

# BoilerX

## Project Backlog

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### Problem Statement

Typically for members of the Purdue community, when they want to trade goods and services, they will make a post on social media websites such as Facebook and wait for a response. To handle this mismatch in the Purdue marketplace, we decided to create a web-based application to provide a peer to peer trading place for students and faculty. The user-friendly app will create an easy environment for both buyers and sellers to make trades in Purdue. A search bar will allow buyers to easily search up a specific item that they need. As this is a free market, prices will be kept low as sellers will compete against one another to sell a particular product such as an i-clicker. Once a deal between two parties is reached, they can meet somewhere on campus and make the exchange, effectively saving time and money on delivery costs.

### Background Information

There are plenty of Facebook groups (such as Textbook Exchange) that allow the Purdue community to trade goods and services. However, these groups are often very messy, user-unfriendly and inefficient when it comes to filtering results to the exact item that a user wants. For example, when a buyer wants to find a particular textbook for a class, there is no way of filtering search results that returns the exact item on Facebook. Even if a buyer manages to find a particular good that he or she is looking for, there might still be a mismatch because of the high price, due to the lack of competition. A peer-to-peer trading marketplace app will save time and money for the Purdue community, allowing us to focus on the things that matter.

### Environment

We will use ReactJS for the frontend user interface. We will use a Serverless framework with AWS services such as Lambda, DynamoDB and S3 for our backend databases. We will store users, listed items and other related information on AWS.

## Requirements

### - Functional

Backlog ID	Functional Requirements	Hours	Status
1	As a user, I would like to be able to sign up using my Purdue email	2	Planned for Sprint 1
2	As a user, I would like to be able to verify my email address	4	Planned for Sprint 1
3	As a user, I would like to be able to set a password and change password any time I log in.	3	Planned for Sprint 1 & 2
4	As a user, I would like to be able to change username	2	Planned for Sprint 1
5	As a user, I would like to be able to set a profile picture	2	Planned for Sprint 2
6	As a user, I would like to be able to login to my account with my Purdue email and password	5	Planned for Sprint 1
7	As a user, I would like to be able to logout of my account	3	Planned for Sprint 1
8	As a user, I would like to be able to search for items by keywords	7	Planned for Sprint 2
9	As a user, I would like to be able to filter items by category	3	Planned for Sprint 1

10	As a user, I would like to be able to sort items by price or popularity	4	Planned for Sprint 2
11	As a user, I would like to be able to see the most popular items on the homepage	5	Planned for Sprint 2
12	As a user, I would like to be able to view my account information, which includes my personal profile and item listings	4	Planned for Sprint 1
13	As a user (seller), I would like to be able to post an item for sale	3	Planned for Sprint 1
14	As a user (seller), I would like to be able to add title and/or description for the item that I want to sell	2	Planned for Sprint 1
15	As a user (seller), I would like to be able to upload pictures of the item that I want to sell	3	Planned for Sprint 1
16	As a user (seller), I would like to be able to create tags for the item that I want to sell	2	Planned for Sprint 1
17	As a user (seller), I would like to be able to set a price for the item that I want to sell	2	Planned for Sprint 1
18	As a user (seller), I would like to be able to edit my item information after I post them for sale	2	Planned for Sprint 1
19	As a user (buyer), I would like to be able to buy an item by clicking the "buy button" which will send an system email notification to the seller	5	Planned for Sprint 2
20	As a user (seller), I would like to be able to receive a system email stating the buyer's email and the item information once a sale is made	3	Planned for Sprint 2

21	As a user (seller), I would like to be able to take down the listed item after it is sold	5	Planned for Sprint 2
22	As a developer, I would like to inspect my code, unit inspect my code, and inspect the design of my code	100	Planned for Sprint 1 & 2
<b>Total Hours:</b>		<b>171</b>	

### - Non-functional

Backlog ID	Non-functional Requirements	Hours	Status
23	As a developer, I would like to learn how to use ReactJS	10	Planned for Sprint 1
24	As a developer, I would like to learn how to use serverless framework to configure AWS services	10	Planned for Sprint 1
25	As a developer, I would like to learn to build a custom API hosted on AWS API Gateway	20	Planned for Sprint 1
26	As a developer, I would like to learn how to configure DynamoDB and S3 cloud storage for our web app	10	Planned for Sprint 1
<b>Total Hours:</b>		<b>50</b>	

### - Use Cases

Case: Sign up

#### Action

1. Click sign up button
3. Input Purdue Email and click confirm
5. Input confirmation number and click next

#### System Response

2. Open sign up page
4. Create account and send confirmation number to the email
6. Verify confirmation number and open password

page

7. Input password and click complete sign up
8. Save password

#### Case: Set profile picture

##### Action

1. Go to account page
3. Click change profile picture button
5. Choose picture from the device and click upload

##### System Response

2. Display account page
4. Display picture uploading page
6. Save the picture to cloud storage and display it

#### Case: Change username

##### Action

1. Go to account page
3. Click change username button
5. Input username and click save

##### System Response

2. Display account page
4. Display editing mode
6. Save the username to cloud storage and display it

#### Case: Log in

##### Action

1. Input Purdue email and password
2. Click "login button"

##### System Response

- N/A
3. Display home page

#### Case: Change password

##### Action

1. Go to account page
3. Click change password button
5. Type in current password and new

##### System Response

2. Display account page
4. Display change password page
5. Verify if the current password is correct; if

password

so, change the password stored in database to the new password

Case: Sign out

Action

1. Go to account page
3. Click sign out

System Response

2. Display account page
4. Mark the user as signed out in Database and display home page

Case: Search items by keywords

Action

1. Go to homepage
3. Type the keywords in the search bar

System Response

2. Display homepage
4. Display search results

Case: Filter items by category

Action

1. Apply the filter settings

System Response

2. Display the search results with the applied filter

Case: Sort items by price or popularity

Action

1. Click search button
3. Select "price: High to Low", "Price: Low to High" or "popularity".

System Response

2. Display search results
4. Update the page with according sorted results

Case: See popular items on the homepage

Action

1. Go to homepage

System Response

2. Display the homepage with popular items

Case: View my account information

Action

System Response

If not on account page:

1. Go to account page

2. Display account page

If on other tabs of account page:

1. Click on "account profile"

2. Display personal information

Case: Post item for sale (set title, description, upload pictures, create tags and set price)

Action

System Response

1. Click sell button

2. Display "create listing page"

3. Input title of the item and short description

4. Click "upload picture"

5. Display picture uploading page

6. Choose picture from the device and click upload

7. Save the picture to cloud storage and display it on the frontend

8. Input tags

N/A

9. Input price

N/A

10. Click "submit listing button"

11. Display item

Case: Edit posted items

Action

System Response

1. Go to account page

2. Display account page

3. Click listings button

4. Display listed items

5. Click edit button

6. Display edit item page

7. Make corresponding changes

8. Click submit changes button

9. Display updated listed items

Case: Buy an item

Action

1. On the item page, click "buy"

System Response

2. Send email notification of buyer's contact information, selling item information and link to the seller
3. Display email sent respond

Case: Receive email notification of the items sold

Action

1. (Optional) click on the link to the item page

System Response

2. Display item page

Case: Take down sold items

Action

1. Go to account page
3. Click listings button
5. Click edit button
7. Click delete button
9. Click yes button

System Response

2. Display account page
4. Display listed items
6. Display edit item page
8. Display confirmation popup
10. Display updated listed items