SW Engineering CSC648/848
Fall 2019

Section 01

Aardvark Shopping Solutions

Team 01 - Local

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Milestone 2

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History table (revisions)

1. Functional Requirements - Prioritized

Priority 1

1.Unregistered users shall be able to register an account.

1.1Unregistered users shall be able to send a message to Aardvark Team.

2.Unregistered users shall be able to browse product posts from registered users.

3.Unregistered users shall be able to search for textbooks by title or author.

4.Unregistered users shall be able to search for items by name or identification number.

4.1 Unregistered users shall be able to submit a purchase request to seller.

7.Registered users shall be able to perform all functions of non-registered users plus those below

8.Registered users shall be able to post items to sell.

9.Registered users shall be able to edit and correct post after it's submitted.

10. System shall provide user access to data information based on customer ID and password.

11.System shall provide privacy of users data. Data shall only be used for this website for tracking customer usage and will not be shared with anybody.

12.Administration shall screen photos and posts before displaying it on the website.

13.Administration shall screen newly registered users before creating their new account.

15.Admin shall be able to delete posts and users

Priority 2

5.Unregistered users shall be able to place items in the shopping cart feature.

6.Unregistered users shall be able to purchase products through guest checkout feature.

17. System shall provide users with recommended items to purchase

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Priority 3

10.Registered users shall receive promotional offers

14.Customer transactions shall be executed via secure internet connection.

16. Users shall be able to leave ratings on the items they've purchased

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2. UI Mockups and Storyboards (high level only)

Storyboard #1: Joshua Algulto

      As Josh goes to school four days a week and works from Friday through Sunday, he will need a convenient website that will allow him to purchase electronics and home goods while he is on campus, and to have the option to sell used products to others. On the home page, under the 'Carousel', the products that we sell are categorized at the bottom which are 'school supplies', 'home goods', and 'books'. Also, he will have the option to create an account to purchase our products on campus, using the 'Purchase Request' page to request an appointment with the seller of the used products, and/or to sell a product such as a TV monitor, scientific calculators, etc. Since Josh is a full-time student and works four days a week, he will be using our website to purchase his home goods (for pickup on campus) and could sell his own products using the 'Post Item Page'.

Joshua clicks on Aardvarks home page and views the categories under the 'Carousel'
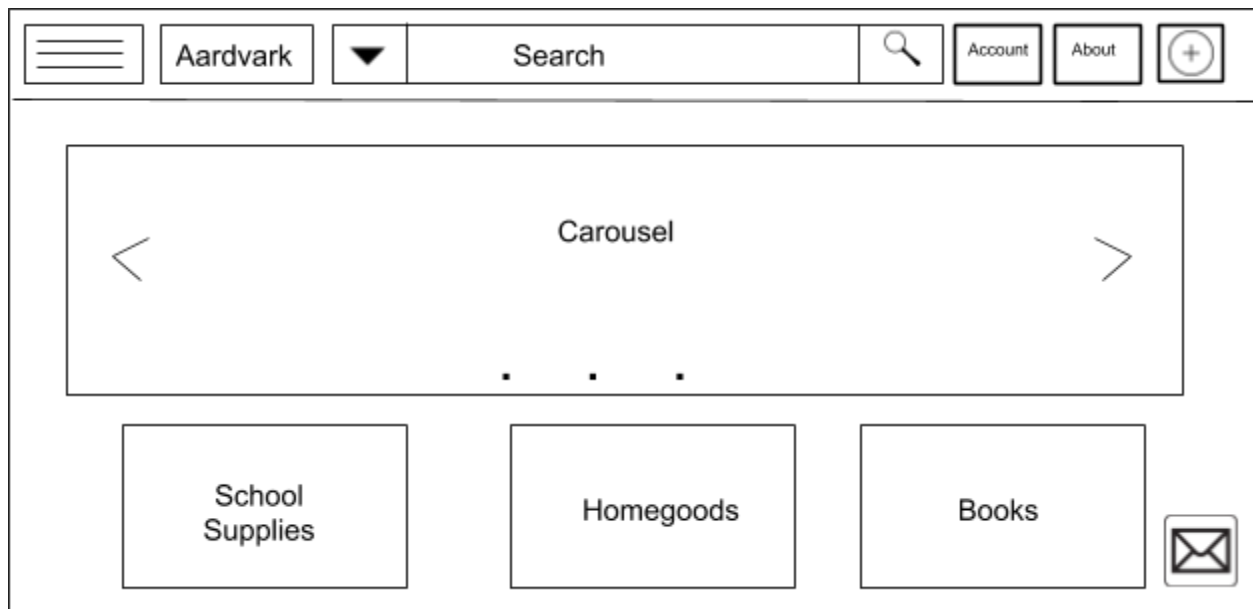
Joshua creating an account and a window will ask for the new user to input his information

| Aardvark | **Hello** |

Sign In

Name:

Password:

Login

Create Account

Name:

Email:

Password:

Confirm Password:

Create Account

Joshua clicks in a product category and views item detail page

| ☰ | Aardvark | ▼ | Search | 🔍 | Account | About | ⊕ |

Filter:

By Price:

$0-$10

$11-$20

Product Image

Price

Description

Product Image

Price

Description

Product Image

Price

Description

✉

Joshua clicks on a new item and views the products description, photo, and ratings.

