

Swapping Auction
Requirements & Design
Document

Darshak Mehta

801020115

dmehta9@uncc.edu

Project overview

Description of Application: Swapping Auction is an exciting platform to swap your old stuff with something new you love. The world is accepting the principles of Reusability. Most of developers are following the principle of not Reinventing the wheel, instead spending time to solve more challenging task. Therefore, I am here presenting a platform following the concept of reusability, where you use your stuff, and once you are no longer using it, or would like to try something new, you can swap your product with anyone in the world.

The product being online, it is accessible to anyone connected to internet and platform clearly adheres to its main purpose of swapping the product without monetary gains. So, the target audience is limited to anyone who wants to swap their product with any other user connected through online.

Site Map

Home

- **Sign up / Sign In / Sign Out**
- My Catalog
- My Swaps
- **Categories**
- **About**
- **Contact**

Categories

- Home
- **Sign In / Sign Out**
- My Catalog
- My Swaps
- **Categories**
- About
- Contact
- **Subcategory**

Sign In / Sign Out

- **Home**
- My Catalog
- My Swaps
- Categories
- About
- Contact
- **Login**
- **Register**

Register

- Home
- **Sign In**
- My Catalog
- My Swaps
- Categories
- About
- **Contact**

About

- Home
- **Sign In / Sign Out**
- My Catalog
- My Swaps
- Categories
- **Contact**

Contact

- Home
- **Sign In / Sign Out**
- My Catalog
- My Swaps
- Categories
- **About**

My Catalog

- Home
- **My Swaps**
- **Sign Out***
- **Categories**
- About

- Contact
- **Add Item**
- **Update**
- **Delete**
- View Item

* If user is not logged in, they will be redirected to login page.

SubCategory

- Home
- **Sign In / Sign Out**
- **Categories**
- About
- Contact
- My Catalog
- My Swaps
- **View Item**

Item

- Home
- **Sign In / Sign Out**
- Categories
- About
- Contact
- My Catalog
- My Swaps
- **Swap It / See the Offer**
- **Rate It / Rate**

Swap It

- Home
- **Sign Out**
- Categories
- About
- Contact
- **My Catalog**
- **My Swaps**
- **Confirm Swap***

* If item is available

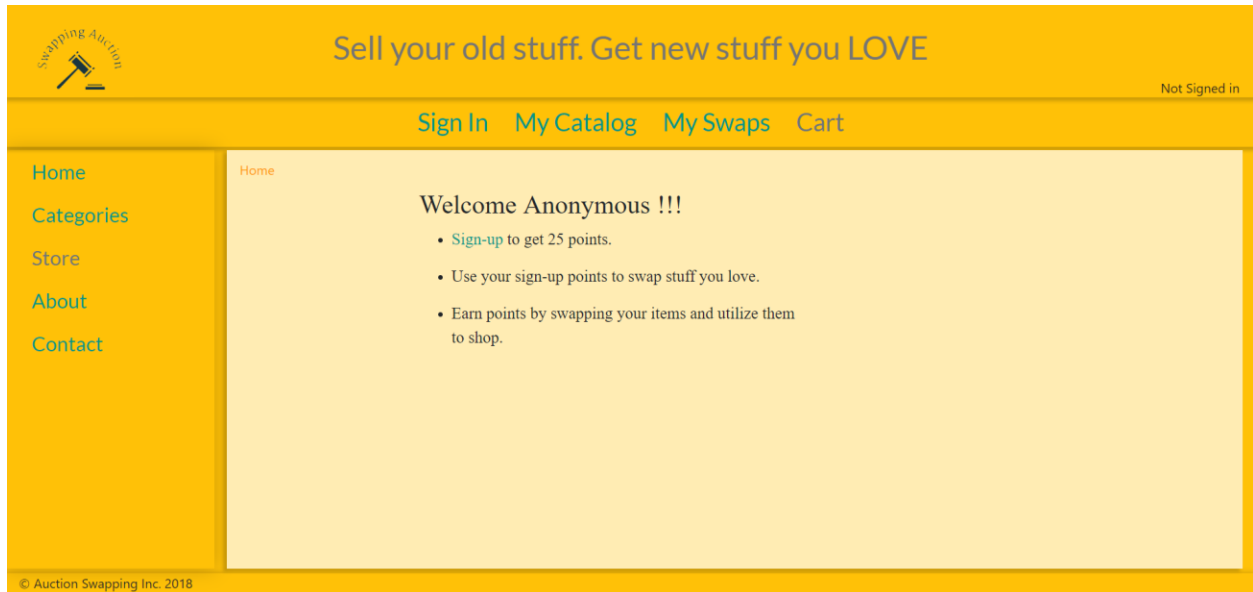
My Swaps

- Home
- **My Catalog**
- **Sign Out***
- **Categories**
- About
- Contact
- **Add Item**
- **Update**
- **Delete**
- View Item

* If user is not logged in, they will be redirected to login page.

Note: Bold bullet points indicate the probability of hitting the page is high.

PAGE DESIGN



The name of the page: Home Page

Purpose of the page: Introducing to our Platform and option to make a new account or sign in using existing credentials

Audience of page: General Users

What data (fields) will be presented on the page based on what logic?
Based on user login status, they will welcome with their name or 'Anonymous'. Also,

What validations (if any) will exist on page? (of data fields above)

User login status will be checked to render the name field accordingly

What buttons or hyperlinks will exist, and what actions will be taken when clicked (data saved, navigate to other page, search based on value, etc.)

Side Navigation Menu:

1. Home: Redirects to home page
2. Categories: Link to Product Catalog
3. About: Link to About Us page
4. Contact: Link to Contact Us page

Logo: Clicking on Logo will redirect to the Home Page

Navbar Menu:

1. Sign In / Sign Out: Based on user logged in, they will either asked to sign in or sign out
2. My Catalog: If user is logged in, they will be shown their profile consisting of all items they uploaded on the platform else user will be requested to login to the platform
3. My Swaps: If user is logged in, they will be shown their offers made to the other user or received from another user else user will be requested to login to the platform

Sign-up: User will be linked to registration page.

