

**Group #5 | Usability Document | Spring 2023 | CS 3240**

*Falcon-List*

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## Executive Summary

As current Bowling Green State University [BGSU] students, the team members of Falcon-List noticed how useful websites and applications such as Craigslist are. Especially when moving in and out of dorms and when wanting to meet up with new groups on campus, websites and applications of that nature are very helpful. What if there was a website like Craigslist but exclusive to just BGSU students? From there, the idea for Falcon-List was created.

We began the journey of developing Falcon-List by brainstorming, what would a BGSU exclusive version of Craigslist look like? What would it need to be functional? Through developing system requirements (functional requirements, non-functional requirements, user interface requirements, and hardware/platform requirements) and initial talks of what the platform could look like, the first iteration of falcon list was created. An important part of our initial iteration of Falcon-List was determining usability goals for the project and deciding which model of usability we were going to work from. This project is based around the Leventhal and Barnes model of usability with some additional situational variables added in that are more specific to Falcon-List:

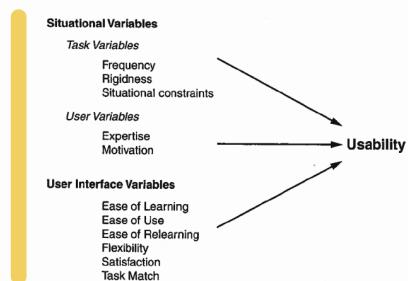


Figure 3.4 Our Model of Usability.

Additional Situational Variables:

- Are students aware of the application?
- Are students able to access the application?
- Can they complete a successful transaction (buying and/or selling an item)
- Would they recommend this application to a friend?
- How difficult is it to make illegal sales - error prevention?
- How quickly can returning users sell items

*Leventhal and Barnes model of usability, from Usability Engineering: Process, Products & Examples (2007) by Laura Leventhal; Julie Barnes.*

During the next phase of development, we focused on creating user stories to better relate and empathize with future users of Falcon-List. Utilizing the system requirements that were previously established, we created a list of those requirements in the form of user stories to better understand actions a user might take within

Falcon-List. Another important part of the development journey of Falcon-List was planning out how we would gather data and what type of data we should gather. This included planning and listing potential individuals to interview, sample interview and questionnaire questions, and how we may conduct observations (both in a natural environment observing students and through analytics of the website).

The third phase of development is where we narrowed our scope and clearly defined an overview of the project. We created a thorough description of the problems Falcon-List aims to solve and our team's proposed solution to those problems. Project drivers, constraints, potential project issues, and a more indepth review of the system requirements were established. During this iteration of Falcon-List we created two personas to represent hypothetical users of Falcon-List. The personas created greatly aided in keeping the end users' experience in mind. To further reinforce the personas we also created scenarios for these personas to be in as a way to help put ourselves in a users' shoes.

The fourth iteration is where Falcon-List really took shape. An interactive prototype was developed to really internalize the vision of what a finished version of the website would look like, and how it would feel to use. Team members were able to really step into the role of a user through determining the layout and look and feel of the interface of Falcon-List. Conceptual models were established to help future users relate our product to the real world and concepts already familiar to the user to make their experience easier upon first use and continued use of Falcon-List. Storyboards of our previously created personas were created to envision what perspective other than our team members would be like when using Falcon-List.

Our current iteration of Falcon-List is centered around usability testing. Standard tasks that users would perform during testing, a consent form, typical users who would be good candidates for testing were identified, and a plan was developed for our usability study. Plans were created for both a test in a controlled and natural setting.

From the beginning to our current work on Falcon-List, our focus has been centered around the end users' experience. Through reading literature and working through exercises in the design process we have created our current iteration of Falcon-List and are ready to do some initial testing with possible users. A particular topic we were interested to learn about and are continuing to investigate is the compliance and standards in following usability guidelines through a website that is affiliated with a public university.

## Proposal [P1]



# System Requirements

## Functional Requirements

- Post items to sell on online store with picture and description
  - The website will give them specific direction on what information to include/ give them a form to fill out about their item.
- Message buyer/seller directly or group chat messaging (for looking for a group feature)
- Sign-in page with BGSU ID or myBGSU login credentials
  - Via existing BGSU app
- Ability to view the number of times an item has been visited/people interested
  - items with high number of bids or views will be marked in some way
- See status of an item -> available/sold
  - Sold items will no longer be displayed
- Ability to sort by
  - Different categories of items (tech, household items, appliances, etc)
  - Price
  - Location of item (close to user or far away?)
  - Condition of item (new vs used, good, average, or poor condition)
- Reputation of seller
  - Are they reliable, do they show up on time, are they friendly...
- Reputation of buyer
  - Have they been deceitful in previous sales , do they show up on time, are they friendly...
- Looking for group feature
  - Distinction between looking for dorm residents and off campus
  - Filters for what kind of group the user is looking for (study group, friends, clubs, etc. ...)
- Profile set up for the user
  - Specification for dorms/off-campus
  - Log in/ verify BGSU credentials
  - Set up the desired method of payment/receiving payments (does the seller prefer cash, Venmo, or some other method of payment?)
  - Users given a rating of 100 and others can report them to lower their rating to suggest they are not reliable sellers/buyers