Joshua uses the 'Purchase Request' page to request an appointment and fills in a purchase request form

Storyboard #2: Mark Bugzy

Since Mark commutes from Pinole, CA to San Francisco State University and is current unemployed at the moment, he wants to use a website where he can sell his own used products (electronics, books, home goods, etc.) and to conveniently use it to purchase school supplies and pickup on campus. On Discord, he asked his friends about recommendations on other sources to purchase affordable electronics, books, and school supplies. And they recommend using Aardvark to purchase his daily needs while he is on campus. And so he typed Aardvark on Google search engine, and click on the home page link. On the home page, on the right side of the search bar, he can sign-up to make an account for him to be able to sell his used products on the 'Post Item Page'. Also on the home page below the 'Carousel', he can view the products we are selling by category which are 'School Supplies', 'Home Goods', and 'Books'. If he needs to search for a book for particular math or engineering classes, he can quickly click on the 'Books' box/icon, then use the 'Filter' option on the 'Product Browsing' page to search by price or by description. Since Mark has a shared car and comes to school five times a week, this is a convenient way for him to receive his purchase before he walks to the bus stop.

Mark searches for Aardvark on Google Chrome and clicks on the home page link
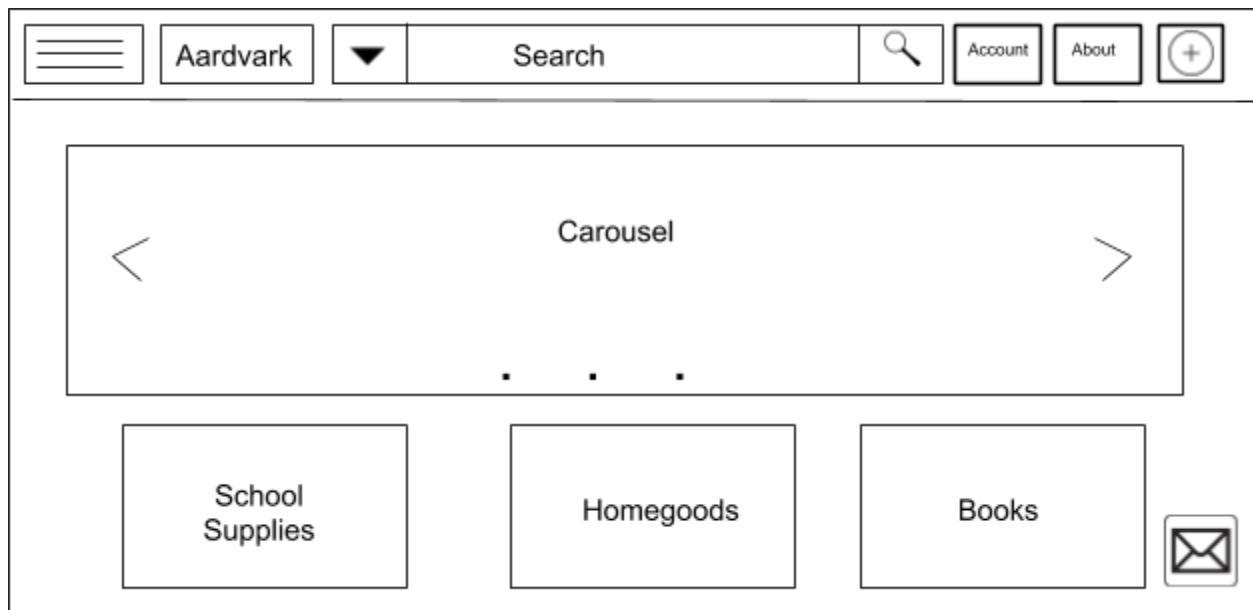
Mark will be directed to Aardvark homepage and clicks on 'Account' on the top right of the search bar to create an account

Aardvark	Hello

Sign In

Name:

Password:

Login

Create Account

Name:

Email:

Password:

Confirm Password:

Create Account

After creating an Aardvark account, he will be directed back to the home page and clicks on 'school supplies' under the 'Carousel' banner

| ☰	Aardvark	▼	Search	🔍	Account	About	⊕

< Carousel >

. . .