Special notes regarding page (if any):

On the main navigation bar, the login status will be displayed. Not signed in means logout, while Welcome 'First Name' will be logged in status.

Swapping Auction

Sell your old stuff. Get new stuff you LOVE

Not Signed in

[Sign In](#) [My Catalog](#) [My Swaps](#) [Cart](#)

[Home](#)
[Categories](#)
[Store](#)
[About](#)
[Contact](#)

Home

Sign up for Free Account and get 25 points

First Name* Address Field 1*

Last Name* Address Field 2*

Email* City* State*

Password* Zip Code*

Confirm* Country*

[Register](#)

© Auction Swapping Inc. 2018

The name of the page: Registration View

Purpose of the page: To make a free account

Audience of page (general users, registered users, etc.): All non-registered user

What data (fields) will be presented on the page based on what logic?

- First Name, Last Name, Email, Address Field 1, Address Field 2, City, State, Zip, Country. All are mandatory fields.

What validations (if any) will exist on page? (of data fields above)

- Valid Email Address; Valid Ascii Characters for First name, last name, address field 1, address field 2, city, state, zip code, country, Only Alphanumeric Password.

What buttons or hyperlinks will exist, and what actions will be taken when clicked (data saved, navigate to other page, search based on value, etc.)

- Register: Until successful registration is achieved it will re-render registration view

- Login: On successful registration, the user will be move to the login view.

Special notes regarding page (if any)

- While trying to validate, except password or the other field will re-render
- Email will be sent on successful registration

Swapping Auction

Sell your old stuff. Get new stuff you LOVE

Not Signed in

Sign In My Catalog My Swaps Cart

Home
Categories
Store
About
Contact

Login

Email

Password

Submit

Don't have an account? [Register](#)

© Auction Swapping Inc. 2018

The name of the page: Login view

Purpose of the page: Registered users can log in to the platform

Audience of page (general users, registered users, etc.): Only registered users

What data (fields) will be presented on the page based on what logic?

- Username (Email address), password

What validations (if any) will exist on page? (of data fields above)

- Valid Email address will be checked.
- If email entered is valid registered user will be checked
- Password with hash/salt to verify the user.

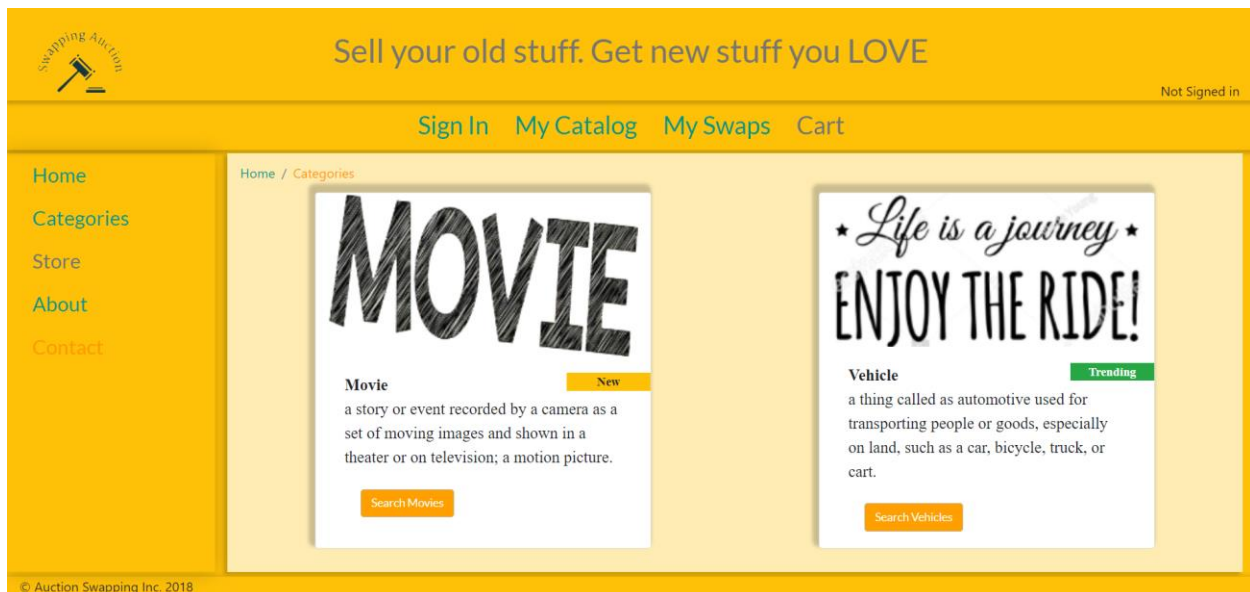
What buttons or hyperlinks will exist, and what actions will be taken when clicked (data saved, navigate to other page, search based on value, etc.)

- Submit: On successful login it will take the user to their profile view

- Submit: Until successful login, it will request user to enter correct details with appropriate message

Special notes regarding page (if any)

- Sanitization is applied and certain characters are escaped `{ } < > & ' / " `` from email address.



The name of the page: Categories View

Purpose of the page: Choose category from the catalog

Audience of page (general users, registered users, etc.): General Users

What data (fields) will be presented on the page based on what logic?