- Search
  - Search for specific sellers
  - Search for specific items
  - Search for specific topics (for groups/ finding people)
  - Search for specific location on campus (for groups/ finding people)

## Non-Functional Requirements

- Item database moderation
  - no selling of illegal/age restricted items
  - Removal of irrelevant posts/ general content moderation
- Easy-to-navigate database of items
  - This can be completed through the functional requirements such as searching and the ability to sort by what kind of item or group the user is looking for.
- Easy-to-learn for new students
  - Easy to set up a profile, look at items, purchase an item, or sell an item. See the usability metric of “could they explain how to do this process to a friend?”
- Easy-to-memorize for returning students
  - How easy it would be for a user who may have learned the system before to then return years later to look up items to buy or enter a new post for the item to be sold.
- User Interface Requirements
  - BGSU friendly colors, the webpage will adhere to the official BGSU branding guidelines.
  - Layout distinction between wanting to sell and wanting to buy on the software
    - This could possibly be achieved through a homepage that is set up like a dashboard of some kind.
  - Visual representation of the item (similar to product pages on websites)

## Hardware/Platform Requirements

- Have a computer/mobile device
- Access to internet
- BGSU student
  - Integration within the existing BGSU app

## User Stories & Data Gathering [P2]

### System requirements in the form of User Stories

#### Functional Requirements

- As a student moving in or out of my dorm/apartment I want to post items on Falcon-List so that I can get rid of things I no longer want or need.
  - As a student selling something on Falcon-List, I want to know what information is required about my item so I can sell it successfully.
- As a student looking to create a group on Falcon-List I want to post a listing for my group so I can start hearing back from interested members.
  - As a student listing a group on Falcon-List, I want to know what information is required about my group or myself so I can start letting people join my group.
- As someone purchasing an item I want to be able to message the seller so I can find out more information or set up a time and place to pick up my item.
- As a seller of an item I want to be able to message the buyer so I can answer any questions and set up a time and place to deliver my item.
- As a group leader/creator I want to be able to message interested members so I can communicate information such as meeting times and verify they are a good fit for my group.
- As a student interested in joining a group I want to be able to message the group leader so I can find out more information about the group and get to know some of the members.
- As a BGSU student I want to be able to sign into Falcon-List using my student ID number or my BGSU credentials inside of the existing BGSU app so that I can easily access Falcon-List.
- As someone selling an item I want to see the number of times my item has been viewed by others and how many other people have marked they are interested in my item so I can know if my item will sell quickly or sell to the highest bidder.
- As a buyer I want to know which items are popular or have a high number of bids so I can make a judgment call on how fast to purchase the item or whether or not I should bid on the item.
- As someone interested in purchasing an item I want to see the status of an item to know if it has recently been sold or is still available so I can purchase the item or start looking for similar items instead.
- As someone selling an item I want to know the status of my item so I can know when my item has been purchased.

- As a student searching for items to buy, I want to check the seller's rating so I know if they are a trustworthy seller.
- As a student who sells items, I want to check the rating of a potential buyer so I will know if they can be trusted during a money exchange.
- As a student interested in buying an item, I want the ability to sort the available items by category so I can find exactly what I am looking for.
- As a student interested in buying an item, I want the ability to sort by lowest/highest price so I can find an item in my price range.
- As a student living in the dorms, I want to sort items by their location nearest to me so I can purchase an item from a seller close by.
- As a student interested in purchasing an item I want to sort the items by the item's condition so I will have some idea of what I am getting in text form.
- As a student interested in joining a group, I want to be able to filter through the category of groups so I can find other students that share my interests.
- As a student interested in joining a group, I want the ability to search for groups on-campus or off-campus so I will know the distance from me a specific group meets.
- As a user, I want to set my location as either on-campus or off-campus so I can post items and find groups that match my location.
- As a user, I want to log in with my BGSU credentials so that everyone knows I am a BGSU student.
- As a user, I want to set my desired payment method so that buyers know how to pay me for my item.
- As a user, I want to give a rating to other members so that other users know if someone is unreliable in selling items or buying items.
- As a user, I want to search for specific sellers so that I can find people who I know or people that have a high rating.
- As a user, I want to search for specific items so I can filter out things that I don't want or need.
- As a user, I want to search for specific topics so I can find people who are interested in the same things I am.
- As a user, I want to search for specific locations so I can find groups who meet at my preferred location.

## Non-Functional Requirements

- As an administrator or university official I want to moderate the items posted to the database of Falcon-List so I can prevent the sale of illegal or age restricted items.

- As an administrator or university official I want to help remove irrelevant posts and oversee what is posted to Falcon-List so I can ensure the application is being used for its intended purpose.
- As a new student I want it to be easy to learn how to use Falcon-List so I can set up my profile and begin looking for groups/items or post a group/item.
- As a returning student I want to be able to remember how to use and access Falcon-List after not using the application for a while so that I don't have to look anything up or take extra steps to do something I once knew how to do.