School Supplies	Homegoods	Books	✉

Mark uses the 'filter' feature to organize the seller's page by price, scrolls down through the seller's page, and decides what he wants to purchase from that seller's offer/post.

Mark views the seller's profile and page to determine if the seller is trustworthy based on ratings and comments. Then, clicks on the envelope icon on the bottom right to message the seller about the product.

Mark uses the 'Purchase Request' page to request an appointment and fill in a purchase request form

Storyboard #3: Stephanie Lopez

Stephanie wants to purchase supplies that will help her keep her room organized and clean, but the campus stores are either sold out or they do not sell the products. A friend of Stephanie recommends she should use Aardvark to shop online. Stephanie grabs her cellphone and types Aardvark on Google. She clicks on our link and is directed to the home page. But before she starts using the website she wants to do some research to see if the company is a trustworthy site.
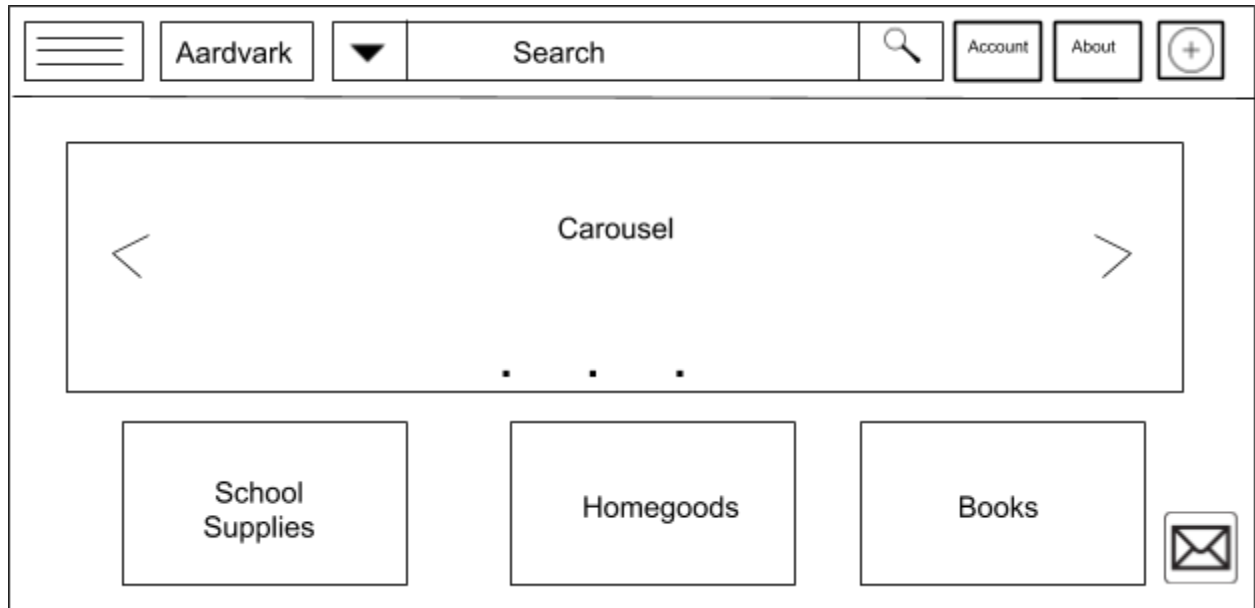
Stephanie wants to learn more about the company before using our website, so she clicks on About and is directed to the about page which has all the members in the company.
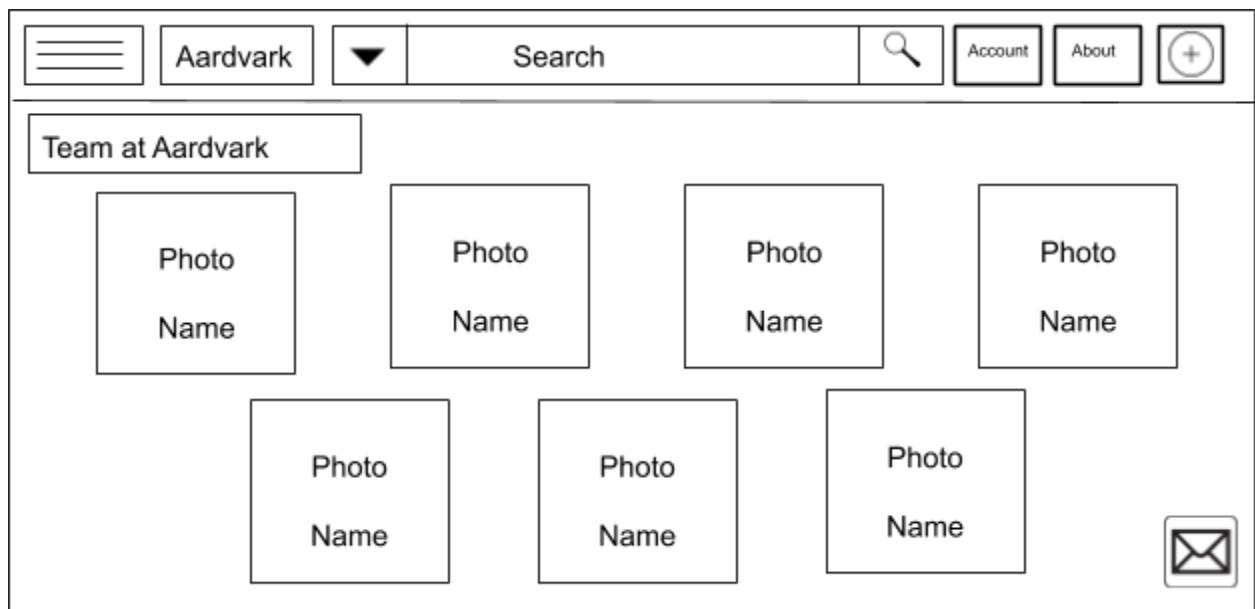
Stephanie clicks on the photo of one member and is directed to the selected member's about description. She reads about the member and is satisfied with what she read. But now she wants to know how the website works. She wants to search for some products.
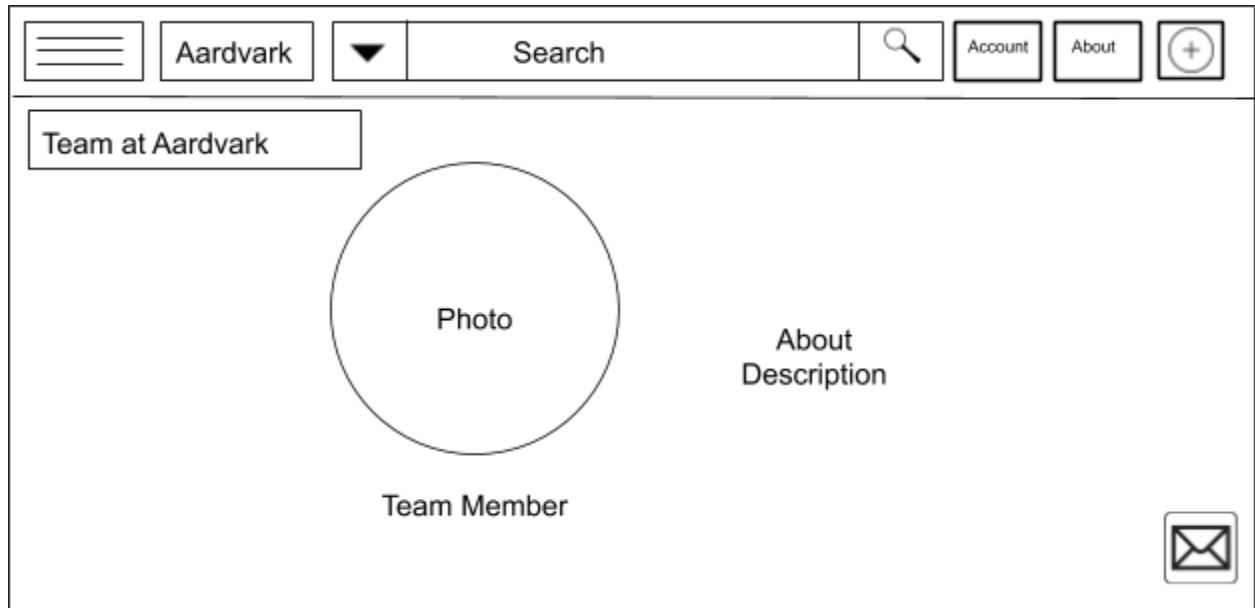
Stephanie clicks on the Aardvark and is directed to the home page. On the home page she clicks on the Carousel to see the recommended product deals.
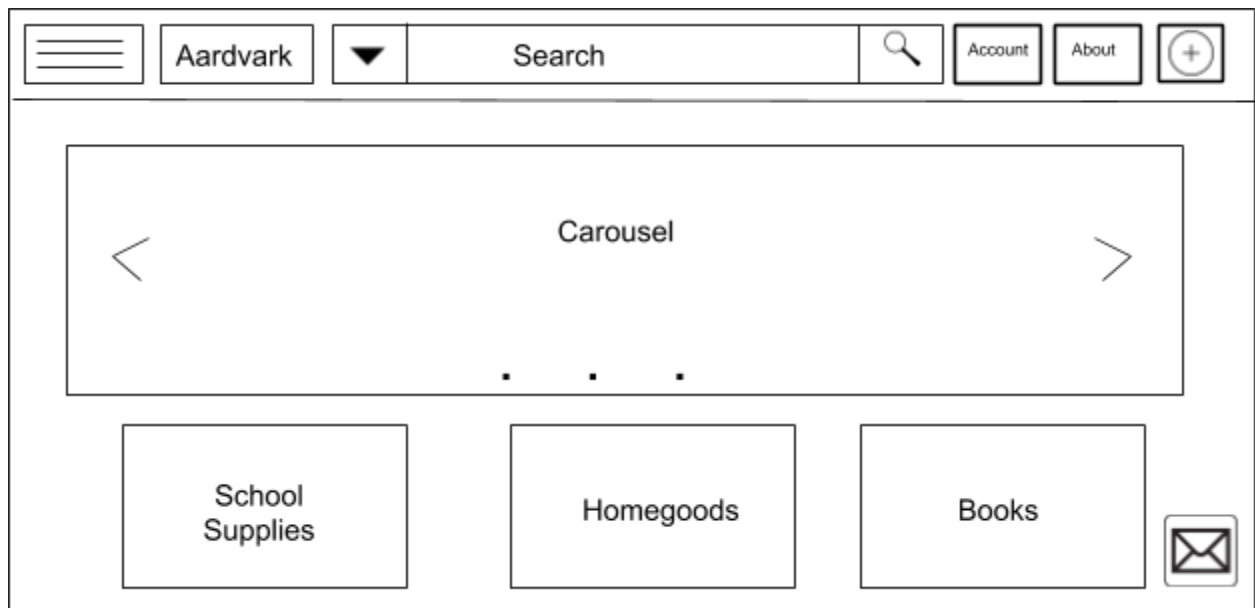
Stephanie has been wanting a drawer organizer, so she clicks on Homegoods to see what is for sale. Stephanie is directed to the product page, where she can see prices, images, and the description of the products. Stephanie finds a drawer that she really likes and wants to buy it.

