User
Stella	Reactivate User

4. High Level Architecture, Database Organization

DB Organization:

items	
Field Name	Datatype
iid	ID
title	VARCHAR(60)
description	VARCHAR(500)
price	INTEGER
seller	Foreign Key (User)
category	Foreign Key (Category)
status	ENUM ('pending', 'approved', 'denied', 'sold')
onlyVisibleToFaculty	BOOLEAN
createdAt	DATETIME
modifiedAt	DATETIME
approvedAt	DATETIME
isBook	BOOL
courseNumber	VARCHAR(10)

images	
Field Name	Datatype
imid	ID
item	Foreign Key (item)
imagePath	VARCHAR(4096)
thumbnailPath	VARCHAR(4096)

user_info	
Field Name	Datatype
uid	ID
firstName	VARCHAR(30)
lastName	VARCHAR(30)
facultyMember	BOOL
moderator	BOOL
blacklisted	BOOL

We will use a user authentication library which will store email and password and will have a 1to1 relationship with the above table

item_wishlist_user_junction	
Field Name	Datatype
item	Foreign Key (Item)
user	Foreign Key (User)

messages	
Field Name	Datatype
mid	ID
recipient	Foreign Key (User)
sender	Foreign Key (User)
sentAt	DATETIME
item	Foreign Key (Item)
content	VARCHAR(255)
location	Foreign Key (Location)

locations	
Field Name	Datatype

lid	ID
name	VARCHAR(50)
map	VARCHAR(4096)

categories	
Field Name	Datatype
cid	ID
name	VARCHAR(25)

Media Storage:

- Images: File System

Search/Filter Architecture and Implementation:

Algorithm/SW for search : %like

How will you organize search items for the user: Most similar result based on %like

What DB terms will be searched, how it will be coded and organized in the DB: Title, category, c

(and perhaps description, depending on performance)

APIs:

Data Transfer Methods:

1. Send items to frontend React via setting property on global window object in JSON format, using the same names for properties as the database field names. JSON will have the following format: {error: String or null, data: nested JSON object}.

Example usage:

```
<script id="data-provider">window.data=<%= data_json %></script>
<script src="items-bundle.js"></script> <!-- items-bundle.js will access
json via global window object-->
```

2. HTTP requests

List of APIs

1. ItemAPI

Description: Sends all items of a certain user to the frontend. Differs between registered user and registered user, which is also faculty member. Just sends approved items if the requested user is not the same as the requesting registered user, otherwise will additionally send

items with status of pending, denied, and sold. Does not include description.

2. ItemDetailAPI

Description: Sends all of the details of an item including description, path to image, etc. If the requesting user is not a moderator or the owner of the object and the object's status is pending, denied or sold, the request should return a HTTP 403 error.

3. BrowseItemAPI

Description:

- i. Selects items to show on the frontpage and as suggested items when no items could be found from a search result
- ii. Instead of passing via HTTP, this is based by setting a property on the window object for when this is used on the frontpage. For search results the procedure above will be used.

4. MessageAPI

Description: Sends all messages of a certain user to the frontend

5. WishlistAPI

Description: Sends all items of the wishlist of a certain user to the frontend

6. AddWishlistItemAPI

Description: Creates a new wishlist item in the wishlist of a certain user

7. DeleteWishlistItemAPI

Description: Deletes an item in the wishlist of a certain user

8. CategoryAPI

Description: Sends all items of a certain category to frontend

9. PendingItemsAPI

Description: Sends a list of items which are pending approval. Backend has to check if requesting user is moderator

10. PostItemAPI

Description: Post item of a user. Includes approval by moderator.

11. DeleteItemAPI

Description: Delete item of a certain user

12. UpdateItemAPI

Description: Update item of certain user (description, price, title etc.)

13. AddUserAPI

Description: Creates a new user based on the information the unregistered user made to get a registered user