### User Interface Requirements

- As a university official I want to have the interface use BGSU official colors and branding so that the application is associated with BGSU.
- As a student using Falcon-List, I want the interface to have a layout distinction depending on what action I want to do (buy, sell, create a group, join a group) so that I can effectively use the application.
- As a user of Falcon-List I want to see visual representations of items or groups (if applicable) so that I can decide if I want to join that group or buy that item.
- As a student on the go, I want to be able to use the app on my mobile phone so that I can easily access the application.

### Hardware/Platform Requirements

- As a user of Falcon-List I want to have a computer or mobile device with internet access so that I can access the application
- As a BGSU student I want to be able to access Falcon-List through the BGSU app so that I can easily verify my student status and not need to download another app on my phone.

## Personas & Scenarios [P3]

### User Profile 1

#### Persona:

**"Outgoing Owen"**



**Demographic Information**

Age: 20 | Gender: Male | Freshman BGSU student majoring in business. | Place of residence: Falcon Heights room 101.

Personality: outgoing, friendly, energetic, a "go-getter".

Activities and interests: Owen enjoys playing videogames with his friends and going to hockey games. He enjoys meeting new people and trying new things.

**Other Information**

Owen is not the most tech savvy. When he encounters issues with tech his first plan of action is to ask others how to fix the issue. He is familiar with online shopping and sites such as Craigslist however. As Owen is a freshman, he is still quite new to BGSU.

**Beliefs**

He thinks that the idea of Falcon-List is cool, and he is particularly interested in the creating and joining groups feature. This aligns with his interest of meeting new people and trying new things on campus. Owen has only used Falcon-List once, to buy a BGSU sweatshirt. He would like to use the app again to get more things for his dorm and to meet others.

**Pain Points**

As a new student that is unfamiliar with campus, Owen can at times feel apprehensive that he will not know where particular spots or buildings are on campus.

**Needs**

An easy way to directly message another user, directions to a selling/buying or meet up location for a group.

**Scenario:** It's a Friday night and Owen is looking forward to the weekend, but unfortunately the hockey game is an away game and all of his friends are either busy with homework or went home for the weekend. He remembers Falcon-List and that he can browse different clubs and groups that are meeting up over the weekend. This would be a great way to get out there and meet some new people. He already has the BGSU app downloaded and opens the app and selects the Falcon-List icon. Falcon-List greets him with a dashboard that has a few options (buy an item, sell an item, create a group, join a group) and he selects "join a group". Owen is then presented with all of the listings that are open groups he can join. He is able to use filters to sort the available groups by location, meeting time, and activities. Owen sees that there is a group of students currently gathering in the student union to play Mario Kart. He is able to join the group through Falcon-List by clicking a "join group" button and then he heads off to the student union to go play Mario Kart.

## User Profile 2

### Persona:

### "Resourceful Regina"



**Demographic Information**

Age: 23 | Gender: Female | Senior BGSU student majoring in geology. | Place of residence: The edge Apartments, apartment 222.

Personality: shy, studious, hardworking.

Activities and interests: Regina enjoys listening to music and reading. She also enjoys hanging out with a tight knit group of friends. She is close to graduation and is currently looking for full time employment opportunities and to move out of campus-owned apartments.

**Other Information**

Regina is decently tech savvy and feels confident solving tech issues on her own with research. She is familiar with e-commerce sites such as Craigslist. Regina is very familiar with campus and has been to most if not all buildings on campus during her time at BGSU.

**Beliefs**

Regina is a big believer in sustainability, and she thinks Falcon-List would be a great way to get rid of things she doesn't need as she looks to move out of her current apartment. She has used Falcon-List in the past, but it's been a while. Some of her most common actions in the app are buying and selling items.

**Pain Points**

As The Edge is not on campus, she finds it annoying to have to make extra trips to campus. She is also very shy and always dreads the meet up with a buyer or seller.

**Needs**

Notifications when an item she is selling is viewed or purchased. Direct messaging capabilities between her and the other user who purchased the item. An easy and secure way to store her desired method of payment when an item is purchased.

**Scenario:** Success! Regina and her roommates celebrate as she has finally secured a job after graduation in Yellowstone national park working as a geology expert. After the big celebration and spreading the news, Regina begins to start planning. Wyoming is quite far from Bowling Green, OH. She will need to move cross country here in a couple of months to start her new career. Regina gazes around her room, "it's amazing how much stuff one person can accumulate over 4 years of school" she thinks to herself. She remembers Falcon-List, it's been a while since she's used it but it could come in handy for getting rid of extra stuff she won't need when she packs everything up into moving boxes. She starts gathering up things she'd like to sell. Once she had a few things gathered, she opened up the BGSU app. She selects the Falcon-List icon and is greeted with a dashboard with a few options (buy an item, sell an item, create a group, join a group) and she selects "sell an item". The process from here is pretty straightforward, Regina is prompted to take a few photos of the item, write up a quick description, and then she can post her listing. Information such as her contact information and desired method of payment have been previously set in her account settings. She now waits for fellow Falcons to purchase her items.

## Functional Requirements:

### The Scope of the Work:

The system must allow users to register with their existing BGSU email address and password. Registered users should be able to login securely and access the system's features via an existing BGSU app. The system must allow registered users to post listings for either items or groups. Users should be able to upload a description of their items or groups. The system must allow users to search for ads or groups based on filters. The system must provide a messaging system for buyers and sellers or potential group members and group leaders to communicate. Registered users must be able to edit, delete, and repost their ads as needed. Users must also be able to view the ad's performance, such as the number of views and inquiries. The system must have a reporting system for users to report fraudulent or inappropriate ads.

