



UNIVERSIDAD DE PUERTO RICO  
RECINTO UNIVERSITARIO DE MAYAGUEZ  
DEPARTAMENTO DE INGENIERIA

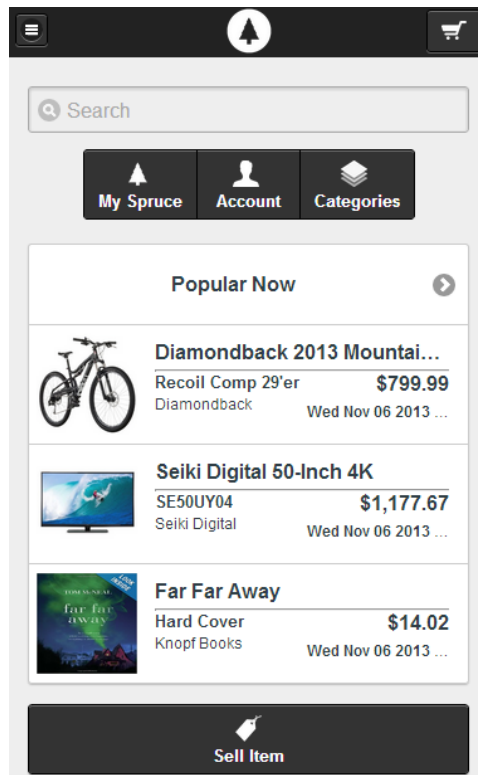


## Phase 2



Luis de la Vega  
Sam De La Torre  
Rafael Pol

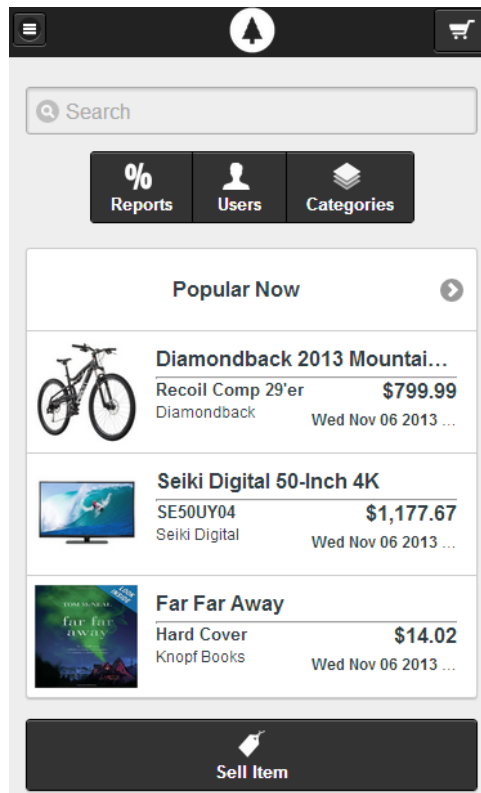
# Home Page



Depending on the credentials of the user (log in, guest, or administrator), the view behaves different for each one.

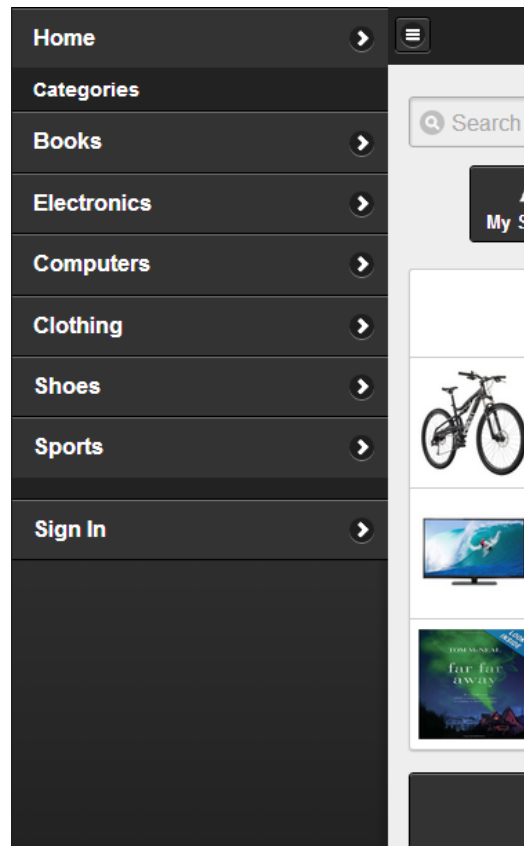
- Log in user and Guest Operations:
  - Search the items by the item name using the search bar.
  - View their current cart by clicking the cart icon in the header.
  - See the most popular items.
  - Click items to view the product listing.
  - Click the Categories button to see the general categories (See Categories Page)
  - Click the side bar button to reveal the side panel.
- Log in user Operations:
  - Click "My Spruce" button to see a summary of their activity (Selling, bidding, and sold items).
  - Click "Account" button for viewing general info of their account.
  - Sell an item.

# Admin's Home Page



- Administrator Operations:
  - Search the items by the item name using the search bar.
  - See the most popular items.
  - Click items to view the product listing.
  - Click the Categories button to see the category page with administrator privileges.
  - Click the side bar button to reveal the side panel.
  - Click the report button to generate reports.
  - Click the users button to see a listing of all active account.

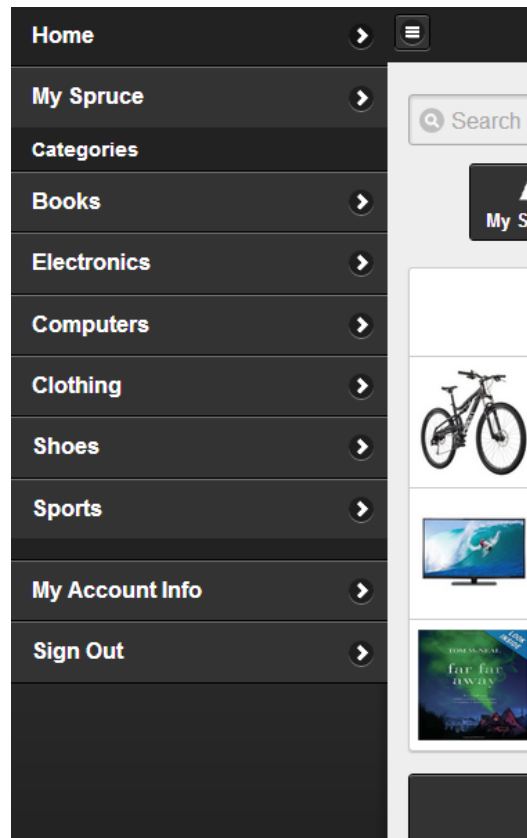
# Guest's Side Panel



Depending on the credentials of the user, the side panel will show different options for the user. The side panel is present in every page that the user visits.