14. SearchAPI

a. Description

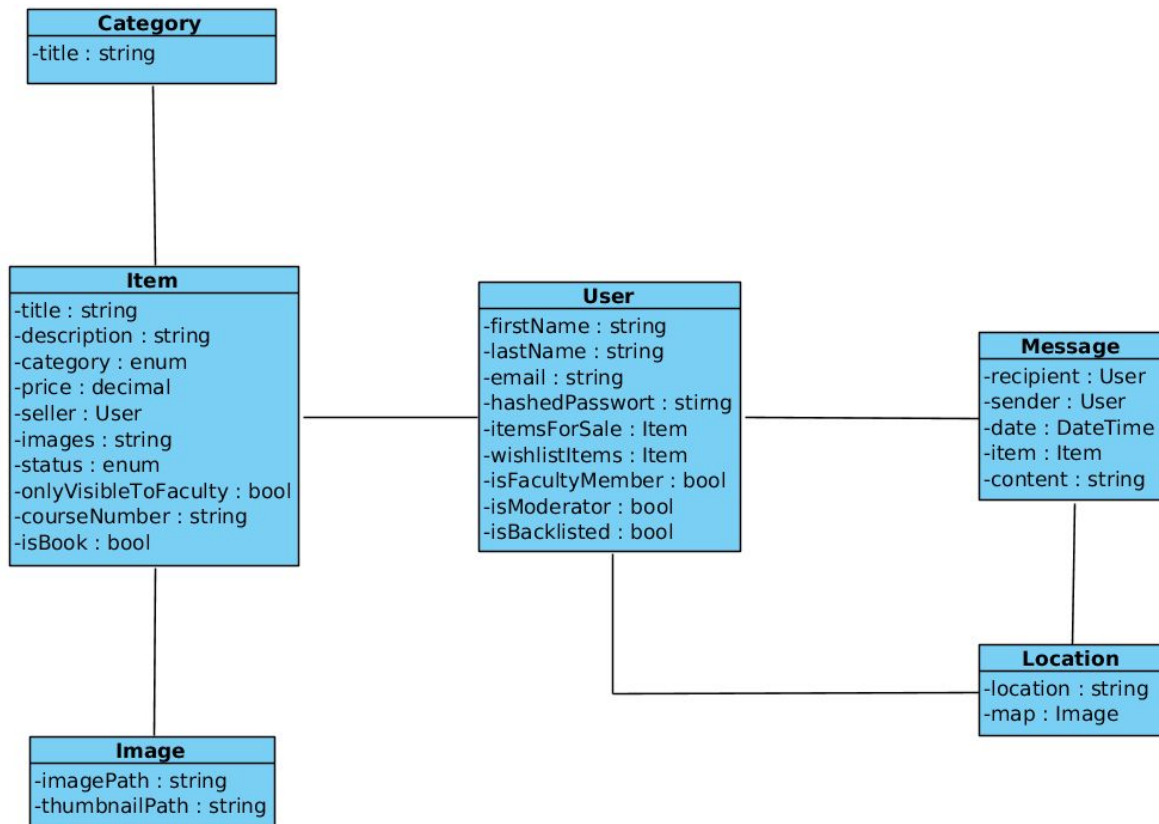
- i. Sends items to frontend based on search query provided in request

b. Details

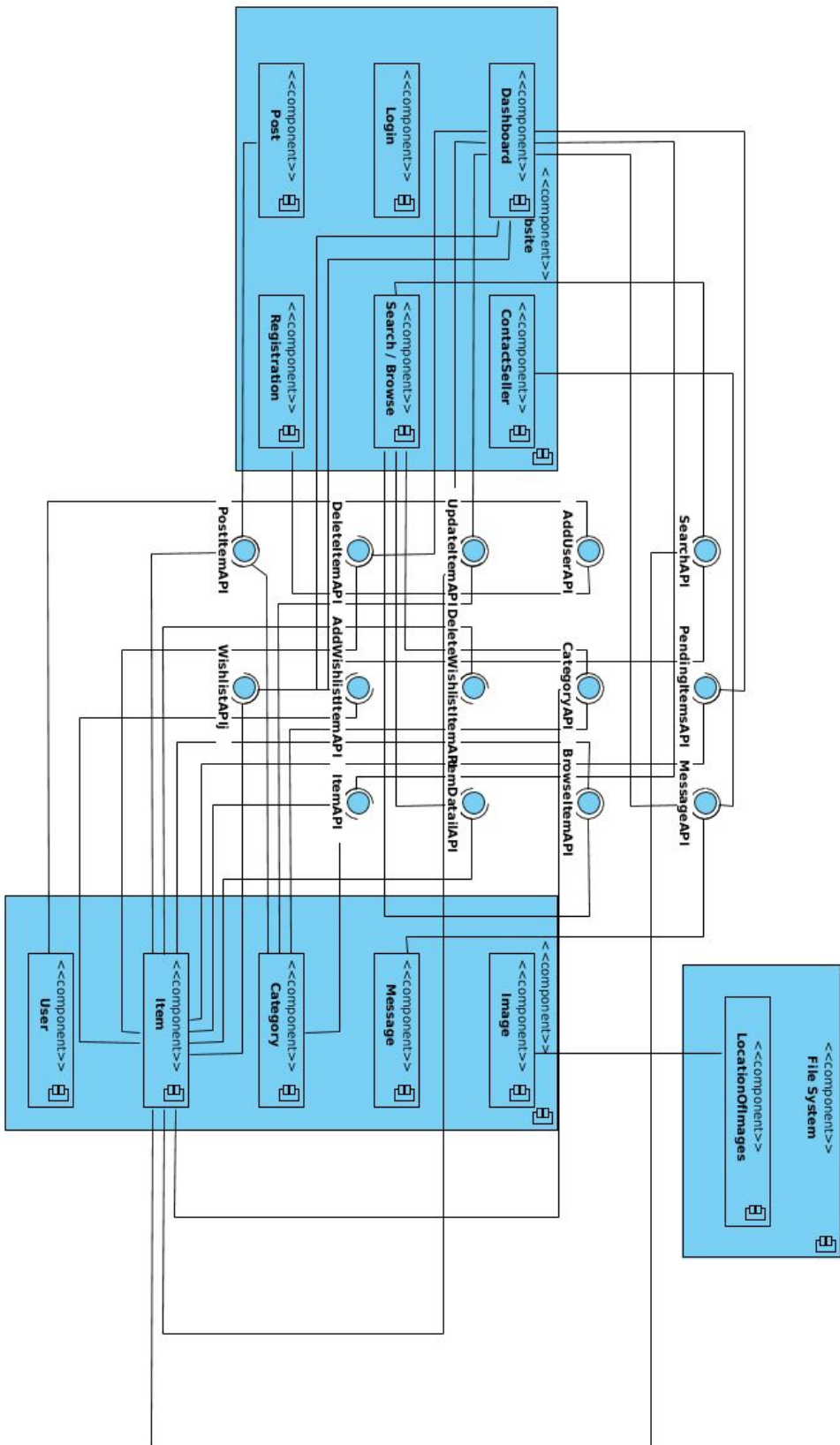
- i. HTTP request
- ii. Input: Search query
- iii. Output: Ranked list of items JSON