Stephanie does not find any problems with the website. Therefore, she wants to create an account and buy the drawer. She clicks on Account and is directed to the sign in/ signup page. She fills in the information for creating an account.

Stephanie clicks Create Account and is directed to the home page.
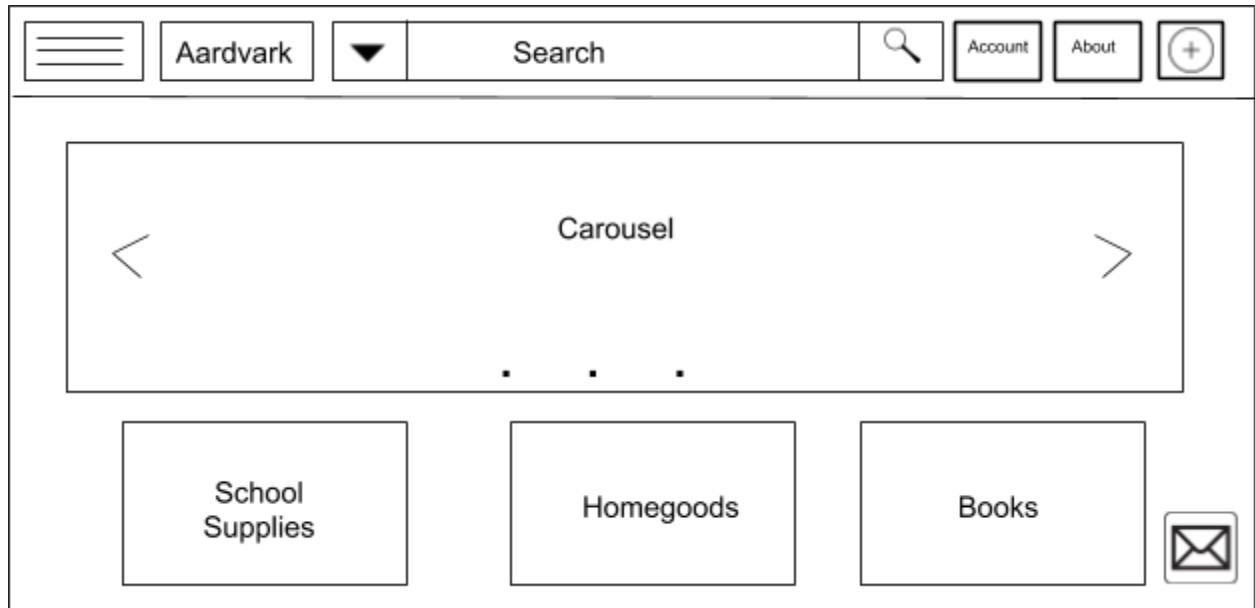
Stephanie really wants to buy the drawer, so she clicks on Homegoods and is directed to the product page. She searches for her product.