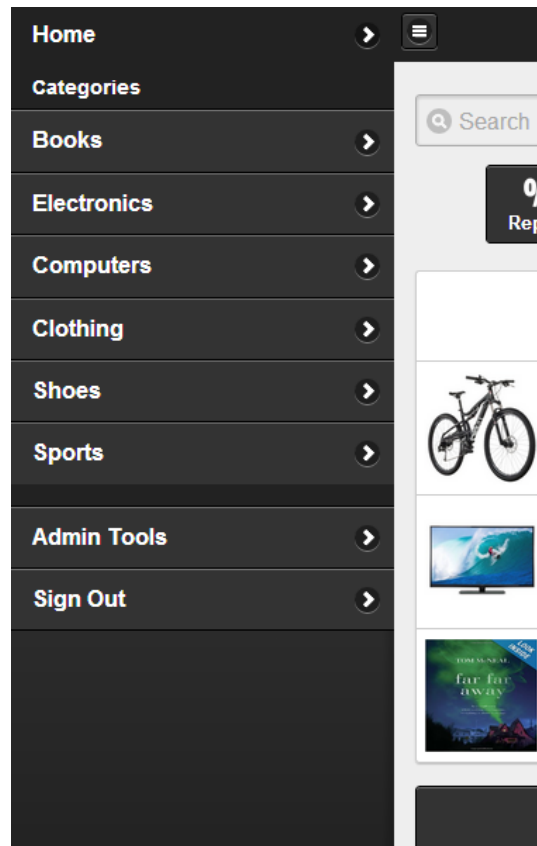
- Operations
  - Go to the Home page.
  - Choose a category to see a listing of all items in that category.
  - Go to the Sign In page.

# User's Side Panel



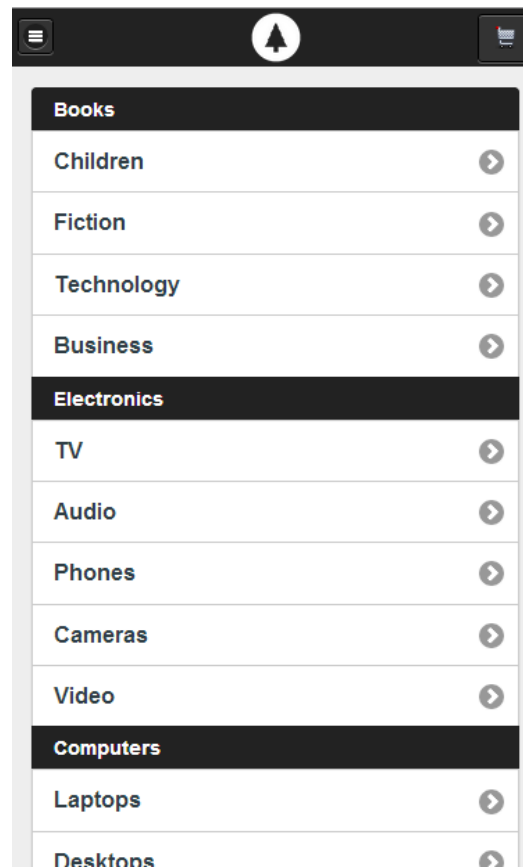
- Operations
  - Go to the Home page.
  - Choose a category to see a listing of all items in that category.
  - Go to my account page.
  - Sign out to erase all credential of the current user.

# Admin's Side Panel



- Operations
  - Go to the Home page.
  - Choose a category to see a listing of all items in that category.
  - Access the administrator tools page.
  - Sign out to erase all credential of the current administrator.

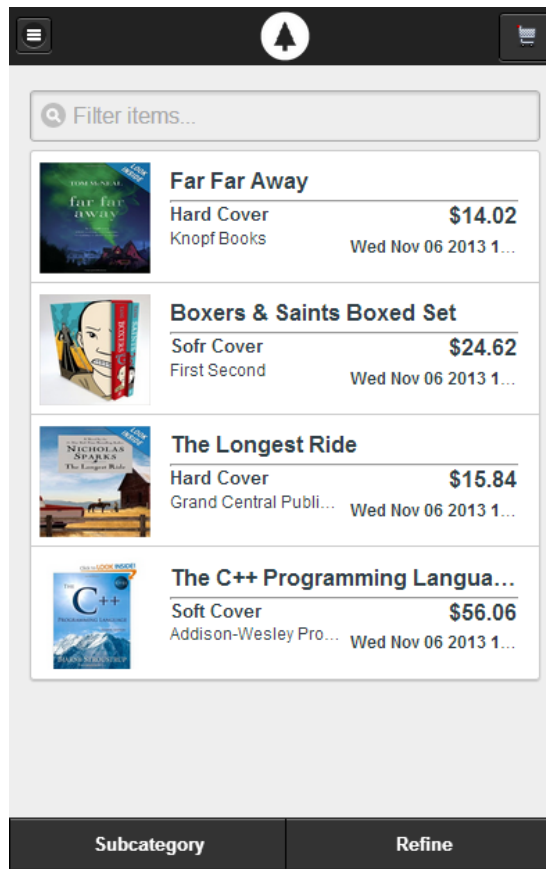
# Categories Page



Clicking the category button in the home page will bring you to the category page. This page shows the closest subcategories of the parent categories.

- User Operations
  - Clicking a subcategory will lead you to a listing of all product belonging to that category.
  - Click the side bar button to reveal the side panel.
  - View their current cart by clicking the cart icon in the header.

# Items by Category Page



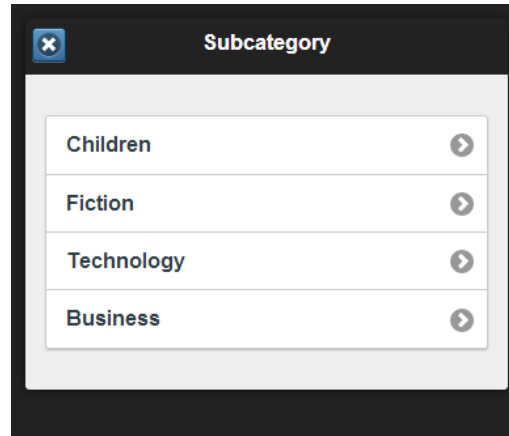
Clicking a category in the Categories Page or in the side panel will bring the items by Category Page.

- User Operations
  - See a listing of products based on the category they choose.
  - Click an item to see the product listing.
  - Click the subcategory button in the footer to choose a subcategory of the current category.
  - Click the refine button in the footer to order items based on price, item name and brand name.
  - Click the side bar button to reveal the side panel.
  - View their current cart by clicking the cart icon in the header.
  - Filter items in list based on the item name.