### Business Data Model and Data Dictionary:

- The database must store user information, including name, housing location, BGSU student number, email, user rating.
- The database must store ad information, including title, description, price, location, and pictures.
- The database must store group posting information, including the creator of the group, number of members if available, location for group meeting, and category of the group.
- Messaging System: The database must store messages between buyers and sellers or group leaders and potential group members.
- Reporting System: The database must store reports of fraudulent or inappropriate ads and update the rating of the reportee.

## The Scope of the Product

The product must provide a platform for BGSU students and staff to buy and sell goods as well as find groups or group members. The website should be easy to use, secure, safe, and accessible on desktop and mobile devices.

## Functional and Data Requirements

The following outlines the functional and data requirements for our system that allows users to register, post ads, search and filter, contact sellers/buyers, contact group leaders, manage ads, and report fraudulent or inappropriate ads.

User registration and login should allow users to create an account with their current BGSU email address and password, and log in securely using an existing BGSU app. Registered users should be able to post item ads with a title, description, price, and location, as well as upload pictures of their items. Registered users should also be able to post group information ads with a title, description, meeting location, and number of current members. Users should be able to search for item ads based on keywords, category, location, price range, and date posted, and filter search results by various criteria, such as price, location, and date posted. Users should also be able to search for group ads based on keywords, category, date posted, and filter search results by various criteria, such as but not limited to meeting location, category of groups, and number of members in a group. The system should provide a messaging system for buyers, sellers, and group finders to communicate, which should be secure and protect users' privacy. Registered users should be able to edit, delete, and repost their ads as needed, while all users must be able to view the ad's performance, such as the number of views and inquiries, and the website should automatically expire ads after a certain time period to keep the listings current. Finally, the website should have a reporting system for users to report fraudulent or inappropriate ads, which should be reviewed by admins who can take action, such as deleting ads or banning users, and the website should keep a record of all reports and actions taken.

### **Non-Functional Requirements:**

Look and Feel Requirements; the appearance should stay on brand with BGSU official colors and graphics. Falcon-List should integrate into the existing BGSU application for easier/more convenient use for students. Falcon-List when initially opened displays the dashboard, so users can easily navigate to areas of the application that will best suit their needs depending on what action they are planning to take within the app (example: buying an item, selling an item, creating a group, joining a group).

Usability and Humanity Requirements include ensuring that Falcon-List is easy to learn for incoming students and returning students do not have difficulty remembering how to use Falcon-List. Students should be able to make secure and efficient transactions (selling and buying items) or interactions (creating or joining groups) with each other. In-App customizations for accessibility (higher color contrast, increased font size, compatibility with audio devices to read text on a page...) will be available in the users settings. User profile customizations (selecting preferred language, saving user preferences for next time they use the app) will be available to further enhance the overall user experience.

Performance Requirements; new users will be able to create an account and customize settings upon first interaction with Falcon-List. Returning users will be able to log in and view or change their account settings if desired. Users are able to post listings and view listings on Falcon-List. Users are able to communicate with each other through direct messaging. Loading times should be relatively fast for user convenience and images will be optimized for web (not exceeding 72 PPI). The app should have good scalability to accommodate large numbers of users at any given time. Falcon-List will incorporate responsive design and will effectively scale depending on device size (for example, desktop to mobile).

Operational requirements include; Falcon-List must be functional within the existing BGSU app. The app will be available and accessible at all times for users with minimal downtime and maintenance. Security conventions for e-commerce systems will be utilized to keep user information and transactions on Falcon-List secure. Analytical data on app performance will be logged to track app performance. Falcon-List will have a disaster recovery plan to recover any lost or breached data and minimize the effect of any critical issues. User support will be offered via BGSU ITS through tech support and FAQ's.

Environmental requirements will be fulfilled through ensuring that Falcon-List will be optimized for multiple device types (desktops, laptops, mobile devices), accommodation for various types of internet connections, location functionality built into the app, and a robust security system to protect user information so their information is secure no matter where they log in at.

Maintainability and support requirements; server(s) will be kept up to host a database of listings. Content within the database will be subject to moderation by university administrators. Tech support will be available for users via BGSU ITS. Security audits will be conducted by BGSU ITS. Documentation of the database and API will be kept for maintenance and support purposes. Error logging and monitoring will be performed regularly. Falcon-List will take scalability of the app into account and be ready for large amounts of user traffic.

Security requirements will be fulfilled through verifying user payment information and personal contact information is kept within the application securely via encryption. Two-factor authentication already utilized by BGSU will be used to verify user identity in Falcon-List. Regular security audits of Falcon-List will be conducted by a BGSU ITS representative once every month. Secure connection protocols (HTTPS) and secure data storage conventions (such as firewalls, intrusion detection systems, and restricted access/access control) will be used.

Cultural and political requirements will be handled through content moderation that will remove any irrelevant post or posts that do not follow BGSU community guidelines (example: removing posts that are not creating a group or selling an item, taking down posts that classify as cyberbullying). Users will be able to select their preferred language and translation will be available for pages in a different language. Users will also be able to select their preferred pronouns or name when setting up an account with Falcon-List.