- Category names

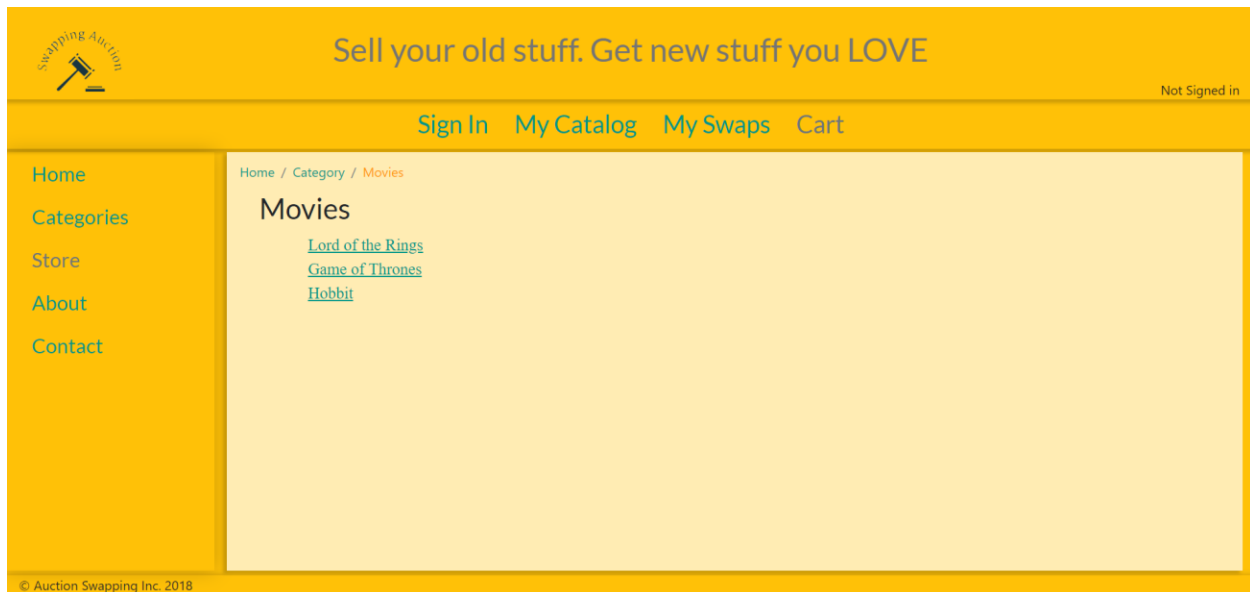
What validations (if any) will exist on page? (of data fields above)

- Only valid categories will be loaded.

What buttons or hyperlinks will exist, and what actions will be taken when clicked (data saved, navigate to other page, search based on value, etc.)

- Select Subcategory: User can select new/trending subcategory.

Special notes regarding page (if any)



The name of the page: Sub category View

Purpose of the page: List of all the items from selected subcategory

Audience of page (general users, registered users, etc.):

General Users

What data (fields) will be presented on the page based on what logic?

- All the item name with their Item code is presented based on subcategory selected

What validations (if any) will exist on page? (of data fields above)

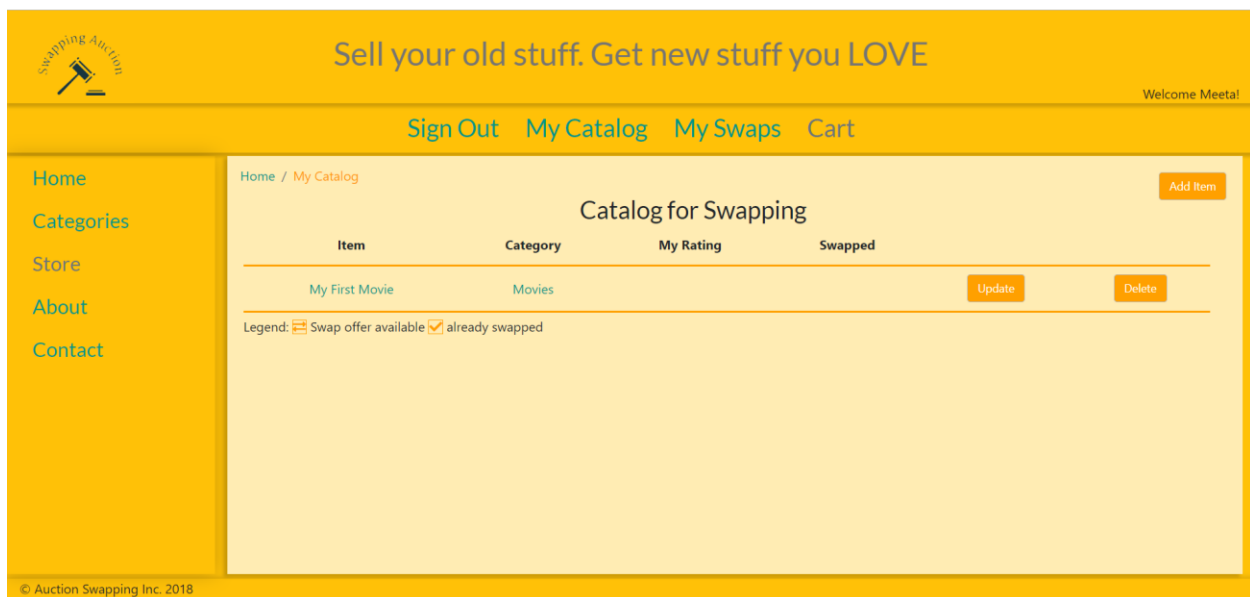
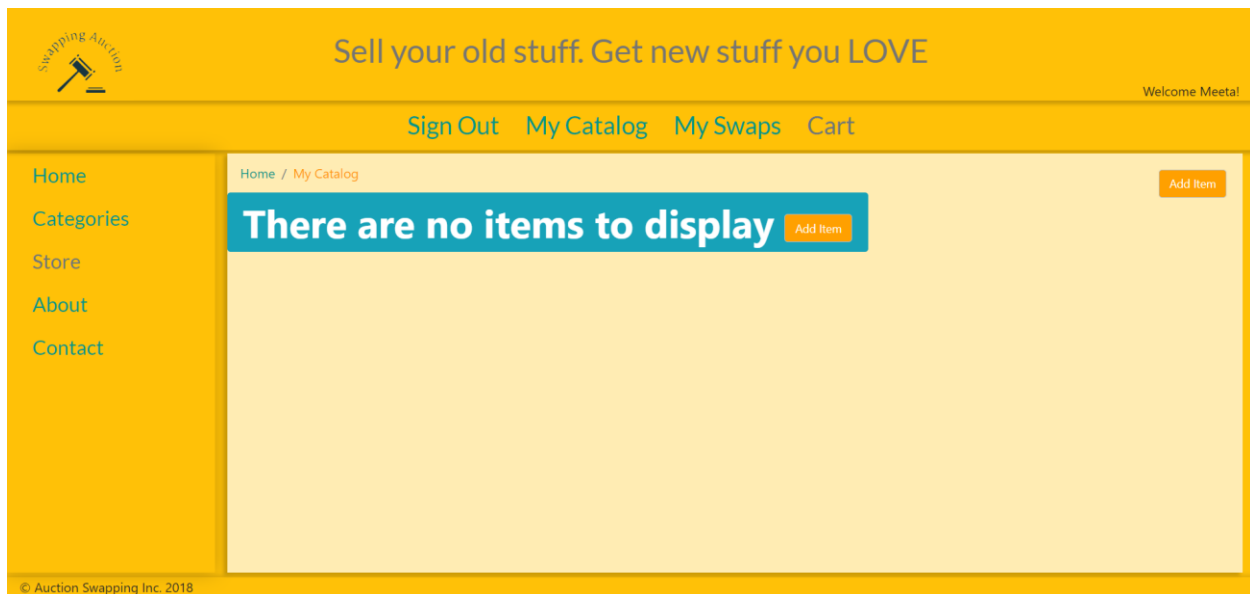
- If user is logged in, they are not able to check their products in the list, while if they are logged out, they can view all available products on the platform