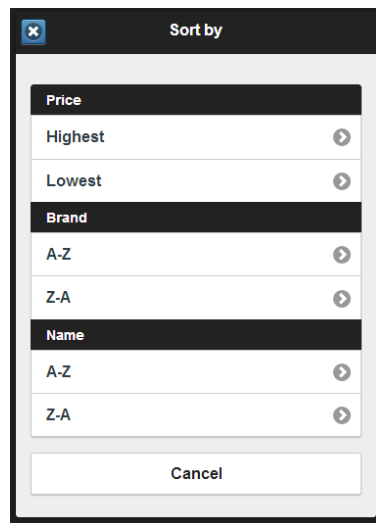
# Item by Category popups

## Subcategory



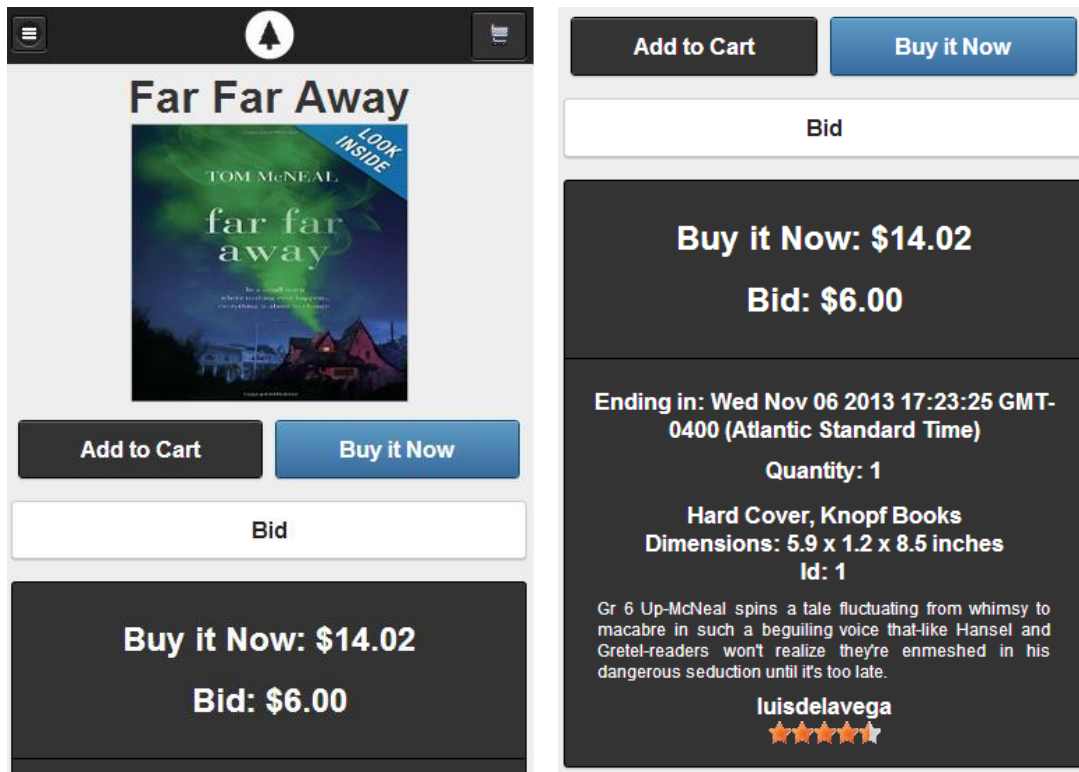
- User Operations
  - See subcategories of the current category in Item by Category Page.
  - Clicking a subcategory will lead you to the Item by Category Page showing products of the category chosen.

## Refine

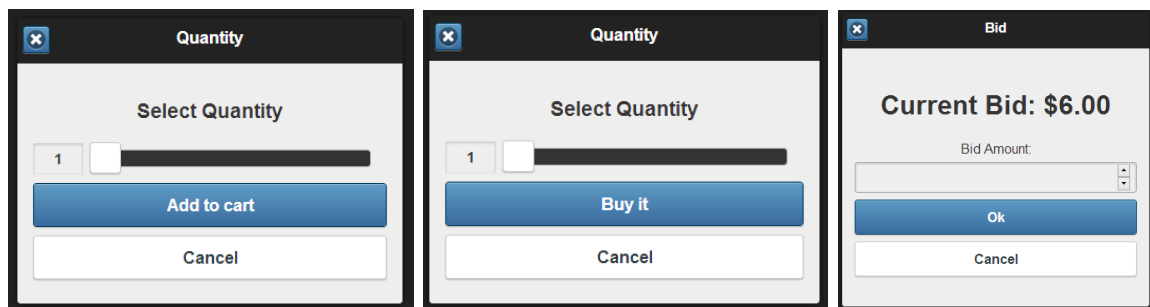


- User Operations
  - Refine the order of product shown in the Item by Category Page by price, brand, and name.

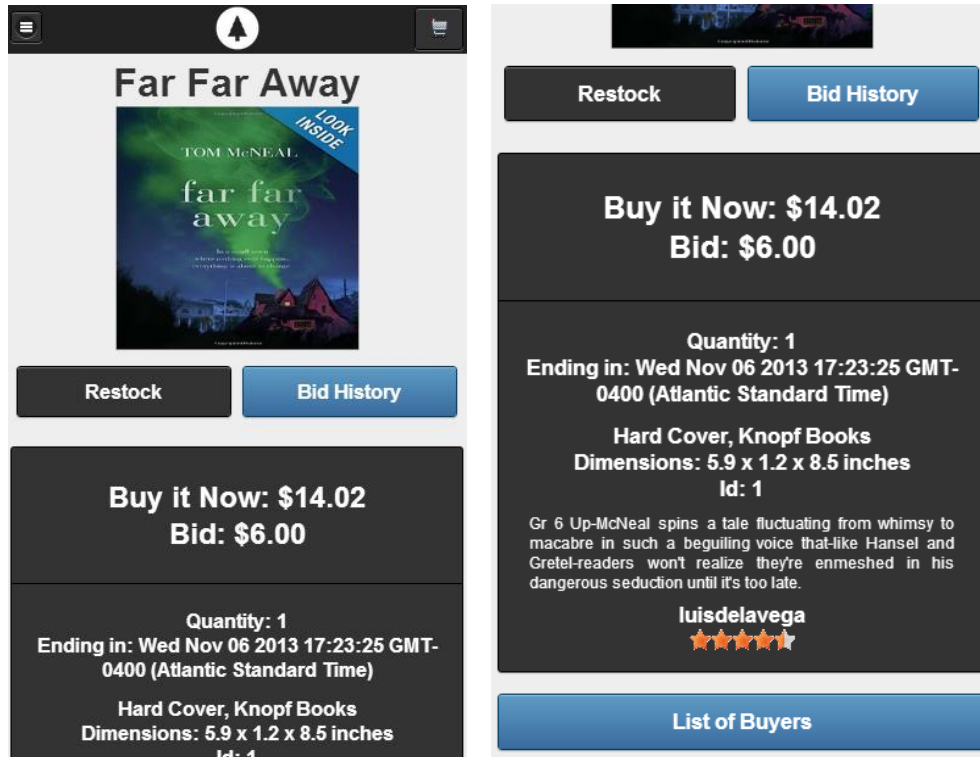
# Buyer Product Page



- User Operations
  - Can add to cart the current item with a desired amount.
  - Buy the product instantly.
  - Bid on the product.
  - Click the image to see it in full resolution.
  - View product description (Ending date, quantity, seller, etc.)
  - Click on the seller name to view his profile.
  - Click the side bar button to reveal the side panel.
  - View their current cart by clicking the cart icon in the header.

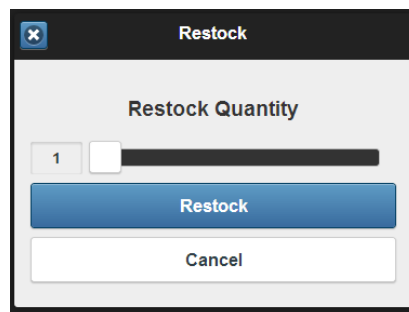


# Seller Product Page

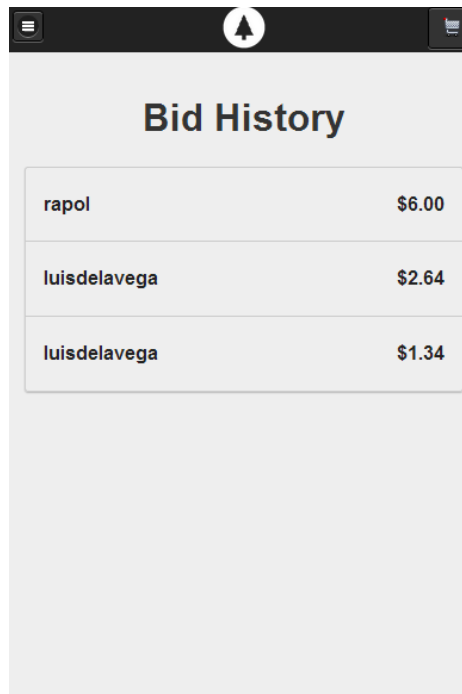


- User Operations

- Can restock current item with a desired amount.
- See a list of the bid history of the item.
- Click the image to see it in full resolution.
- View product description (Ending date, quantity, seller, etc.)
- Click on your username to go to your account information.
- Click the side bar button to reveal the side panel.
- View their current cart by clicking the cart icon in the header.
- See a list of buyers of the current item.



