

FINAL PROJECT

Project Name: Phones Glore

Date: 4/3/2025

Proposal for:

- **Com S 3190 Final Project**
- **Iowa State University CS Department**

By:

- **Naveen Prabakar**
- **Milo Mucu**

Table of Contents

- **Introduction**
- **Purpose of The Proposal**
- **Goals & Objectives**
- **Project Description**
- **Project Path Selection**
- **Feature Ownership & Responsibility**
- **Resources & Tools**
- **File Structure and Project Organization**
- **Data Sources and Management**
- **User Experience Views**
- **Final Comments**

Introduction:

Milo Mucu milomucu@iastate.edu

Naveen Prabakar prabakar@iastate.edu

Milo had limited frontend experience coming into the class with some backend projects. Naveen has some previous full stack experience regarding app development through 309, but is still experienced with creating web applications. We explored options of a market (produce, technology, etc.), and we wanted to do something related to technology and decided to pick phones as the main aspect of the website. We wanted to make a website that was a center to all other phone models where various different types of phones can be purchased.

Purpose of the Proposal:

The plan is to create a user-friendly place where people can easily sell and buy phones. We want to make a shop where a wide variety of phones can be found so users can find exactly what they want. The project will aim to make the process of buying and selling as smooth as possible. Also, this gives people the opportunity to find phones at better prices.

Goals and Objectives:

- Build on full-stack development skills
- Learn to build applications using React for the frontend
- Learn to build applications using Node.js for the backend
- Get experience using databases such as MongoDB
- Set up a shop where users can put items up for sale
- Set up a system for users to buy items with confirmation
- Allow people to create accounts and save their information
- Create a working navigation system
- Include a good use of images
- Continuously update the application when phones are added or sold
- Integrate CRUD functionalities
- Create a user-friendly application throughout the whole process

- Make improvements to the UI
- Create an Admin account for updating information

Project Description:

The project is a shop where users can sell and buy phones. It will start on a page where the user can either log into an existing account or create a new one. A person cannot go to the shop if the login information is incorrect. After logging into an account, the next page will have the shop, with phones listed with prices and an image. The user will have the option to sell a phone. The user must fill out all the information on the phone, including the name, price and an image. When a phone is accepted into the shop, the page will update with the new item. There is also an Admin account that will have the option to edit the items listed. The user will also have an option to add phones to a cart. When they are done shopping, they can click the cart button to take them to a transaction page, where they fill out payment information. When the transaction is accepted, the user will finally be taken to a confirmation page with details on the purchase. The final page of the project is a team information page.

Project Path Selection:

We decided to extend our previous project. The final result of the midterm project gave us room to expand, so we chose option 1. Users will now be able to put their own phones in the shop to sell. They can also buy phones directly from the shop instead of being brought to another website. We will use the existing code from the shop page in the midterm project as a starting point to reconstruct the final project using React. The additional features of creating an account and buying an item will be added from there.

Feature Ownership and Responsibility:

- Login & SignUp: Handled by Naveen (Frontend + Backend)
- Home View : Handled by Naveen (Front end + Backend)
- Selling Screen: Handled by Naveen (Front end + Backend)
- Purchasing Screen: Handled by Milo (Front end + Backend)

- Shop Screen: Handled by Milo (Front end + Backend)
- Admin View: Handled by Milo (Front end + Backend)
- About page: Handled by Naveen or Milo (depending on time, front end + backend)

Resources and Tools:

- Gitlab issue board to keep track of tasks and distribute work
- Excalidraw for wireframes of the pages
- MongoDB for our database
- React for the frontend
- Node.js with Express for the backend
- CRUD functionalities
- 2-3 hours per week per team member
- YouTube API for users to see videos on each phone

File Structure and Project Organization:

FrontEnd/ (Contains all of the React Files)

- **Src/**
 - **assets/ (will hold images and external data: json, etc.)**
 - **components/ (will hold the react components: home, shop, etc.)**
 - **App.jsx, main.jsx**

Backend/ (Contains the Express server with Node.js. Database and API calls)

- **API/**
 - **Holds the API calls and configurations**
 - **Access to MongoDB**
- **Configuration for Express server**

Documents/ (contains Proposal, sketches, final report, video)

The front end will use Axios to call to the back end. The backend will then process the style of request (Create, Read, Update, or delete) and will do the following functions. After, it will respond with 200 and the expected response back to the frontend. The Front end will then take the response and display it according to the component.

Data Sources and Management:

The majority of the data in the application will come from the user as they are the ones posting the phones to the shop.

- Create: The user will create a post of the phone they are selling with the price, model, picture and description
- Update: The user can edit their post (change prices, or images)
- Read: The user can click on other phones posted by other users and check the phone details and view information on it
- Delete: The user can delete the phone they posted that they were trying to sell.

