User Documentation

ZippyPark

Team 2

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Customers

Account

Customers are prompted to create an account using the "Sign Up!" button on the app. The customer should enter their credentials into the appropriate text fields before clicking next. Their information will be saved to the database. The next time the customer wants to log in, they may use the same email address and password at the initial "Login" page. While logged in, customers may view their profile to check their personal, vehicle, and payment information. They may also edit their information and save any new changes.

Reservations

While on the "Home Screen," customers may click "Create Reservation" to reserve a parking spot in the parking garage. On this page, customers may view the available time slots for each day. They may then enter a start time and end time for their reservation. Clicking "Create Reservation" will save the information to the database and add the reservation to the customer's list of current reservations. The customer can edit or cancel their reservations at any time by navigating to the "Current Reservations" page from the home screen, where they may view their pending reservations. Customers may also view their past reservations from the "Reservation History" page.

Using the Garage

On the day of a reservation, customers may enter the garage at their designated time. On entry, the system scans the customer's unique barcode. If the barcode is recognized and linked to a single account, then the system will automatically display the customer's pending reservations. The customer may then check-in for their reservation, where they will be provided an assigned parking spot. The customer is free to park in their parking spot for the duration of their reservation, and their spot will be considered "Occupied." To exit the parking garage, customers may leave their parking spot and move towards the descending ramp. As the customer leaves, the system will scan the customer's barcode again, automatically informing the system that the customer has left. If the customer has departed on-time, they will gain points to their account. Otherwise, they will lose points and be charged for their overstay.

Walk-in

Customers may use the parking garage without making a prior reservation. However, the customer must still have a registered account. When attempting to use the parking garage as a walk-in, customers will follow the same procedure for verification as described above in "Using the Garage." Because there will be no available reservations, the system will assign a parking spot on the ground floor to the customer. The customer may use this parking spot and they will automatically be billed for the duration of their stay.

Points

The customers will gain points for making reservations, but they will lose points for overstaying or missing reservations. A customer may view their point balance under their "Points" page, where they may then choose to exchange their points for rewards. The available rewards at the time will be set by the garage manager and are subject to change. The customer may redeem rewards that include but are not limited to priority parking spots, free reservations, and longer reservation durations. However, the customer may not exchange rewards that would result in a negative balance. If a customer has incurred a negative balance due to actions that constitute bad behaviour, they may return to a positive balance by maintaining good behavior, such as making recurring reservations or arriving on time.

Managers

Managing Accounts

The garage manager may log in using authorized credentials to access the managerial options. Here, they may view a list of all registered customers and all pending reservations. At the list of customers, the manager may sort the listing by name, by barcode, by license number, or by points. If needed, garage managers may delete accounts from the list of customers, such as those that are inactive. The manager may also edit or cancel existing reservations by clicking the respective button on a specific reservation.

Points Management

While logged in with an authorized account, a manager may edit the reward/penalty system in the "Points" page. They may edit the list of rewards available for exchange by clicking the appropriate "Add" or "Remove" button. The manager can also edit the existing rewards using the "Edit" button to change the type or the point cost of the reward. By clicking on the "Penalties" tab, managers can adjust the threshold for penalties, which by default is set to -10. After a manager completes the changes, they may finalize them using the "Save Changes" button, which will update the system.

Pricing

Garage managers can set the pricing scheme for the garage while logged in with a manager's account. By default the cost for reservations follows a dynamic pricing model, but the manager may choose to adjust the app's default pricing settings. The manager may adjust the price according to more recent trends, such as surges on certain days of the week, or adjust according to holiday schedules. The garage manager may change the pricing using the index multiplier in the database, which determines the final pricing.

Viewing Statistics

Using an authorized account, managers may access the statistics for the parking garage. By clicking "View Stats," the manager will be presented with the garage's records in graphical form. The manager may choose specific statistics to view, such as profits over a chosen period of time, average number of reservations throughout the day, or number of new customers per day. The manager may also see a list of past reservations using the "Reservation History" button, which will present the account that made the reservation, the date and time of the reservation, and the length of the stay.