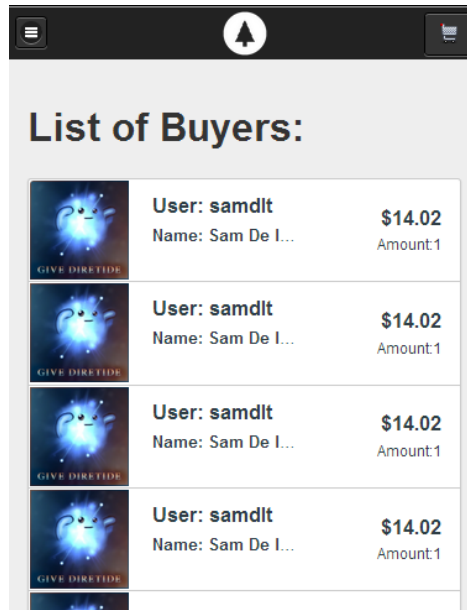
# Bid History


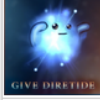
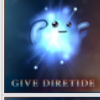
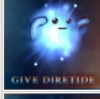
A mobile application interface for viewing bid history. At the top is a dark header bar with three icons: a menu icon on the left, a home icon in the center, and a cart icon on the right. Below the header, the title "Bid History" is centered. Underneath the title is a table with three rows of bid data. The table has two columns: the bidder's name and the bid amount. The first row shows "rapol" with a bid of "\$6.00". The second row shows "luisdelavega" with a bid of "\$2.64". The third row shows "luisdelavega" with a bid of "\$1.34".

Bid History	
rapol	\$6.00
luisdelavega	\$2.64
luisdelavega	\$1.34

- User Operations
  - See a list that contains the history of bids.
  - If the item date ended, you can accept or decline the latest bid.
  - Click the side bar button to reveal the side panel.
  - View their current cart by clicking the cart icon in the header.

# List of Buyers Page

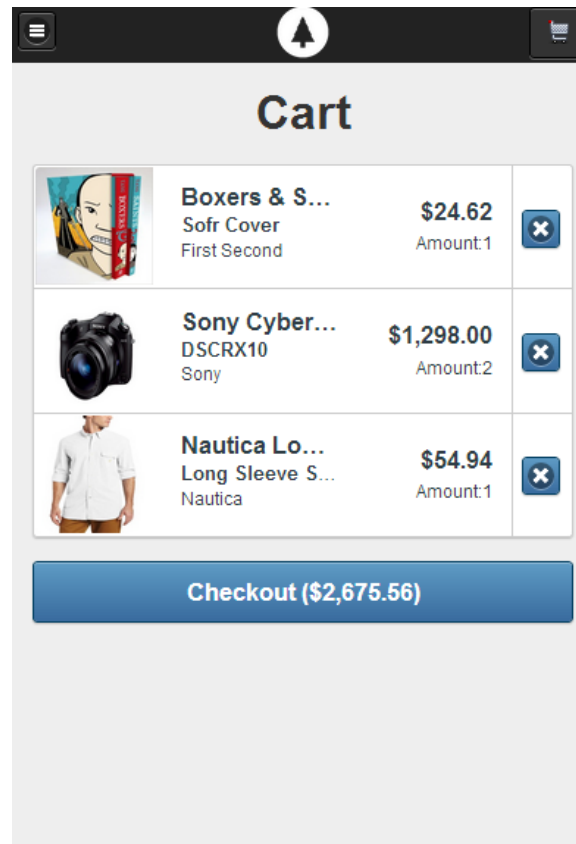


List of Buyers:		
 GIVE DIRETIDE	User: samdlit Name: Sam De I...	\$14.02 Amount: 1
 GIVE DIRETIDE	User: samdlit Name: Sam De I...	\$14.02 Amount: 1
 GIVE DIRETIDE	User: samdlit Name: Sam De I...	\$14.02 Amount: 1
 GIVE DIRETIDE	User: samdlit Name: Sam De I...	\$14.02 Amount: 1

- User Operations

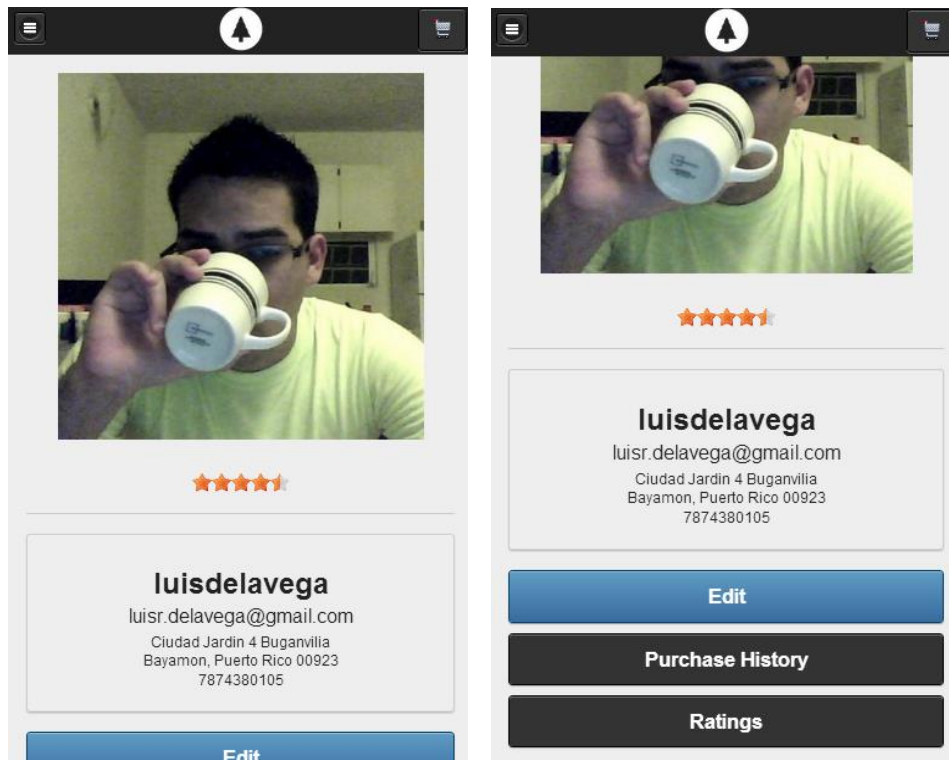
- See a list that contains the history of users that bought the item.
- Clicking the user will redirect you to the buyer info.
- Click the side bar button to reveal the side panel.
- View their current cart by clicking the cart icon in the header.