What buttons or hyperlinks will exist, and what actions will be taken when clicked (data saved, navigate to other page, search based on value, etc.)

- User can access the details about any item, by clicking on their name

Special notes regarding page (if any)

- If user is registered and has items uploaded and currently, they are sign out, they can check their product in the list
- If user is non-registered, they can see other items for that category
- If user is registered and logged in, they can only view products from other users.



The name of the page: Profile View

Purpose of the page: Take actions on already existing items and add new items

Audience of page (general users, registered users, etc.): Registered user

What data (fields) will be presented on the page based on what logic?

- Item name, Item Category, Item Rating, Swap offer available

What validations (if any) will exist on page? (of data fields above)

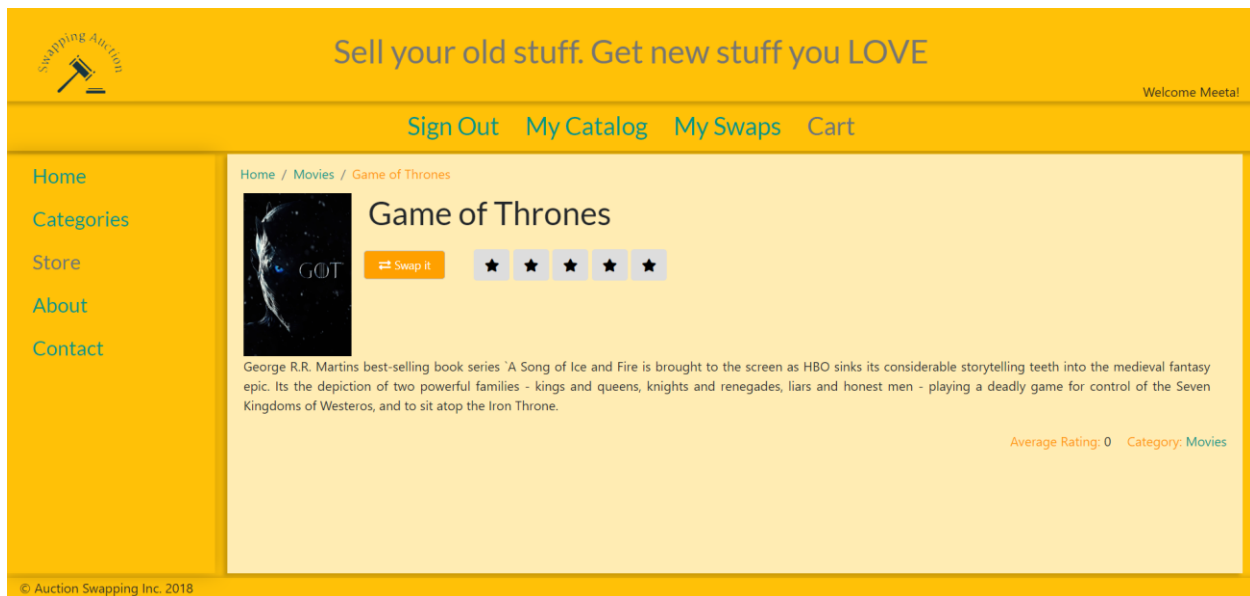
- Logged in user can view only their products and take actions only on their products

What buttons or hyperlinks will exist, and what actions will be taken when clicked (data saved, navigate to other page, search based on value, etc.)