Stephanie finds the drawer and clicks on the product. She is directed to the item's page where she clicks Request to Purchase.
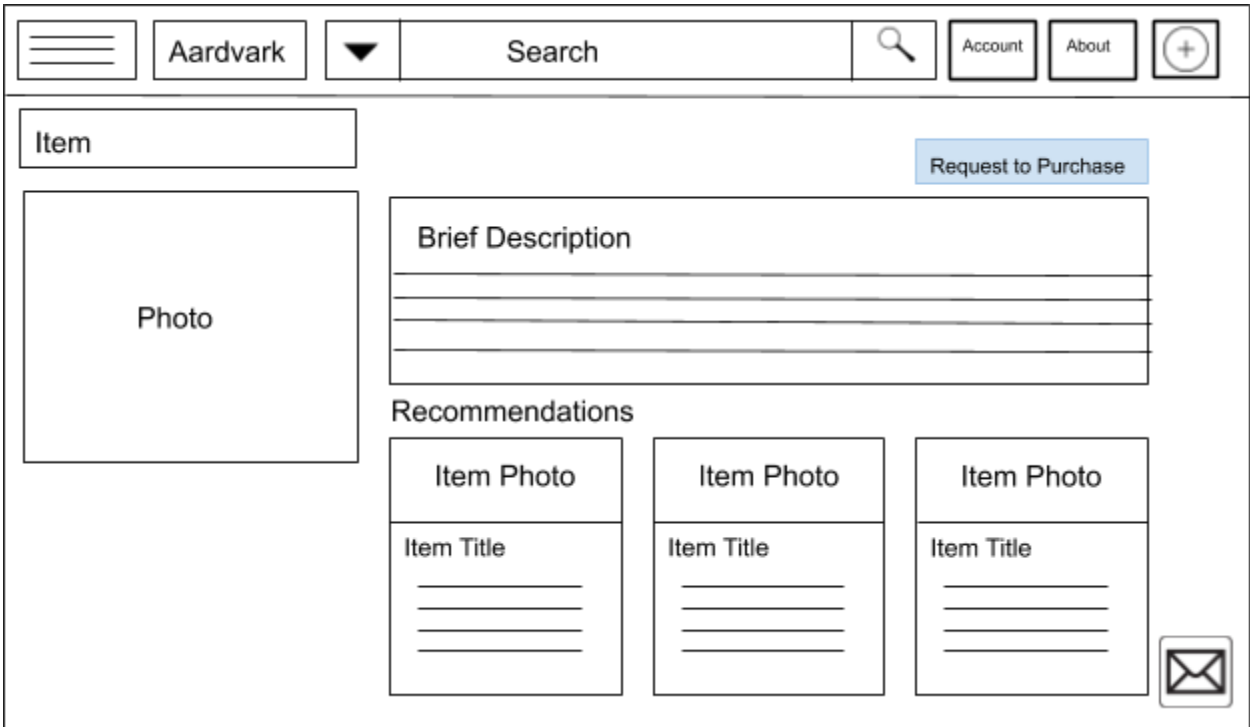
Storyboard #4 Daniel Vargas