# Cart Page



- User Operations
  - See the current items with the amount currently in the user's cart.
  - Remove an item from the cart.
  - Click an item to see the product listing.
  - See the total amount of the cart.
  - Go to the checkout page.

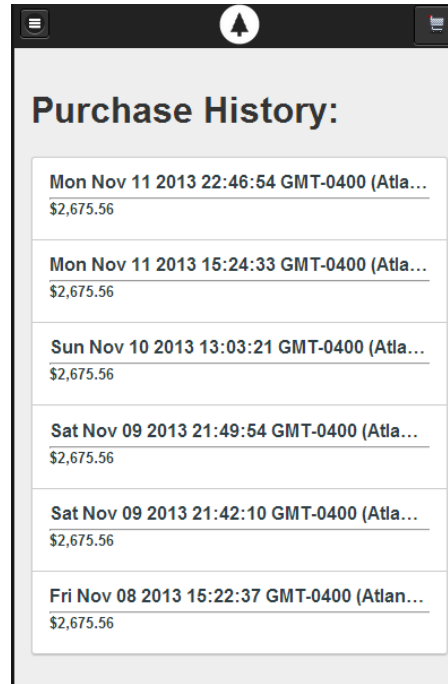
# My Account Info Page



A log in user can see their general information in My Account Info Page.

- User Operations
  - See your current photo.
  - See general information about you.
  - Edit your account information.
  - See your purchase history.
  - See your history of ratings based on customers.
  - Click the side bar button to reveal the side panel.
  - View their current cart by clicking the cart icon in the header.

# Purchase History Page



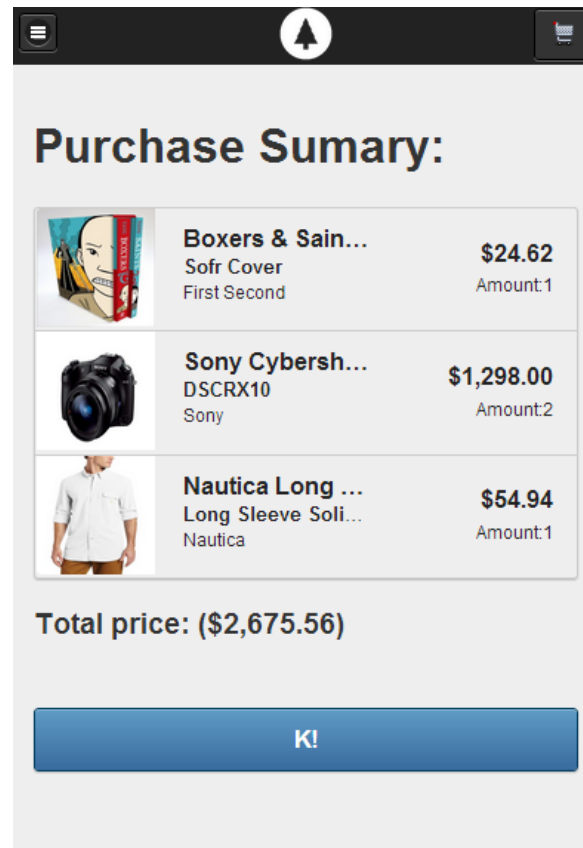
The image shows a mobile application interface for a 'Purchase History' page. At the top, there is a dark header bar with three icons: a menu icon (three horizontal lines), a home icon (a circle with an upward arrow), and a cart icon (a shopping cart). Below the header, the title 'Purchase History:' is displayed in a bold, dark font. The main content area contains a list of six transactions, each presented in a white box with a thin border. Each transaction entry includes a timestamp (date and time) and a location (truncated), followed by the amount '\$2,675.56'.

Transaction
Mon Nov 11 2013 22:46:54 GMT-0400 (Atla...) \$2,675.56
Mon Nov 11 2013 15:24:33 GMT-0400 (Atla...) \$2,675.56
Sun Nov 10 2013 13:03:21 GMT-0400 (Atla...) \$2,675.56
Sat Nov 09 2013 21:49:54 GMT-0400 (Atla...) \$2,675.56
Sat Nov 09 2013 21:42:10 GMT-0400 (Atla...) \$2,675.56
Fri Nov 08 2013 15:22:37 GMT-0400 (Atlan...) \$2,675.56

- User Operations
  - See a list of your transactions history.
  - See the total amount of the transaction.
  - Click the transaction to see the purchase summary.
  - Click the side bar button to reveal the side panel.
  - View their current cart by clicking the cart icon in the header.

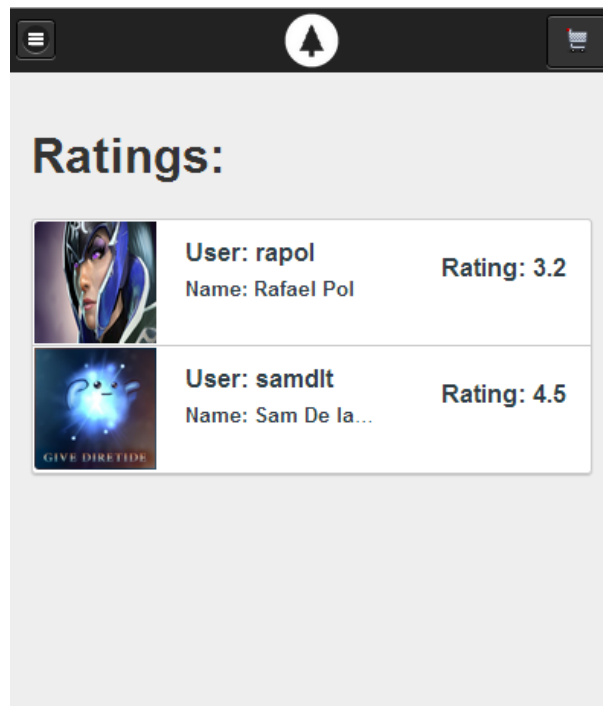


# Purchase Summary Page



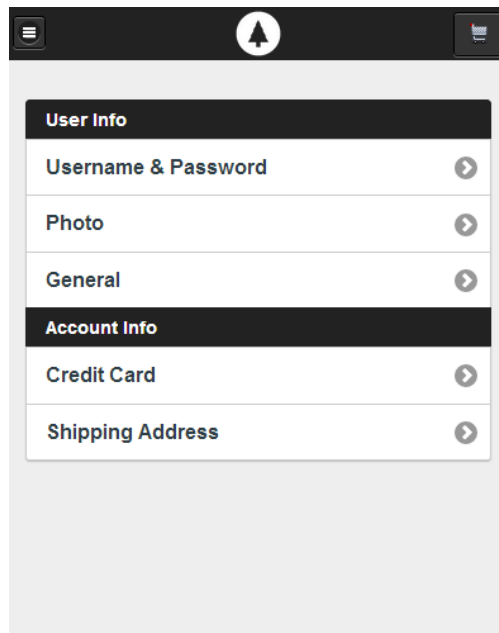
- User Operations
  - See a summary of the transaction

# Rating Page



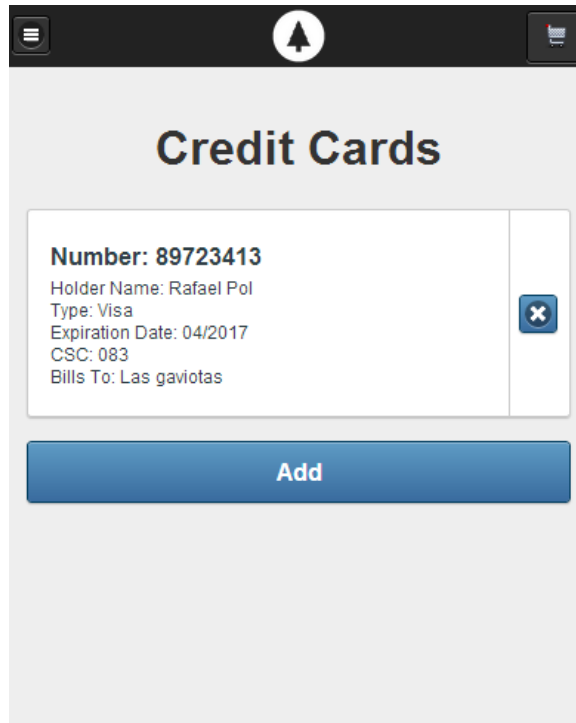
- User Operations
  - See your history of ratings based on customers that have rated your profile.
  - Click a user to see his profile.