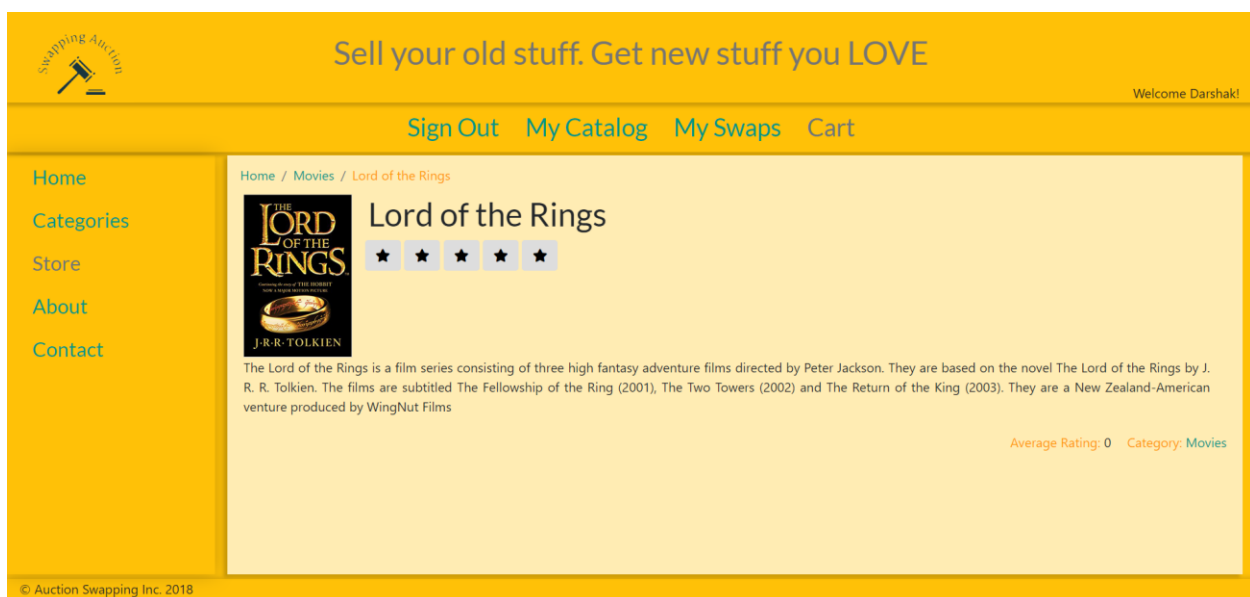
- *Item*: You can view your item details, by clicking on their item name.
- *Category*: You can use the action to category in 2nd Column to view other items offered by various other users for that category.
- *My Rating*: You can view your rating for the product.
- *Swapped*: It will indicate legend (as described at bottom of the table), when a Swap offer is in action (made to the user) or an offer available. Once the swapping is successful, it will indicate the second legend (i.e. aka Correct)
- *Update*: On click to Update, it will either take you to view your item details or if there is any offer available (check Legend at bottom of the list) the table will indicate in Swapped column. On choosing Update action for swap offer available or made to the user, you will be taken to the My Swaps page to further take Actions
- *Delete*: On click to Delete, the item will be deleted from your profile as well catalog.
- *Add Item*: Remember, you can anytime add a new item to your catalog from your profile view.

Special notes regarding page (if any)

- User can check their rating of their product by them



Other User Item view



Your Item view

The name of the page: Item view

Purpose of the page: View the item details

Audience of page (general users, registered users, etc.): General Users

What data (fields) will be presented on the page based on what logic?

- Item name, description, average rating, category, image

What validations (if any) will exist on page? (of data fields above)

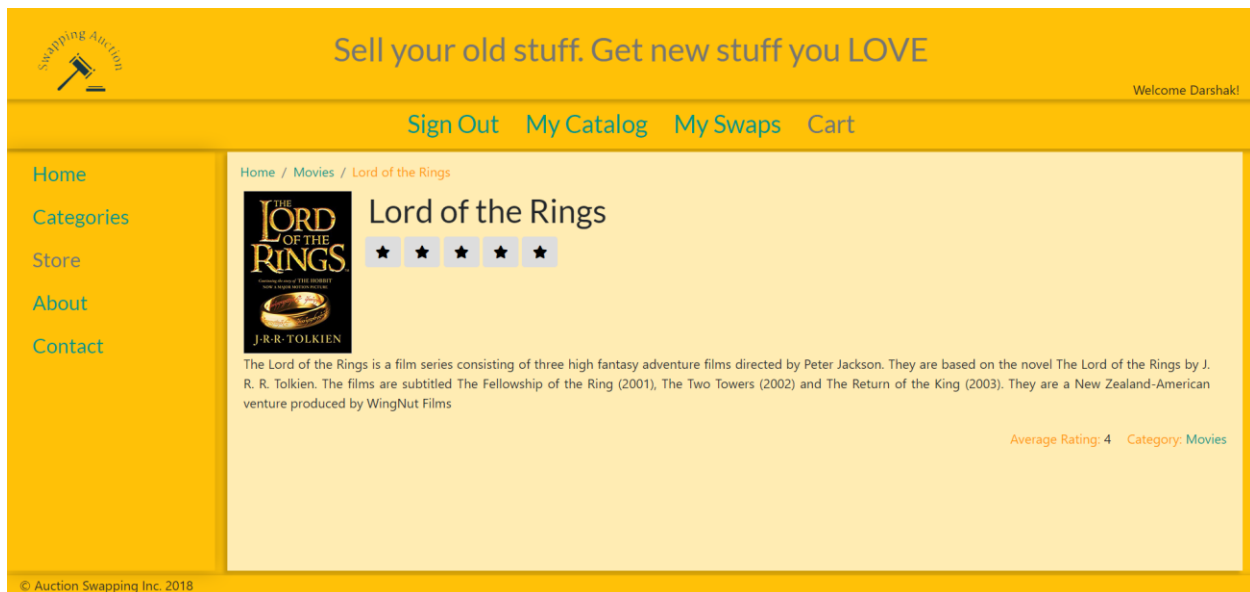
- Based on logged in status, user will be allowed to rate, or they will be show rate-it button
- Based on logged in status, user will be show if they have an offer available, swap it button

What buttons or hyperlinks will exist, and what actions will be taken when clicked (data saved, navigate to other page, search based on value, etc.)