Daniel wants to resell his textbooks but does not want to commute for an hour and 30 minutes to resell his textbooks at San Francisco State University. He grabs his laptop and searches on Google for websites that sell used textbooks and finds Aardvark. He clicks on our link and is directed to the home page. But before he starts using the website, he wants to see how the company sells the products.
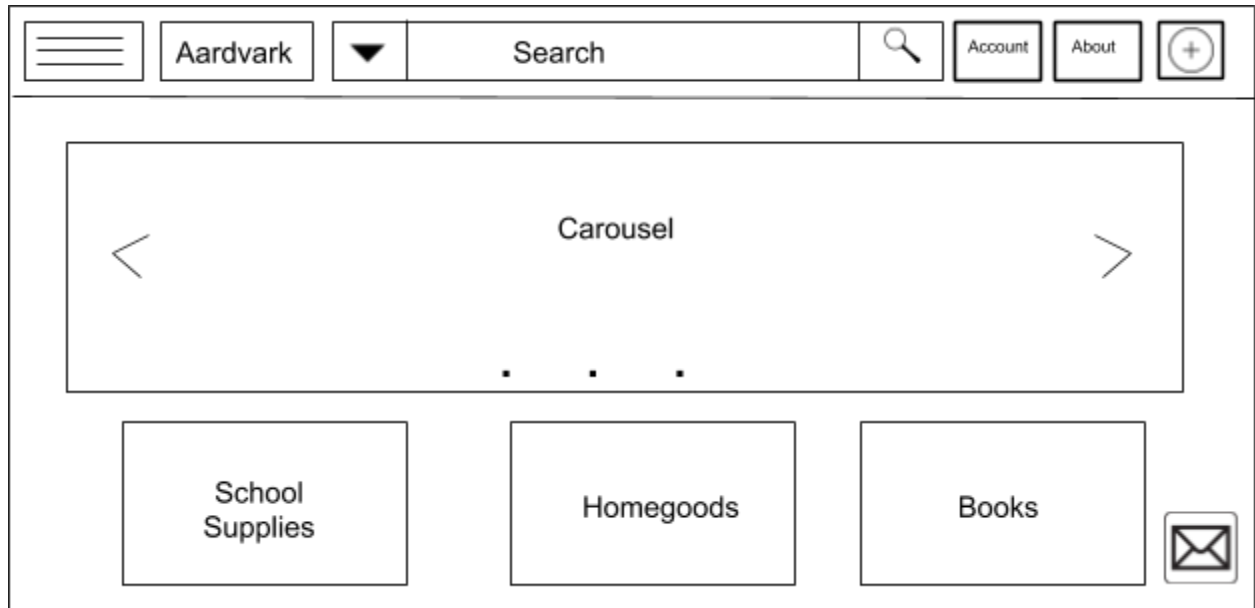
Daniel clicks on Books and is directed to the product page. He looks at the price ranges and the products description. He likes the filters and images for the products.

Daniel clicks then clicks the product and is directed to the item's page. He likes the recommendations and how the buyers will have to Request to Purchase.

Daniel likes the website and wants to create an account. He clicks Account and is directed to the signin / signup page. He fills in the information to create an account.

Daniel clicks Create Account and is directed to the home page. Daniel then clicks on the parallel bar icon and selects post item. Daniel wants to sell his used textbook.

Daniel is directed to the post item page, where he fills in the information to sell his textbook.

3. High level Architecture, Database Organization
DB Organization:

Table	Data Entities	Description
User	Id, name, email, password, phone, role, lastLogin, createdAt, updatedAt, profileImage	Details of a registered user
Item	Id, userId, name, description, price, typeId, status, createdAt, updatedAt	Details of a listed item
Item_Type	Id, name	Type of an item, used for filtering purposes
Item_Image	Id, itemId, name, image, order, createdAt	Image of a listed item
Shopping Cart	Id, userId, createdAt	Shopping cart of a user to store desired items
Cart_Item	Id, itemId, cartId, quantity, createdAt	Details of an item that has been added to a shopping cart
Message	Id, userId, itemId, description, createdAt	Messages for communication between buyers and sellers
Search_History	Id, userId, params, createdAt	Search history of a user, used for recommendation purposes
Token	Id, token, email, createdAt	Authentication token used to reset password

Media Storage:

Images, video, and audio files will be kept using DB BLOBs.

Search/filter Architecture and Implementation: The usage of keywords can be passed through an input field to query the database for the results to render to the user, by availing the built in search query options. In addition to obtaining information in an effortless and relevant way, the optimization of %like mysql query provides us with the ability to carry out these functions with flexibility. Keeping in mind the relatively small scale of the project and databases, %like is advantageous to us as it keeps us unconcerned about the moderate response speed. If we predict

future significant growth in the size of the database, the exploration of other options to increase speed shall be worked on.