Legal Requirements; Falcon-List will use database moderation and a way to report listings to prevent the sale of illegal items on the app (for example, selling drugs or selling alcohol to underage students) The application will comply with all data protection and privacy laws as well as advertising and marketing laws. Falcon-List will adhere to FTC guidelines and follow consumer protection regulations. Tax regulations will be taken into account for buying and selling items on Falcon-List. Falcon-List will comply with accessibility guidelines. Regulations regarding non-discrimination such as Title X and ADA will be followed when developing Falcon-List.

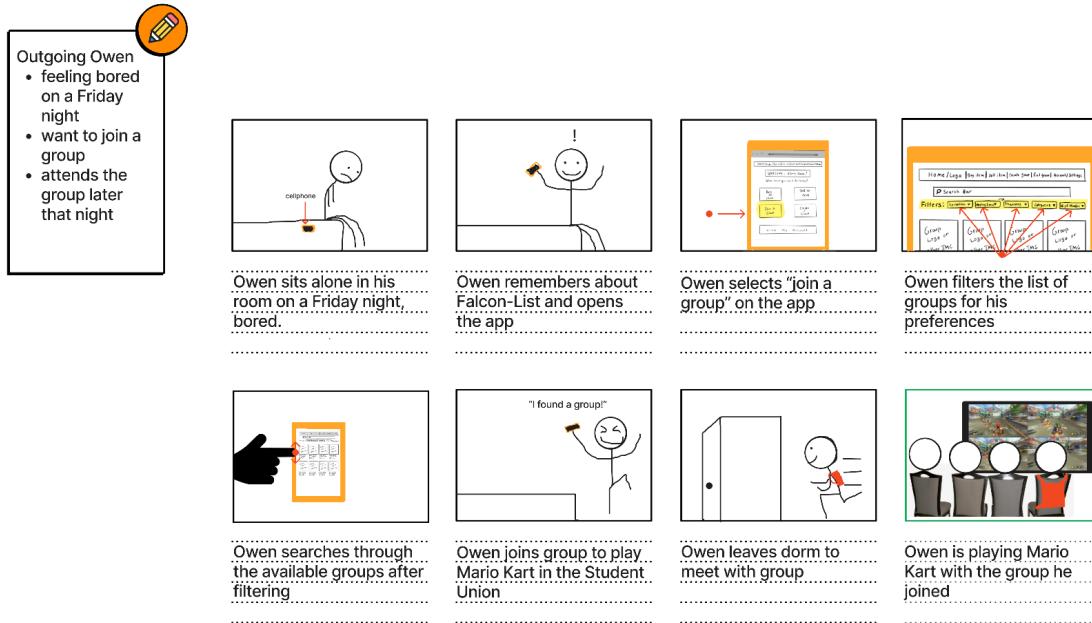
## Prototyping [P4]



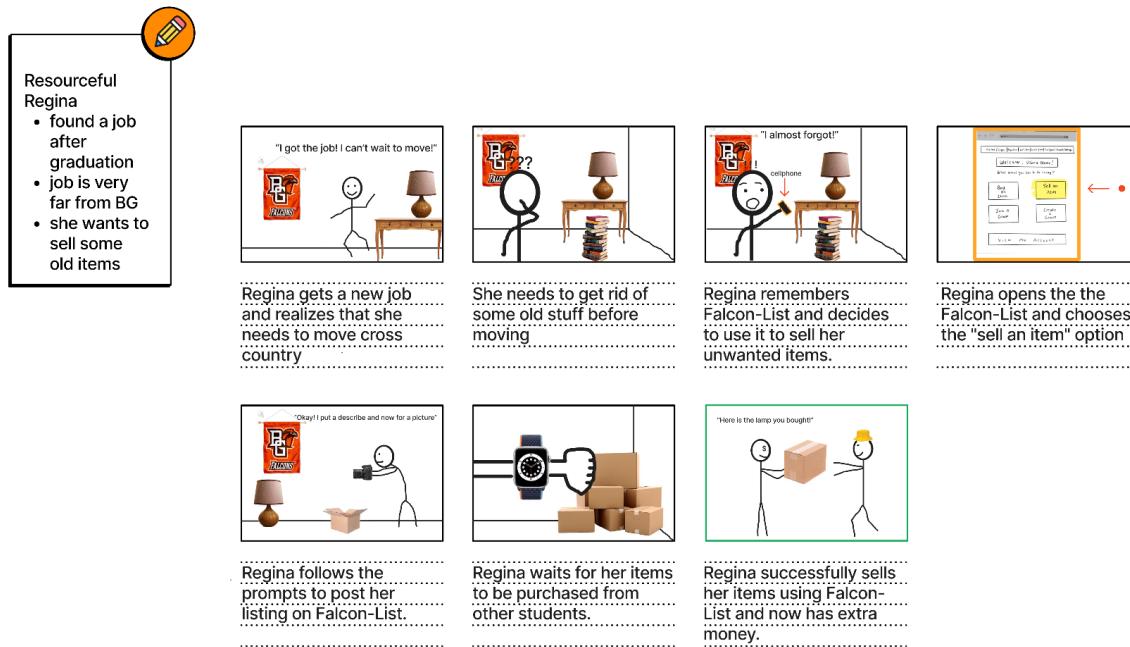
### Conceptual models:

Interface Metaphor	Newspaper advertisements, Craigslist, Job postings/help wanted posters on community boards
Interaction Type	User to User, User to System, User to Task
Interface Type	Web & Mobile
Supported Activities	Messaging & Payment processing
Functionalities	Selling/Buying items, Searching for groups/clubs, Messaging other users
Relationships Between Functionalities	Users will need to message other to find groups and decide on a meeting place for buying/selling items
Information Requirements	Student login credentials, General location, Minor personal details

## Storyboard 1: Owen storyboard on Figma



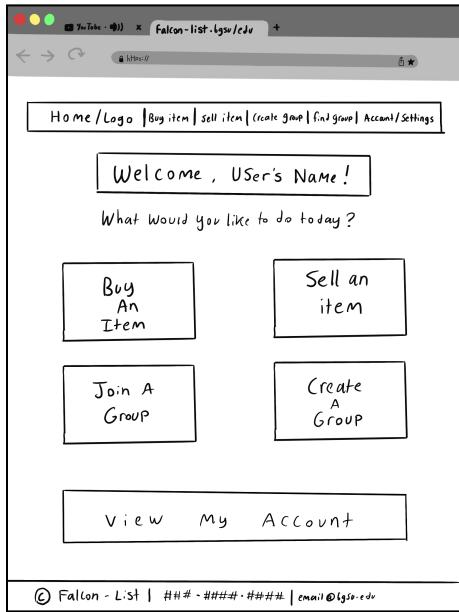
## Storyboard 2: Regina storyboard on Figma



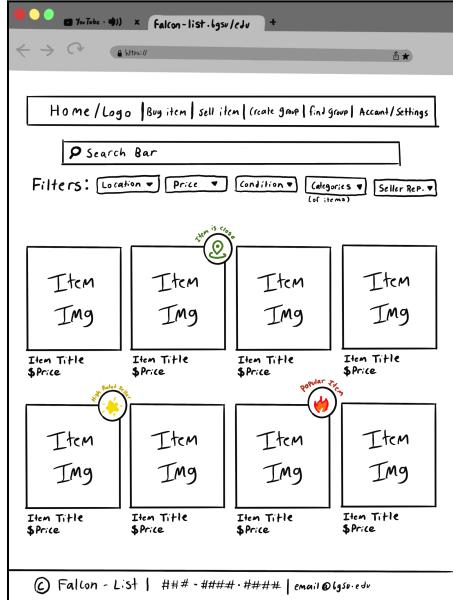
## Application Interface Sketches:

Early sketches of Falcon-List were centered around the “Home screen / dashboard” page and designed to mimic an e-commerce site.

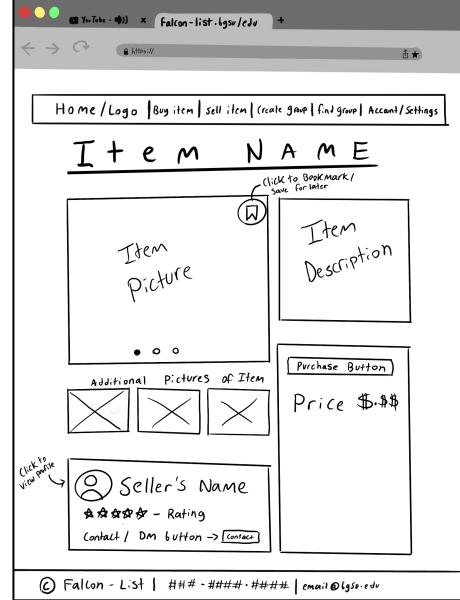
Home screen / dashboard.



Looking for an item.



Viewing a specific item.



## Payment screen for a buyer.

Home / Logo | Buy item | sell item | (create group | find group) | Account / Settings

**PAYMENT**

Select Method of payment

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**PICK - UP**

Select a Pick up time and location

\_\_\_\_\_

\_\_\_\_\_

Other: (Directly message Seller)

**Place Your Order**

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## Bidding screen for a buyer.

Home / Logo | Buy item | sell item | (create group | find group) | Account / Settings

**Ongoing Bids**

IMG	Item Name Seller	(Current highest bid)	end date for bids	Go to Listing
IMG	Item Name Seller	(Current highest bid)	end date for bids	Go to Listing
IMG	Item Name Seller	(Current highest bid)	end date for bids	Go to Listing

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## Selling an item.

Home / Logo | Buy item | sell item | (create group | find group) | Account / Settings

**Tell us More About Your Item:**

Item Name: \_\_\_\_\_

Item Description:

Price: Select one

Sell for highest bid enter base price

Sell for flat rate enter price

Payment: Select preferred payment method

cash

credit

overstock / Cash App / PayPal

other

Upload Photos of your item

Select your Availability for item exchange  
button that opens Calendar Widget

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## A seller's currently selling items.