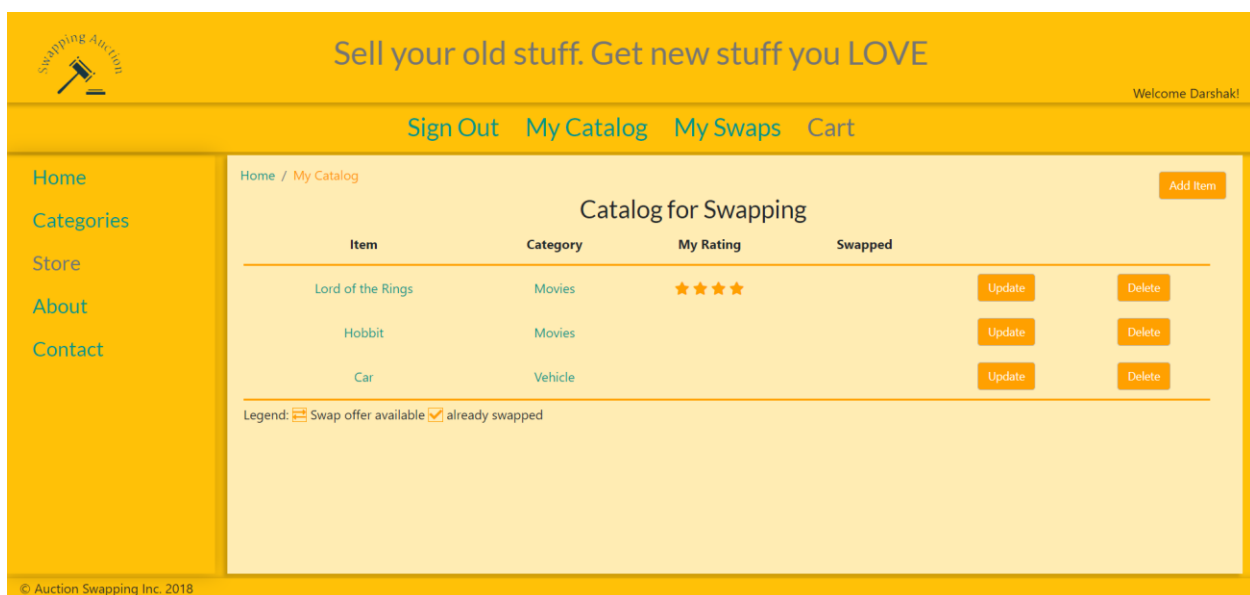
- Swap-it/Rate-it: If user is logged out, they will be asked to log-in
- Swap-it/Rate (*): If user is logged in, they will be allowed to rate the product. If a user has not made swap he can click on swap-it. If a user has a offer, he will be redirected to see the offer
- Category: Link to Other items of same category

Special notes regarding page (if any)


I will rate my Lord of the Rings Movie a rating of 4/5.



Profile will be showing the rating provided.



- If a user has any offer, they will be allowing to redirect to see the offer.
- Profile view will display rating provided by you for an item. While, the item view will show the average rating by every user on the platform including you.




Sell your old stuff. Get new stuff you LOVE

Welcome Darshak!

[Sign Out](#) [My Catalog](#) [My Swaps](#) [Cart](#)

[Home](#)
[Categories](#)
[Store](#)
[About](#)
[Contact](#)

[Home](#) / [Swap Movies](#)



Game of Thrones

George R.R. Martin's best-selling book series 'A Song of Ice and Fire' is brought to the screen as HBO sinks its considerable storytelling teeth into the medieval fantasy epic. Its the depiction of two powerful families - kings and queens, knights and renegades, liars and honest men - playing a deadly game for control of the Seven Kingdoms of Westeros, and to sit atop the Iron Throne.

Average Rating: 0 Category: Movies


Swap this item

Select an item from your available swaps

- ☐ [Lord of the Rings](#)
- ☐ [Hobbit](#)
- ☐ [Car](#)

[Confirm Swap](#)

© Auction Swapping Inc. 2018




Sell your old stuff. Get new stuff you LOVE

Welcome Meet!

[Sign Out](#) [My Catalog](#) [My Swaps](#) [Cart](#)

[Home](#)
[Categories](#)
[Store](#)
[About](#)
[Contact](#)

[Home](#) / [Swap Movies](#)



Game of Thrones

George R.R. Martin's best-selling book series 'A Song of Ice and Fire' is brought to the screen as HBO sinks its considerable storytelling teeth into the medieval fantasy epic. Its the depiction of two powerful families - kings and queens, knights and renegades, liars and honest men - playing a deadly game for control of the Seven Kingdoms of Westeros, and to sit atop the Iron Throne.

Average Rating: 0 Category: Movies

Swap this item

Sorry, you do not have any available items for swapping. Please add more items to start swapping again!

© Auction Swapping Inc. 2018

The name of the page: Swap View

Purpose of the page: To swap their available products, for the product they are interested in.

Audience of page (general users, registered users, etc.): Registered user

What data (fields) will be presented on the page based on what logic?

- Item name, image, description, average rating, category, of the item interested to the user.

- List of available items of the user trying to swap

What validations (if any) will exist on page? (of data fields above)

- Valid list of available items will be shown

What buttons or hyperlinks will exist, and what actions will be taken when clicked (data saved, navigate to other page, search based on value, etc.)

- User can view their available items, by clicking on the item name
- **Confirm Swap:** Clicking on Confirm Swap will make an offer and notify the user

Special notes regarding page (if any)

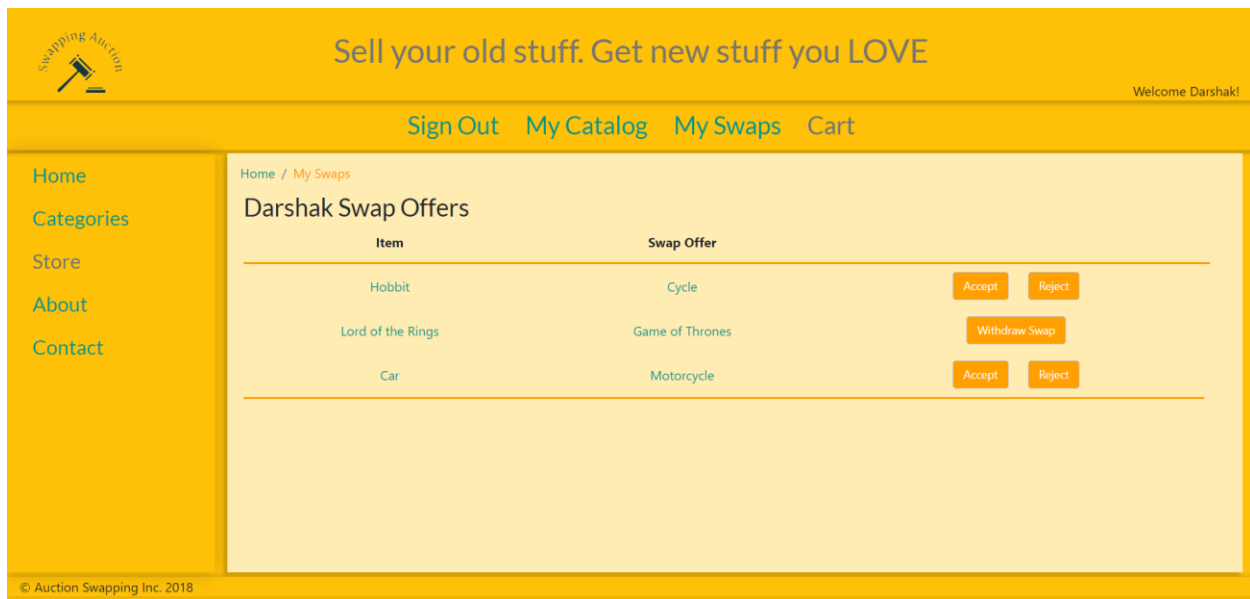
- After making the offer, user is directed to the profile view and see the legend is updated (Swapped column)