The admin privileges:

- Create: The admin can create the same things as a normal user.
- Update: The admin can update their post, verify the validity of the other people's posts.
- Read: The admin can read other people's posts as well as more information that is not displayed to users
- Delete: The user can delete anyone's post if they find it inappropriate (scam)

Purchasing items:

- Create: Users can add items to the cart; purchase items
- Update: The users can update the items in their carts
- Read: The users can view what's in the cart
- Delete: The user can delete items from the cart

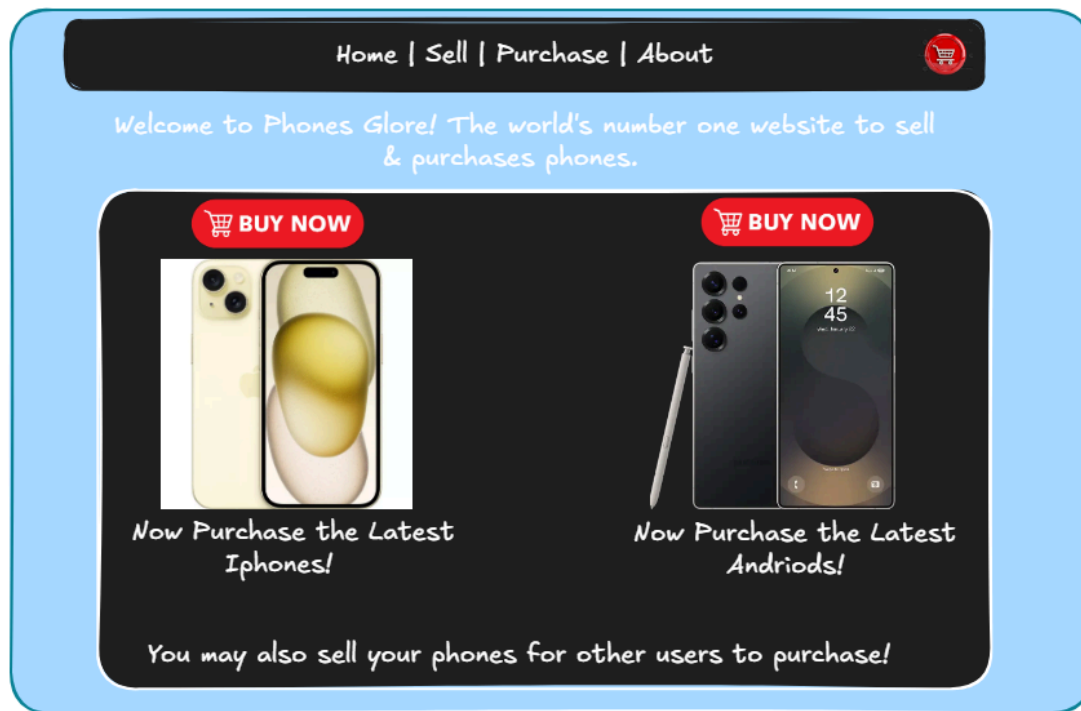
Sample Data Format: (If the people and what they have posted on the store

```
[{"username": "naveen prabakar", "password": "xxxxx", "email": "xxxxxx"}  
  {posts: [ {"model": "iphone", "description": "it is good", "price": "899"}, .....] }
```

```
"Username: Milo Mucu", "password" : "xxxxx", "email" : "xxxxxx"
  {posts: [ {"model" : "iphone", "description": "it is good", "price": "899"}, .....] }
]
```


User Experience Views:

The View of the Home page:



This is the homepage of the project. It holds an introductory message, with a preview to purchase phones (Buy Now Button). There is a good navigation bar with a cart button for them to look at their final purchases.

The selling page of the website:

Home | Sell | Purchase | About

Sell your old phones or any phones you want for people to buy!


Model: Samsung Galaxy S8


Price: \$899

Description:

I bought this phone a month ago,
but I no longer need it.