Home / Logo | Buy item | sell item | (create group | find group) | Account / Settings

**Currently Selling Items**

Item	Item NAME	Price \$	# of views	# of bids (if applicable)	<a href="#">View Item Listing</a>
IMG	Item Name	\$			<a href="#">View Item Listing</a>

**Previously Sold Items**

Item	Item NAME	Price / Amount received	Sold to :
IMG	Item Name	\$	

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## Listing/ Creating a group.

Home / Logo | Buy item | sell item | (create group | find group) Account / Settings

Tell US More About Your Group:

Group Name: \_\_\_\_\_

Group Description:

Group Category / Categories ▼ (dropdown menu with "Other" option)

Enter Group Meeting Time [Calendar/Extremus]

Is the Meeting time re-occurring? ▼ (frequency of meeting - once per a week ... etc)

Upload Photos of Your item [select files]

Submit

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## A user's current groups listed on Falcon-List.

Home / Logo | Buy item | sell item | (create group | find group) Account / Settings

Current Groups

Group IMG	Group NAME	# of members	# of views	<a href="#">View Group Listing</a>
Group IMG	Group NAME	# of members	# of views	

Previous Groups

Group IMG	Group NAME	# of members	# of views	<a href="#">Re-List Group</a>
Group IMG	Group NAME	# of members	# of views	<a href="#">Re-List Group</a>

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## Looking for a group.

Home / Logo | Buy item | sell item | (create group | find group) Account / Settings

Search Bar

Filters: Location ▼ Meeting Time ▼ Frequency ▼ Categories ▼ # of Members ▼

Group Logo or Other IMG			
Group Name # of members Meeting Time			
Group Logo or Other IMG			
Group Name # of members Meeting Time			

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## Viewing a specific group/ Join group.

Home / Logo | Buy item | sell item | (create group | find group) Account / Settings

GROUP NAME

Click to Bookmark! Save for later

Picture

Additional pictures (optional)

Group Leader's Name  
★ ★ ★ ★ - Rating  
Contact / DM button → [Contact](#)

Join this Group

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## User's Account page.

A wireframe sketch of a web browser window showing the 'User's Account' page. The header includes links for Home, Logo, Buy item, sell item, create group, find group, Account, and Settings. Below the header is a title bar 'User's Name Account'. The main area contains fields for NAME, AGE, GENDER, and BGsu ID#. It also has an Address field and several buttons for User's Selling items & Past Sold items, User's Past Purchases, User's Ongoing bids, User's (listed)/Past listed groups, User's Saved Groups, User's Saved Items, User's Messages, and User's Current Groups. At the bottom is a footer with the text '© Falcon - List | ##### - ##### - ##### | email@bgsu.edu'.

## Messaging page.

A wireframe sketch of a messaging interface. It features a header with Home, Logo, Buy item, sell item, create group, find group, Account, and Settings links. Below the header is a large input field labeled 'NAME'. Underneath it are two speech bubbles: one containing '---.' with 'Time stamp' below it, and another containing '--- - ---:' with 'Time stamp' below it. At the bottom are photo library icons for camera, photo, and folder, along with a 'Photo Library' link. The footer contains the text '© Falcon - List | ##### - ##### - ##### | email@bgsu.edu'.

## Saved items or groups.

A wireframe sketch of a page for saved items or groups. It has a header with Home, Logo, Buy item, sell item, create group, find group, Account, and Settings links. Below the header is a title bar 'Saved items / Groups'. The main content area displays two items in a grid. Each item has a thumbnail labeled 'IMG', a 'NAME Seller/Group Leader Name' field, and an 'Info (price, meeting time, etc)' field. There is a small trash can icon next to each item. The footer contains the text '© Falcon - List | ##### - ##### - ##### | email@bgsu.edu'.

## Digital Prototype:

Link :

<https://www.figma.com/proto/R6uwFS71gBDaX35mASDyy4/P4-Prototype?node-id=0-3&scaling=contain&page-id=0%3A1&starting-point-node-id=0%3A3>

PDF:

 P4 Prototype.pdf

## Usability Testing [P5]



### Standard Tasks:

1. View account page.
2. Join a group.
3. Create a group.
4. Sell an item.
5. Buy an item.

### Consent Form:

A more general consent form would be suitable for Falcon-List. An important addition to a general consent form is a statement that confirms the user understands they are not actually purchasing or selling real items or joining and creating real groups.

### Usability Testing Consent Form | Falcon-List

**Title of study:** Falcon-List.

**Investigator:** [Cory Lang / Nate McCauley-Benner / Jaylyn Spitnale]

**Introduction:** You are being invited to participate in a usability study conducted by [Insert Investigator Name] at Bowling Green State University. The purpose of this study is to evaluate the usability of a new product/website/app.

**Procedures:** As a participant in this study, you will be asked to perform a series of tasks using the product/website/app. You may also be asked to provide feedback on your experience using the product/website/app. By participating in this study, you are **NOT** making any legitimate purchases, sales, or commitments regarding joining and creating groups.

**Risks:** There are no known risks associated with participating in this study.

**Benefits:** You will not receive any direct benefits for participating in this study. However, your feedback will be used to improve the usability of the product/website/app.

**Confidentiality:** All data collected during this study will be kept confidential and will only be accessible to [Insert Investigator Name] and research team members. Your name will not be used in any publications or reports.