The screenshot shows a web application interface for 'Swapping Auction'. The header includes a logo, the tagline 'Sell your old stuff. Get new stuff you LOVE', and a user greeting 'Welcome Darshak!'. Navigation links include 'Sign Out', 'My Catalog', 'My Swaps', and 'Cart'. A sidebar on the left lists 'Home', 'Categories', 'Store', 'About', and 'Contact'. The main content area is titled 'Catalog for Swapping' and features a table with columns: Item, Category, My Rating, and Swapped. The table lists three items: 'Lord of the Rings' (Movies, 5 stars), 'Hobbit' (Movies, 4 stars), and 'Car' (Vehicle, 3 stars). Each item has 'Update' and 'Delete' buttons. A legend at the bottom indicates that a swap offer is available for the first two items and already swapped for the third.

Item	Category	My Rating	Swapped
Lord of the Rings	Movies	★★★★★	<input type="checkbox"/> Swap offer available
Hobbit	Movies	★★★★	<input type="checkbox"/> Swap offer available
Car	Vehicle	★★★	<input checked="" type="checkbox"/> already swapped

Legend: ☐ Swap offer available ☒ already swapped

- If available items are none, it will intimate user to add new items.



The name of the page: My Swaps view

Purpose of the page: Accept/Reject an received offer or withdraw offer made to the other user

Audience of page (general users, registered users, etc.): Registered User

What data (fields) will be presented on the page based on what logic?

- User Item along with the offered item, and option to accept/reject or withdraw

What validations (if any) will exist on page? (of data fields above)

- User actions will be validated that they are taking action for the correct product

What buttons or hyperlinks will exist, and what actions will be taken when clicked (data saved, navigate to other page, search based on value, etc.)

- *Accept*: On click to Accept, will be considered as swap is successful, where you are owner of their product (2nd Column

aka **Swap Offer**) and they are now owner of your product (1st Column aka **Item**)

- *Reject*: On click to Reject, will be considered as swap is declined, where your product is again available for others to make an offer, and you continue to be the owner of the product.
- *Withdraw*: On click to Withdraw Swap, you would like to cancel the already made offer by you.

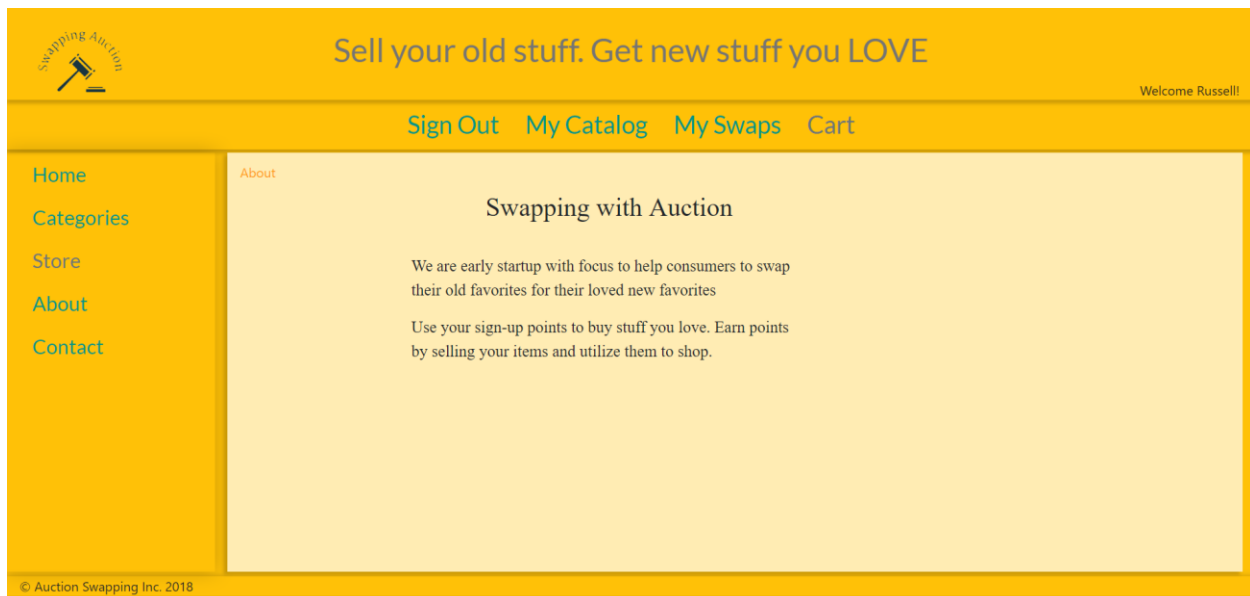
Special notes regarding page (if any)

The screenshot displays the 'My Catalog' page of the Auction Swapping Inc. website. The page features a yellow header with the site logo and navigation links. A sidebar on the left contains links to Home, Categories, Store, About, and Contact. The main content area is titled 'Catalog for Swapping' and contains a table with the following data:

Item	Category	My Rating	Swapped	Update	Delete
Lord of the Rings	Movies	★★★★		Update	Delete
Hobbit	Movies		☑	Update	Delete
Car	Vehicle			Update	Delete

Legend: ☑ Swap offer available ☑ already swapped

- Following is the result of withdrawing an offer, accepting an offer and rejecting an offer.
- Legend is updated (check description of legend on bottom of the screen) for accepted offer, and other two products do not have legend, describing they are available.
- On taking action on any of the Accept/Reject or Withdraw, you will be redirected to the Profile View.