5. High-level UML diagrams

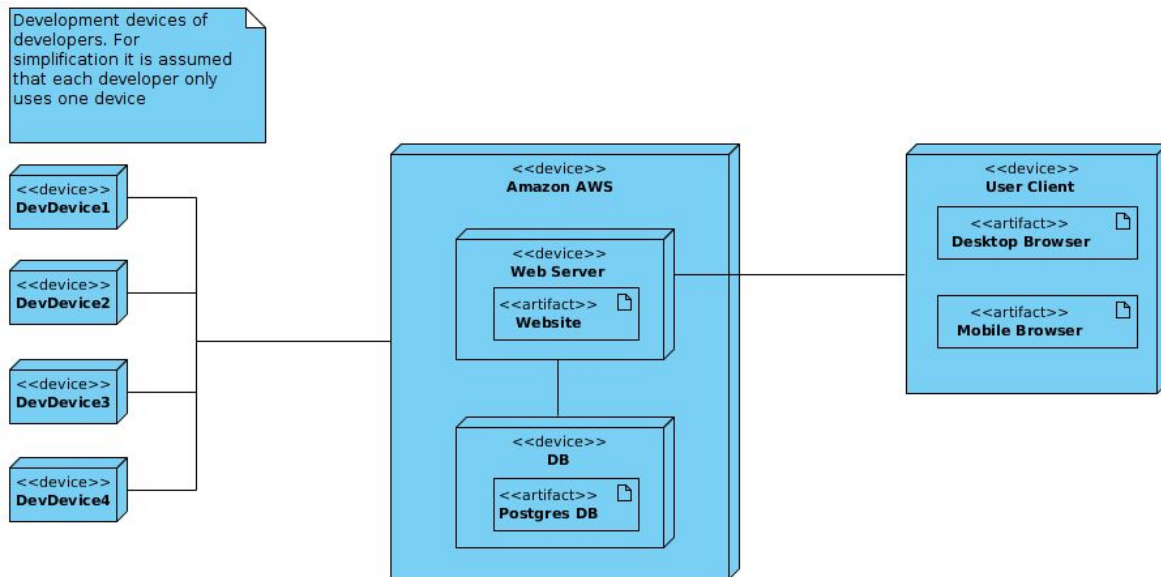
5.1 Class Diagram



5.2 Component Diagram



5.3 Deployment Diagram



6. Identify *actual* key risks for your project at this time

Skill risks: Lack of experience in frontend development at 3 out of 4 members

Member with experience teaches the others

Schedule risk: Vertical prototype

The vertical prototype seems to be very extensive and there can be a lot of unpredictable issues

Teamwork risks: Unsuitable project managing tool

Check Trello, GitHub project managing and others