**Voluntary Participation:** Participation in this study is voluntary. You may choose to withdraw at any time without penalty.

**Contact Information:** If you have any questions or concerns about this study, please contact [Insert Investigator Name] at [Insert Contact Information].

**Consent:**

**I have read and understand the above information about this study. I voluntarily agree to participate in this study.**

Participant Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**Typical Users:**

1. Savanna Spitnale
  - a. Graduate student at BGSU. This person has recently mentioned wanting some BGSU shirts, but not wanting to spend the amount Falcon Outfitters is currently charging. The ability to purchase things from other students second hand for a cheaper price would likely interest this user. This user also brings the perspective of a graduate student into the study.
2. Monique Flores-Baez
  - a. Sophomore student at BGSU. This person has shown interest in buying used textbooks since the new textbook options are too expensive or e-book versions. This person also has experience buying from Craig's List or similar platforms for second hand items. With this experience, they could provide feedback on how easy or difficult it is to use the platform.
3. Stephen Siphos
  - a. Freshman student at BGSU. This person has shown interest in looking for groups of students to meet and connect with across campus since there are not a lot of ways to easily see what clubs/groups are meeting when and where. This student brings the perspective of a first year student

looking for new groups and people to connect and hang out with in the study.

### Plan:

#### Controlled Usability Study:

**How:** A controlled study would take place in a lab or controlled environment free of distractions, where the user providing data in the study cannot see the examiners but can listen for instructions. The task would be something simple like creating a group or buying a specified item and messaging the buyer. The examiner would give as little instructions as possible. The user would be recorded as they are asked to think out loud as they complete the given task and the screen would be recorded to examine interaction with the system. This study would test for ease-of-use and overall UX.

**Take into Account:** In a controlled environment, it is important to find a group of participants that represent the diverse population of students on campus at BGSU. This diversity can be the different genders, age, demographics, and majors found around campus. Another important aspect to take into consideration is that the user may not act in their normal manners when inside the controlled environment when they know they are being examined. The environment should be as calming as possible and distraction free for the users performing tasks.

**Data and Analysis:** The data to be collected would be the time taken for the user to complete the simple task. This should allow us to gauge whether our system has an ease-of-use factor. Two more data points of collection are the audio recording of the user as they think out loud when doing the task and the screen recording to test for any misclicks or confusion in the interface. Audio data should allow us to examine any confusion or lack of that the user may experience in our software. The examiner could also ask the user to answer follow-up questions to provide more insight on the users' thought process for the audio recording. The examiner could make conclusions from the data whether there are areas of trouble in the software where users are getting stuck that could greatly improve the user experience of our product.

#### Field Study:

**How:** A field study would have a group of users asked to use Falcon-List throughout the week and report back to the examiner for interviews. The group of users would be asked to sell an item that has been given to them, join a group made by the examiners for interviews at the end of the week, and buy an item

from the examiners. Throughout the study the examiners would cross check the names of the user participants and the dataset of items being sold. This is for a general idea of the amount of description a typical user may give for a product they are attempting to sell. This study would test for overall UX and the return rate of items being sold and bought via Falcon-List.

**Take into Account:** Much like the consideration of the controlled usability test, it is important to find a group of participants that represent the diverse population of students on campus at BGSU. Also potentially worth noting is as the study takes place over the course of 1 week, users' may forget to complete all tasks or withdraw from the study.

**Data and Analysis:** The data would be collected via interviews a week after the test group of users were given tasks. The examiner would ask questions about the tasks they were given to do; i.e., to see the item listing they made, if the item was sold, and how easy the process was. Questions would then be asked about the group joining feature as well as the item buying feature which will be similar questions to the selling feature. Some question examples may include, "did you find a group that interested you", "did you find an item that interested you", and "how would you describe the process". Once the data from the recording has been collected, the examiners can identify trends and recurring issues in the data. This study would help improve the overall usability of Falcon-List.

### Reflect:

A controlled study in this case would allow for more control over what the user will be testing specifically, and allow us to directly see what functions are good and bad. However, the user that is doing the testing will not be doing things as they would normally when they use websites/apps like Falcon-List since they have people observing them and directly telling them what to do. In a natural setting, it would allow for the users to do things as they normally would, which would provide better overall feedback for the website/app. However, certain functionalities may not be tested or used while doing a natural setting study so it would be more difficult to get feedback on specific functionalities.

Deliverables at the end of the usability study would include the data collected during the study, recordings of post-study interviews with users, and an analysis of results after the study. Data collected during the study would include things such as audio recordings of the user, screen recordings, and the recorded times to complete specific tasks within Falcon-List. Post usability study interviews will be conducted with each participant and video recorded. Analysis of the results after the study would include qualitative and

quantitative analysis. Statistics such as the percentage of users who successfully completed a given task and the average time it took for users to complete a given task will be collected. Qualitative factors such as if the user found completing the given task frustrating in any way or any other thoughts on completing the tasks will be collected. General feedback, comments and suggestions from the users will be collected through the post study interviews and throughout the duration of the study. Any usability issues found during the study will be collected into a formal document and pursued further throughout the development of Falcon-List.