The name of the page: About Page

Purpose of the page: Details about the platform

Audience of page (general users, registered users, etc.): General Users

What data (fields) will be presented on the page based on what logic?

None

What validations (if any) will exist on page? (of data fields above)

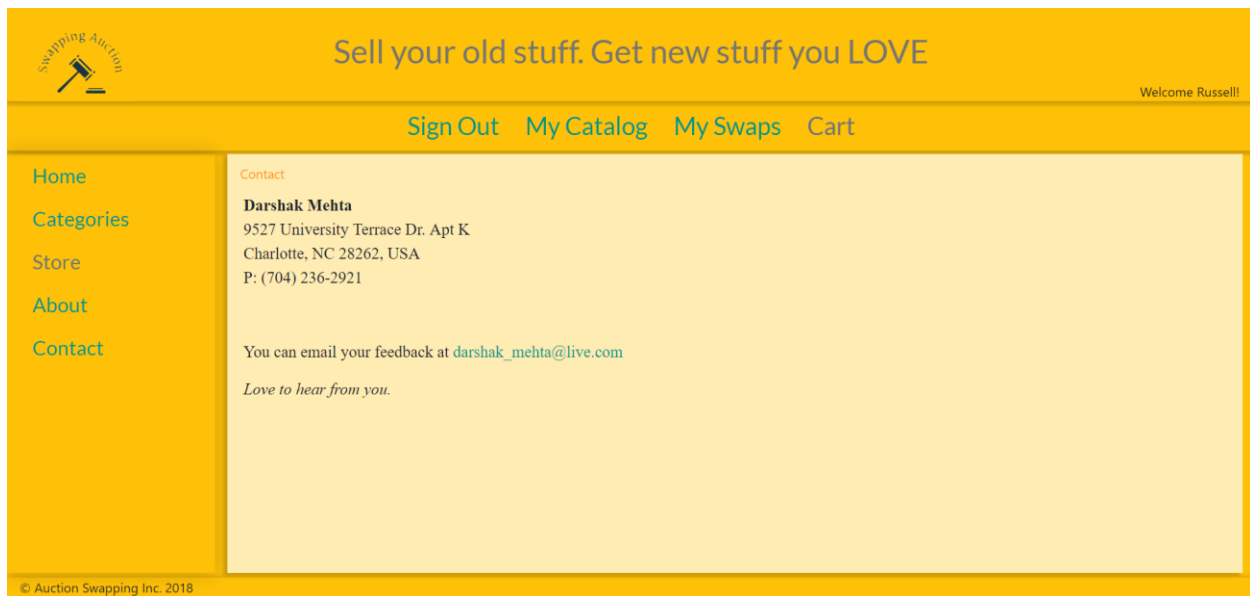
None

What buttons or hyperlinks will exist, and what actions will be taken when clicked (data saved, navigate to other page, search based on value, etc.)

None

Special notes regarding page (if any)

None



The name of the page: Contact Page

Purpose of the page: Contact details

Audience of page (general users, registered users, etc.): General Users

What data (fields) will be presented on the page based on what logic?

None

What validations (if any) will exist on page? (of data fields above)

None

What buttons or hyperlinks will exist, and what actions will be taken when clicked (data saved, navigate to other page, search based on value, etc.)

- If desktop email setup is there, it will be on by clicking the email address provided

Special notes regarding page (if any)

None

ER Diagram

users	items	offers	itemfeedbacks	userfeedbacks
userId	userId	offerId	feedbackId	feedbackId
password	code	userId	userId	userId
salt	name	swapUserId	itemCode	ratedUserId
firstName	category	userItemCode	rating	rating
lastName	description	swapUserItemCode	feedback	feedback
email	rating	status	-	-
addressField1	totalUserRatedItem	-	-	-
addressField2	totalUserRating	-	-	-
city	image_url	-	-	-
state	active	-	-	-
zip	userRating	-	-	-
country	status	-	-	-

Collection: users

userId: Unique identifier of every user

password: Hash Password

salt: Salt use to compare password for future login

firstName: First name of the user

lastName: Last name of the user

email: Valid email of the user

addressField1: Valid address of the user

addressField2: Valid address of the user

city: Valid city of the user

state: Valid state of the user

zip: Valid zip of the user

country: Valid country of the user

Collection: items

userId: Unique identifier of every user

code: Unique identifier for the item

name: Name of the product

category: Category of the product

description: Description of the product

rating: Average rating of the product

totalUserRatedItem: Total Number of users rated the product

totalUserRating: Sum of all the ratings by all the users rated the product

image_url: Item image relative URL

active: This attribute indicates active/inactive (aka: Available/Delete)

userRating: Rating by user for their product

status: status of the product – available, pending (offer made/received), swapped (offer accepted)

Collection: offers

offerId: Unique identifier of Offers

userId: UserId of the user making the offer

swapUserId: UserId of the user receiving the offer

userItemCode: Item Code of the user making the offer

swapUserItemCode: Item Code of the user receiving the offer

status: The attribute status can be anything from pending, accepted, reject, withdraw

Collection: itemfeedbacks

feedbackId: unique identifier for feedback

userId: User ID of the user giving the feedback to the item

itemCode: Item Code for which the feedback is provided

rating: Rating Item between 1 to 5

feedback: Future attribute to store little comment about their ratings.

Collection: userfeedbacks

feedbackId: unique identifier for feedback

userId: User ID of the user giving feedback to the other user

ratedUserId: User ID of the user receiving feedback from the other user

rating: Rating User between 1 to 5

feedback: Future attribute to store little comment about their ratings.