# Edit My Account Page



- User Operations
  - Edit username and password.
  - Edit your photo.
  - Edit general information.
  - Modify your credit card.
  - Modify your shipping address.

# Credit Card Edit Page



The image shows a mobile application interface for editing credit cards. At the top is a dark navigation bar with three icons: a hamburger menu, a home icon, and a shopping cart. Below the navigation bar is a light gray header with the title "Credit Cards". The main content area features a white card with a light gray border. Inside the card, the text "Number: 89723413" is bolded. Below it, the following details are listed: "Holder Name: Rafael Pol", "Type: Visa", "Expiration Date: 04/2017", "CSC: 083", and "Bills To: Las gaviotas". To the right of this text is a small blue square button with a white 'x' icon. Below the card is a large blue button with the word "Add" in white text.

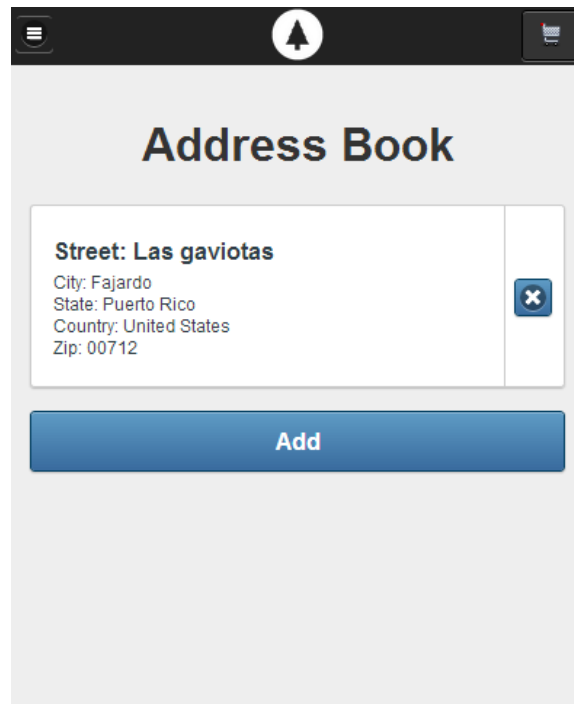
**Credit Cards**

**Number: 89723413**  
Holder Name: Rafael Pol  
Type: Visa  
Expiration Date: 04/2017  
CSC: 083  
Bills To: Las gaviotas

**Add**

- User Operations
  - See a list of your credit cards
  - Add credit card
  - Delete a credit card
  - Click to modify billing address.

# Address Edit Page



The image shows a mobile application interface for an "Address Book". At the top is a dark navigation bar with three icons: a hamburger menu, a back arrow, and a shopping cart. Below the navigation bar, the title "Address Book" is centered. The main content area features a form for editing an address. The form is divided into two sections. The left section contains the following text: "Street: Las gaviotas", "City: Fajardo", "State: Puerto Rico", "Country: United States", and "Zip: 00712". The right section contains a blue square button with a white "x" icon. Below the form is a large blue button with the text "Add".

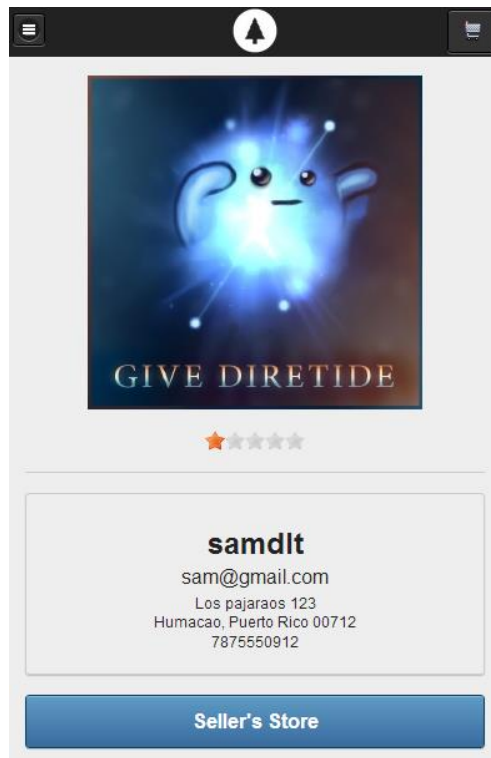
**Address Book**

**Street: Las gaviotas**  
City: Fajardo  
State: Puerto Rico  
Country: United States  
Zip: 00712

**Add**

- User Operations
  - See a list of your shipping addresses.
  - Add shipping address.
  - Delete a shipping address.
  - Click to modify shipping address.

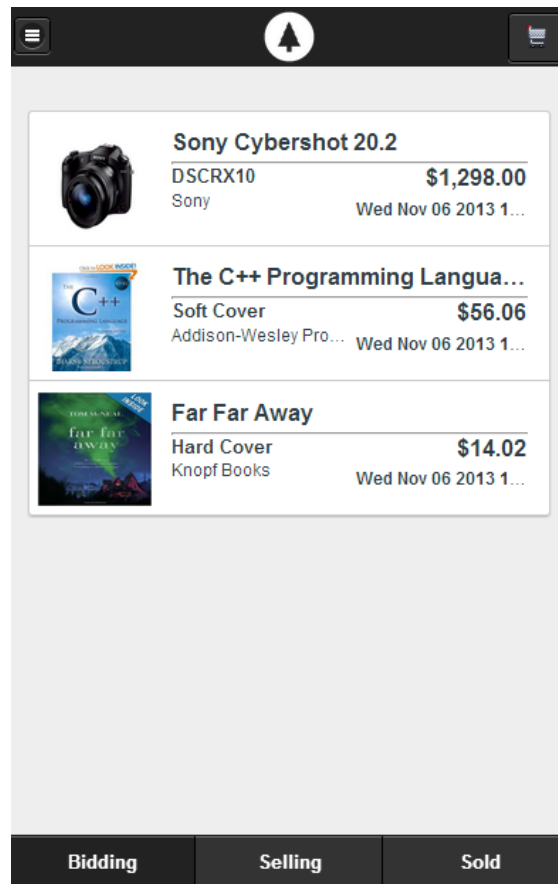
# User Page



User page is used when you click a profile of another user.