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4. High Level UML Diagrams

a) High-level UML Class Diagrams

Team at Aardvark
Team Members
Photo
Name

Team Member
Name of Member
Photo of Member
Description of Member

Contact
Name
Email
Subject
Description

Sign In/ Sign Up
Sign In
Sign Up

Homepage
Search
Account
About
Carousel
Supplies
Homegoods
Books

Product
Product Image
Price
Description
Filter

Item View
Name
Description
People selling

Request to Purchase
Name
Email or Phone
Message
Location

Post Item
Create Post
Info: Title, Price, Category,
Description, Image

Management
Delete, Edit Posts

b) UML Component and Deployment Diagram
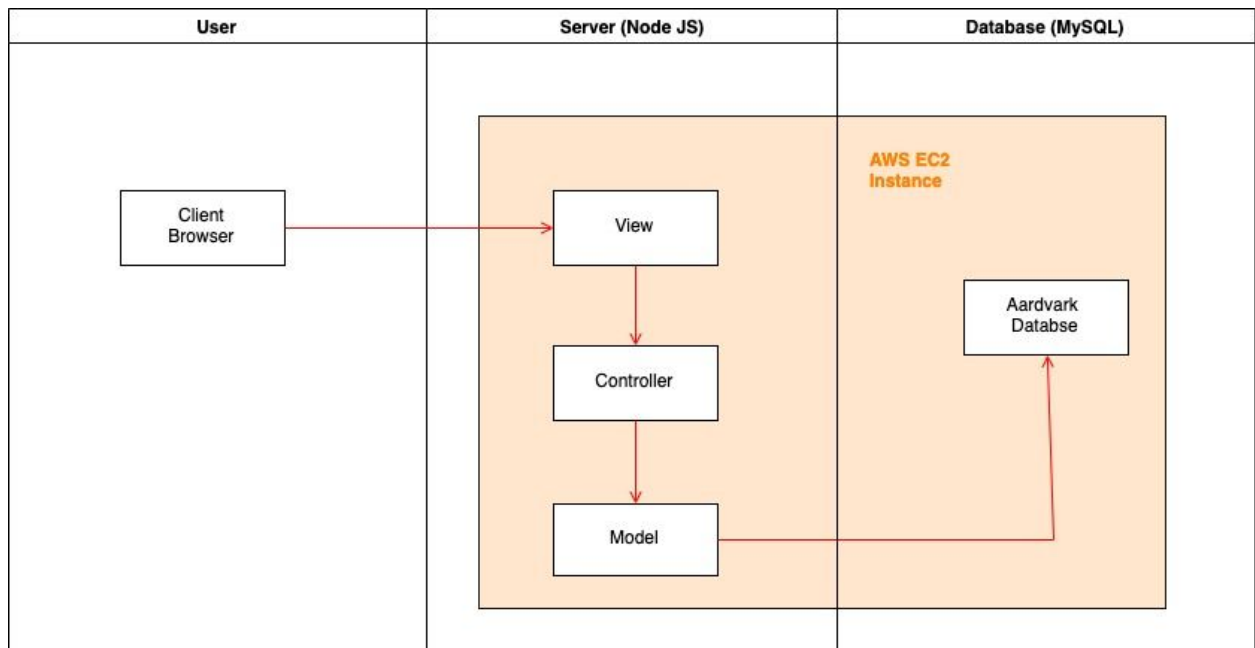
5. Identify *actual* key risks for your project at this time

Skills risks (do you have the right skills):
- The skill range varies between every member, some members are familiar with deploying a working website while some aren't. Learning while on the job is a normal thing when it comes to working in the industry so for the members that aren't too familiar with deploying a website, we will provide them with tutorials to read so they can be familiar with the task at hand.
- Database knowledge varies, some are familiar with MySQL while some aren't. The team members that are familiar with working with MySQL will help provide other team members with the knowledge they need to make them more familiar with the database language.

Schedule risks (can you make it given what you committed and the resources)
- All the members of our team are currently full time students with schedules that are sporadic and this can lead to conflicts with meeting deadlines. Each lead will communicate days prior to gauge the progress of the task at hand and provide help if needed.
- The functions we committed to can be unfamiliar to some which can lead to more time spent on trying to learn how to solve that problem. Communication between team members is crucial and lending a helping hand or providing knowledge can help resolve issues that arise.

Technical risks (any technical unknowns to solve)
- Amazon web services goes down this would lead us to use another host whether it's Google cloud or other competitors.
- Software program doesn't fit in the available memory. Team will decide what functionality should be kept for the website that still provides the best performance while doing our due diligence on deciding which ones to get rid of.

Teamwork risks (any issues related to teamwork)
- Every team member is currently a full time student so conflicting schedules arise every week when it comes to team meetups. We currently use whatsapp for various areas of the project - including frontend, backend and other problems that arise.
- For some, this will be the first time working in teams of more than 3 people so communication and cohesiveness can falter because of the unfamiliarity among team members. Communication through messenger and team meetings will help alleviate the stress of working in large groups.

legal/content risks

- Images used might seem to be a free stock image (however, they might not be).

6. Project management

   All milestones, tasks, and assignments will be managed through Taskade - a team productivity, workflow management software/app. Here, the team lead will monitor the progress of every milestone assigned. Taskade includes a chat box for discussions while planning our assignment. Another feature included is the calendar app for tracking important dates and deadlines. Furthermore, the team will have 2 check ins (Monday and Wednesday) each week. An additional check in with leads (front, back, team) as needed. All documentation will be managed on google docs (via Google Drive). There will be three chat threads managed by the team lead on Whatsapp - team updates/discussion, front end discussion, and backend discussion.