**APS1050 Blockchain Technologies and Cryptocurrencies**

**Final Project-Executive Summary**

**What is our DApp?**

Our DApp is a decentralized automobile auction platform. It solved the problem that people faced during trading used cars. It brings sellers and buyers closer together, saving the high agency fee. At the same time, it prevents second-hand car dealers conduct price manipulation in auctions by keeping track of the highest order’s address.

**What is new?**

We build this DApp based on the pet adoption DApp. We add n back-end features and m front-end features to migrate this app from pet adoption to vehicle auction and significantly enhance the app’s usability.

***Front-end Level***

1. New UI design. We changed all the background color, button features, and the way vehicles are presented, creating a better user experience.
2. Add a new page. We added an add a new button on the top left. By clicking it, users will be redirected to a new page, where they can input information about the cars they want to sell.
3. Shopping cart. We added a shopping cart at the right bottom of the DApp, which can keep customers’ desired cars for five minutes, allowing customers to conveniently compare vehicles they preferred.
4. Searching function. We created a searching box at the top right. Customers can easily search for the brand or vehicle they want to purchase. Save customers’ time by hiding irrelevant cars.
5. Drop down filter box. We implanted a filter function at the top right, which can help customers get access to the brands that are for sale now. Increase the chance customer find what they like and place an order.

***Back-end Level***

1. Track the number of likes for each car.
2. Count the total number of successful purchases.
3. Check whether the new offer is the highest price offer for this car, and don’t allow the highest offer owner to place new offer again.
4. Keep the information of vehicles.
5. Update the sold-out state for each vehicle.