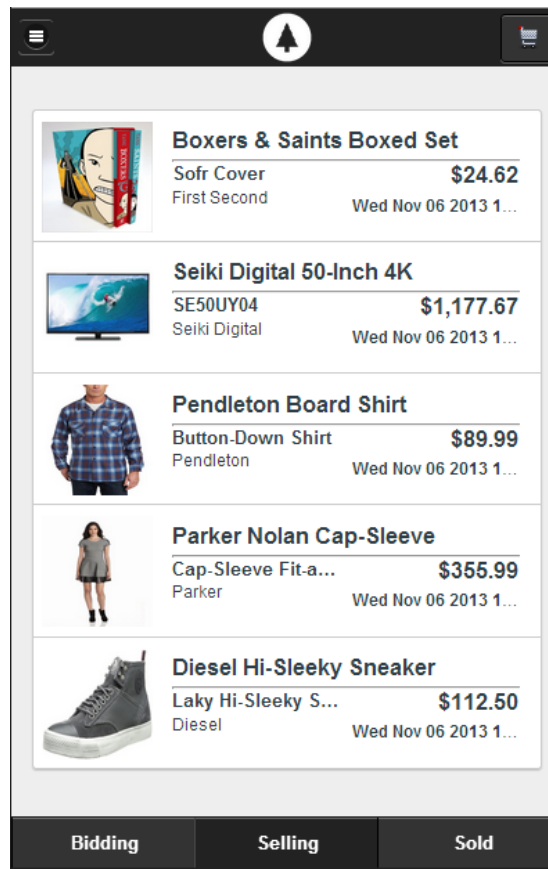
- User Operations
  - See general information of the user.
  - Click to see the seller's store, which contains items the user is currently selling.

# My Spruce Bidding Page



- User Operations
  - See your current items you are bidding.
  - Click the item to see the product listing.

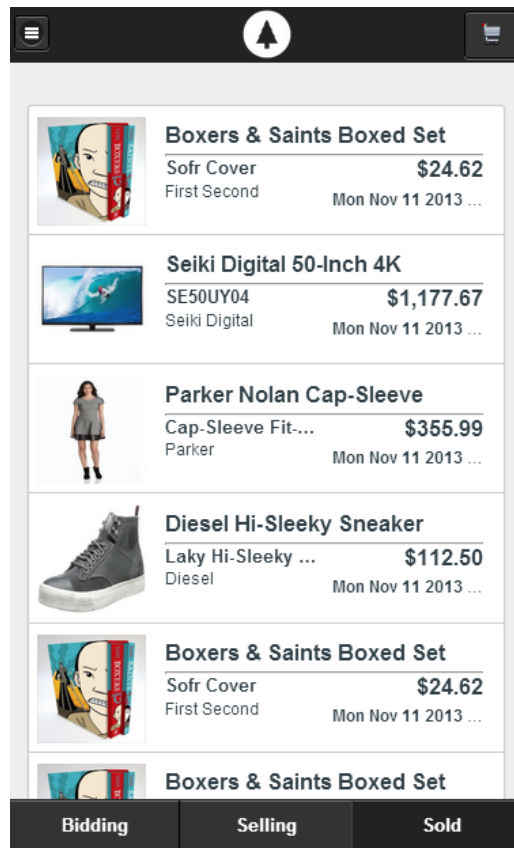
# My Spruce Selling Page



- User Operations
  - See your current items you are selling.
  - Click the item to see the seller product listing.



# My Spruce Sold Page



- User Operations
  - See your current items you sold with the date the item was sold.
  - Click the item to see the seller product listing.

# Sell item Page

**Sell Item**

Item Name:\*

Buy it now price:\*

Model:\*

Brand:\*

Dimensions:\*

Description:

Brand:\*

Dimensions:\*

Description:

Upload Picture:

Choose File No...en

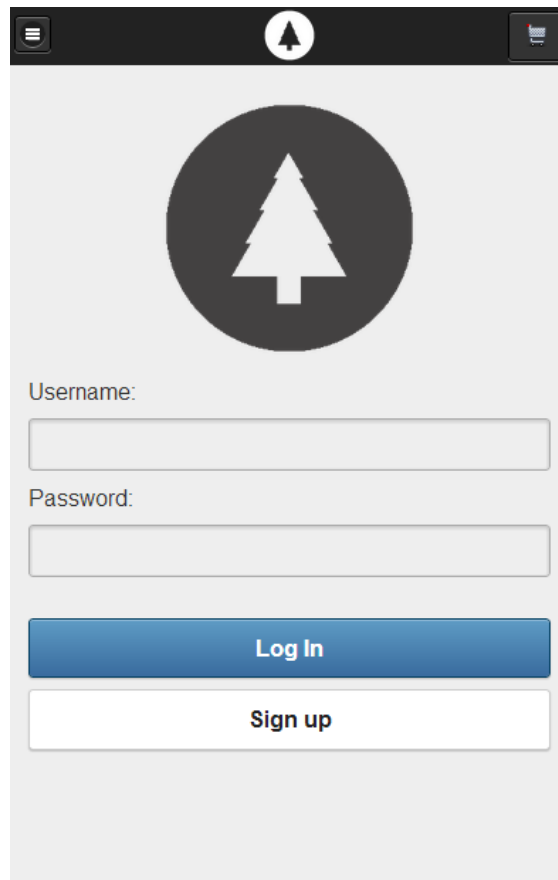
Amount: Restock:

Select Category

Cancel Sell

Form for a logged in user to sell an item.

# Login Page



A mobile application login page mockup. At the top is a dark header bar with three icons: a hamburger menu, a white triangle pointing up, and a shopping cart. Below the header is a large dark circle containing a white stylized Christmas tree. Underneath the circle are two text labels, 'Username:' and 'Password:', each followed by a light gray rectangular input field. Below the input fields are two buttons: a blue button with the text 'Log In' and a white button with the text 'Sign up'.

- User Operations
  - Log in with a user account or administrator account.
  - Go to the sign up page.

# Sign Up Pages

## User Info

Username:\*

Name:\*

Last Name:\*

Email:\*

Password:\*


Re-type Password:\*

Email:\*

Password:\*

Re-type Password:\*

Phone Number:\*

 Upload Picture:

Next


## Shipping Address

Address Line:\*

City:\*

State/Province/Region:\*

Zip Code:\*

Country 

☒ Billing address different from shipping address?

Next

## Billing Address

Address Line:\*

City:\*

State/Province/Region:\*

Zip Code:\*

Country 

Next

## Credit

Cardholder Name:\*

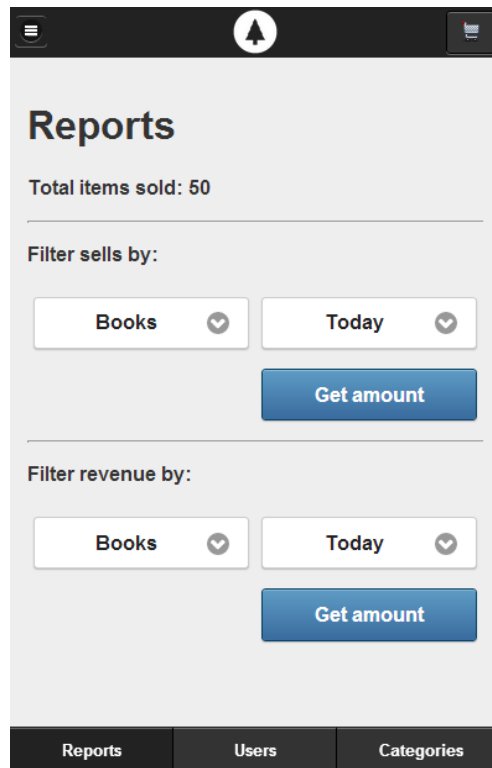
Number:\*

Expiration Date:\*

CSC:\*

Sign Up!