SUBMIT

 Photo of Phone



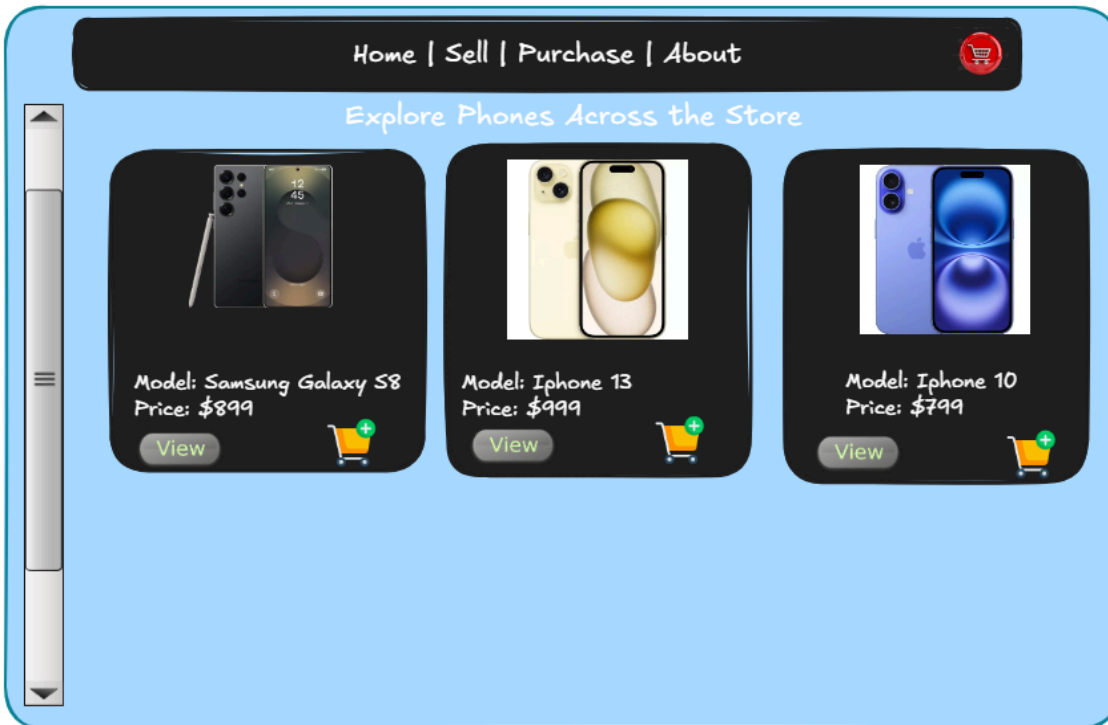
This is the selling screen. You can sell old phones or phones you have. The person needs to upload the photo of the phone, and say the model name and give a price and have the option to write a description. Clicking submit will put the phone into the shop for other people to purchase.

The cart/purchasing screen:



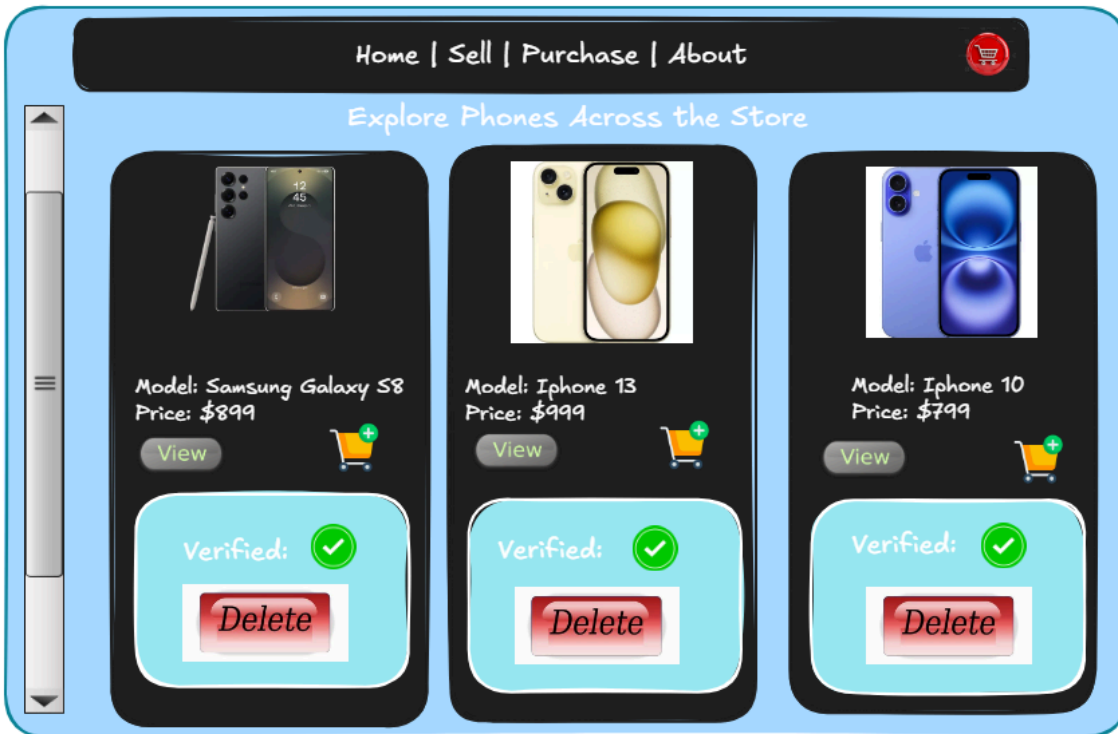
This is the cart, where there is a scroll bar to see all the products you added to the cart. The user needs to put in their user information to purchase the phone and verify the purchase.

The phone shop:



This is where the shop is. The user may view the phone to look for more details about the phone, or they can tap the add to cart button to add it to the cart.

The Admin View:



The admin view. The admin can verify the validity of the product or delete it if it looks like a scam posted by someone. They have the power to delete and verify the items the user is selling.

Final Comments:

Thank you for reviewing the proposal. This project will give us experience with all the skills learned in this class and provide practice with full-stack development. For questions or clarifications, contact us at prabakar@iastate.edu or milomucu@iastate.edu.