**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 would face during trading 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 great back-end and front-end features to migrate this app from pet adoption to vehicle auction and significantly enhance the app’s usability.

***Front-end Level***

1. **Interactive UI**. We designed and accomplished a beautiful UI with great interactivity and responsiveness based on HTML, CSS, JQuery, and BootsWatch, which would provide outstanding user experiences.
2. **Functionality of publishing new cars**. We implemented a new page to publish new products. users could input information about the cars they want to sell and the added product would be displayed on our main page.
3. **Shopping cart**. We added a shopping cart at the right bottom of the DApp, which would keep customers’ desired cars, allowing customers to conveniently compare vehicles they preferred.
4. **Brand Searching**. 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.
6. Add new cars.
7. Purchase directly.
8. Place new auction.