

## **Live Demo**

To-do before the demo: (write in the code, but do not push)

- Create an account: john@email.com, and pre-set the user to have 2000 points
- Create 4 Rewards by different companies
  - One reward will only have 2 rewards left
- For the sake of demo (must mention in the presentation), flood the interested drivers field with arbitrary numbers

## **Actual Demo**

1. Start with driver account creation, talk a little about the security measures put in place (password encryption, which libraries are used), as well as highlight that email addresses must be unique
2. Colour blind scheme
3. Responsiveness
4. Show carpark query system, show the user querying 2 different locations, as well as the use of the radius slider.
5. NOT YET !!!! Show the navigation API :)
6. Point out the “Interested Drivers” attribute → a key feature of our app. Drivers can indicate interest in a carpark, and then this will inform other drivers the current demand of that carpark. I.e., if interested drivers > lots available, then maybe don't go
7. Point out that users are unable to indicate interest without COE registration, and show the COE registration system
8. Go back to the interest system - show interest now at a few carparks + navigation API !!!!
9. Explain the reward system: If user indicates interest in a carpark, and they park there, they get 1 point (equivalent to \$0.10) → this is to incentivise users, as well as show the accuracy of the predictions
10. Show uploading of photo for verification (one point!)
11. Show rewards page, but obviously our new user will not have enough points, but point out as we can see, there are only 4 different rewards available to claim
12. Next, we sign up as corporate, and we mention the unique UEN.
13. Then, show the creation of reward, create two rewards.
14. Show posted rewards, and delete one of them
15. Logout from corporate, and login into john@gmail.com
16. Go to login page, point out the new reward that we have just created - there should be 5 rewards on the page
17. John will claim a few rewards
  - a. Must claim the final 2 copies of that specific reward, then show how the reward will disappear from the list once it runs out
  - b. Show the using of rewards - QR code generator

Good engineer practice? :O

THE END :)

**Database Info:**

Pre-made Companies:

Name	UEN	Password
Luxe Beauty	202301234N	password@1
Organic Bites	202302345M	password@1
Sweat & Soul	202303456K	password@1

**Pre-made User:**

Name	Email	Password
John Tan	john@gmail.com	password@1

**LIVE DEMO USERS**

Name	Email	Password
Bob Tan	bob@gmail.com	password@1

Company	UEN	Password
Awesome Arts	20238888A	password@1

**Locations to Query**

Jalan Batu
Blk 479 Pasir Ris

## Video Flow

Welcome to Parking 4 The Win, a web application designed for drivers in Singapore. Our goal is to provide real-time carpark availability information, allowing drivers to make informed decisions before beginning their journeys.

To access the features of our application, drivers must create an account. Please note that passwords must be at least 8 characters long and include a combination of alphanumeric and special characters. Additionally, for security, all passwords will be hashed before being stored in our database.

This map displays real-time parking availability, sourced from the data.gov.sg API and the HDB Carpark Information dataset. We've added a feature that allows drivers to adjust the colour of vacancies to a blue-orange scale, making it more accessible for users with colour blindness. Each bubble on the map represents a carpark, with green indicating a higher vacancy percentage and red indicating a lower vacancy percentage. Drivers can access full details of each carpark by clicking on the corresponding bubbles.

One important attribute we have included for each carpark is the "Interested Drivers" feature. This is a key component of our application, providing drivers with insight into the number of other drivers interested in a specific carpark. With this information, drivers can make informed decisions about the demand for each carpark. If the number of interested drivers is higher than the actual lot availability, it indicates high demand and it may not be the best option to park there, and vice versa.

To express interest in a carpark, the driver must register their vehicle by providing their full name, vehicle license plate number, and valid COE expiry date.

Once registered, users can view the list of vehicles they have registered and opt to remove them if desired.

Now, let's get the current location of our driver.

Our application allows drivers to search for carparks in the vicinity of their intended destination. For instance, a user can search for carparks in "Jalan Batu" and set the search radius using our slider. Once the search is complete, a list of all carparks within the specified radius will be displayed. Users can sort this list by distance and vacancy and access complete details of each carpark by clicking on the respective entries in the sidebar.

Once a driver has indicated interest in a carpark, our application will display a route from their current location to their intended destination. Additionally, the "Interested Drivers" count will increase by 1. To enhance the accuracy of our app, drivers are encouraged to park at the

carparks they have expressed interest in via our points-and-rewards system. After parking, drivers can click on the "I have parked" button and upload a picture of their parked car.

Upon submitting their parked car picture, drivers will be rewarded with a point. By navigating to the rewards page, users can view their total points, which is currently one point for our new user. Additionally, they can view all rewards posted by corporate users.

Next, we will demonstrate how corporate users can create rewards for our drivers.

To create a reward, corporate users must log in to their corporate account using their company's Unique Entity Number and password.

Let's create a reward:

10% off Gym Membership

Reward Expiry 30 April 2023

Reward Category: Others

Reward Details: 10% off one-month Gym Membership (U.P. \$50).

Number of Rewards Available to Claim: 30

Cost of Reward: 5 SGD

For ease of conversion, every point equals to ten cents.

Corporate users can also view the rewards they have created. From here, they can also delete rewards as necessary. For example, let's delete one of the rewards from the list.

Let's log in to a different driver account to show the process of claiming rewards. As shown previously, drivers can navigate to the rewards page to view and claim available rewards. Here is the reward we have just created with the corporate account. Upon claiming a reward, a QR code will be generated for the user to redeem it. Once the reward has been redeemed, it will be removed from the user's list of rewards.

This is the end of my presentation. Thank you for your kind attention.