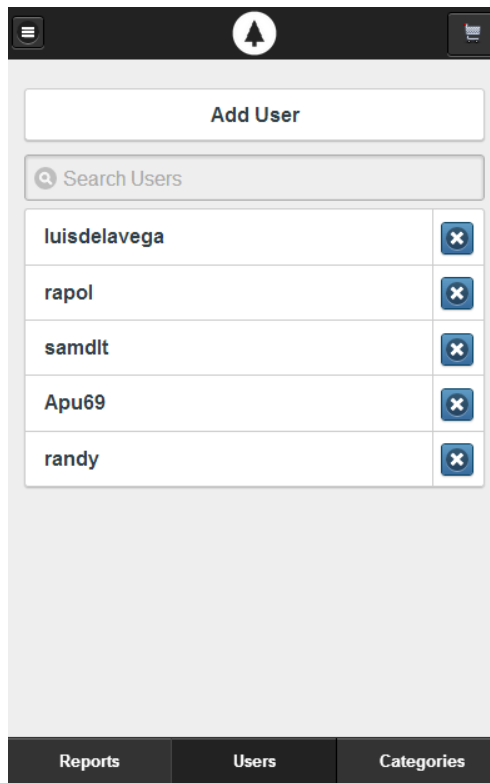
# Administrator Report Page



The image shows a mobile application interface for an administrator report page. At the top, there is a dark header bar with three icons: a hamburger menu, a bell, and a shopping cart. Below the header, the main content area has a light gray background. The title 'Reports' is displayed in a large, bold font. Underneath the title, the text 'Total items sold: 50' is shown. A horizontal line separates this from the 'Filter sells by:' section. This section contains two dropdown menus: 'Books' and 'Today', each with a downward arrow icon. Below these is a blue button labeled 'Get amount'. Another horizontal line separates this from the 'Filter revenue by:' section. This section also contains two dropdown menus: 'Books' and 'Today', each with a downward arrow icon. Below these is another blue button labeled 'Get amount'. At the bottom of the screen, there is a dark navigation bar with three tabs: 'Reports', 'Users', and 'Categories'.

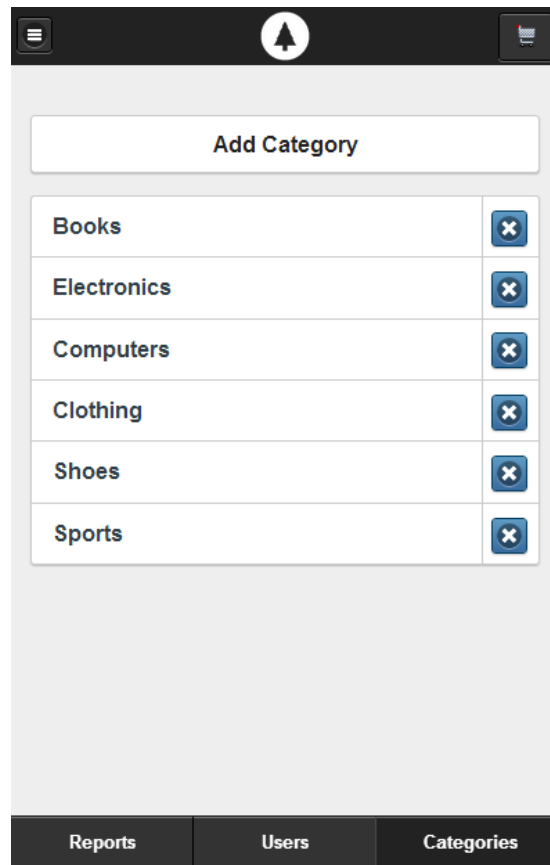
- Administrator Operations
  - Get the total items sold
  - Get total items sold filtered by category and time.
  - Get total revenue filtered by category and time.

# Administrator Users Page



- Administrator Operations
  - Get a list of all users.
  - Delete a user.
  - Add a user.
  - Modify a user.

# Administrator Category Page



- Administrator Operations
  - Get a list of all categories
  - Delete a category.
  - Add a category.
  - Click to see subcategories of a category.

## Entity and Relationship Analysis

### Account:

The account entity contains information such as user name, first name, last name and the account rating. The account entity is associated to every user. The account password is encrypted through the use of hashing and salt which is a random real number between 0 and 1.

### Rates:

Is a recursive relationship with user. This is used to identify which user has rated which user.

### Shipping Address:

Contains information to properly identify a shipping address. This is a one-to-many relationship with account because an account can have many shipping addresses but every one address is associated with one account.

### Ship\_to:

Relationship that associates every shipping address with every account.

### Cart:

Contains an Id which is used to associate every user to a unique cart, thus a one-to-one relationship with account.

### belongs\_to:

Relationship used to associates every cart to a user.

### Guest:

Contains an Id which every guest will have upon entering the site. This Id is used to be able to associate every guest with a cart which can then be used to facilitate the checkout process as every guest needs to sign in or create an account to complete checkout.

### Has:

Used to associates every guest with a cart.

### Item:

Entity containing all necessary attributes to identify an item such as name, price, model, brand, etc. These items are bought and sold by users.



Sells:

Relationship used to associates every item to an account selling that item.

Invoice:

Entity containing fields necessary to create an invoice. These are associated to every user after completing a transaction.

Of:

Relationship used to associates every item to an invoice. After an item is sold, this table is populated with the necessary information associating an item with its respective invoice.

Itemquantity:

Attribute of the relationship between Item and Invoice. This is used to identify how many of the item sold was sold and is later reflected on the generated invoice.

Keeps:

Invoices are never deleted, therefore, an account must always be able to keep a record of sold or bought products. This relationship associates every account with their invoice.

Contains:

Every cart contains items. This relationship associates the cart with many items, therefore, a one-to-many relationship.

Quantity:

Attribute of the relationship between Item and Cart. This relationship establishes how many of the item in the relationship between Item and Cart is found within the cart.

Category:

Entity containing every category and subcategory of every category.

Subcat:

Recursive relationship that associates every subcategory with every category. This is necessary because the category entity contains all categories including subcategories, therefore, it is necessary to associate every subcategory with the category it belongs to. This is done through the use of this recursive relationship.

Describe:

Relationship used to associate every item with a category.

Bid\_Event:

Entity used to describe the auction of an item. Contains start and end dates as well as the current highest bid.

Participates:

Relationship that associates every item with the item that is being auctioned.

Bid:

Table that contains every bid with the date it was placed and a unique ID.

Places:

Associates every bid with a user. Every bid must be placed by a user and a user can place multiple bid, therefore, it is a one-to-many relationship.

Credit Card:

Entity containing all information pertinent to a credit card such as credit card number and expiration date.

Billed:

Associates every credit card with an account.

Winning Bid:

Contains bid price and date the winning bid was issued.

Determines:

Bid event has many bids and the last bid issued (which would also be the largest bid) is the winning bid. The winning bid table is then populated with the information of that bid.

Wins:

Relationship that associates every winning bid with the item that was bid on.

Placed\_by:

Relationship that associates every winning bid with the account that issued that bid.

paid\_with:

Relationship that can associates Invoice with Credit Card.