Astro Ride

An eco-free ride

Name - Sahil
Roll no - 20150

Practicum - IV
(CSC406)

ASTRO
Ride

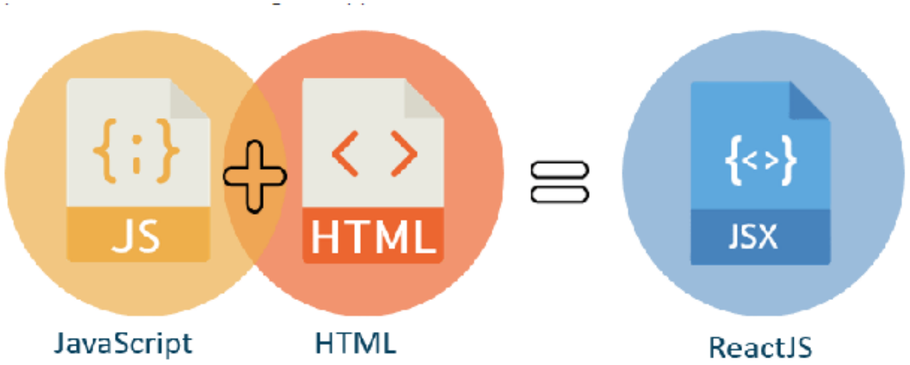
Problem Statement

- A cross platform management system to rent an electric bike, assuming thereare e-bike stations installed in the city.
- User can scan the QR code from the bike to rent a ride.
- On reaching the destination user has to again scan the QR code to end the ride.

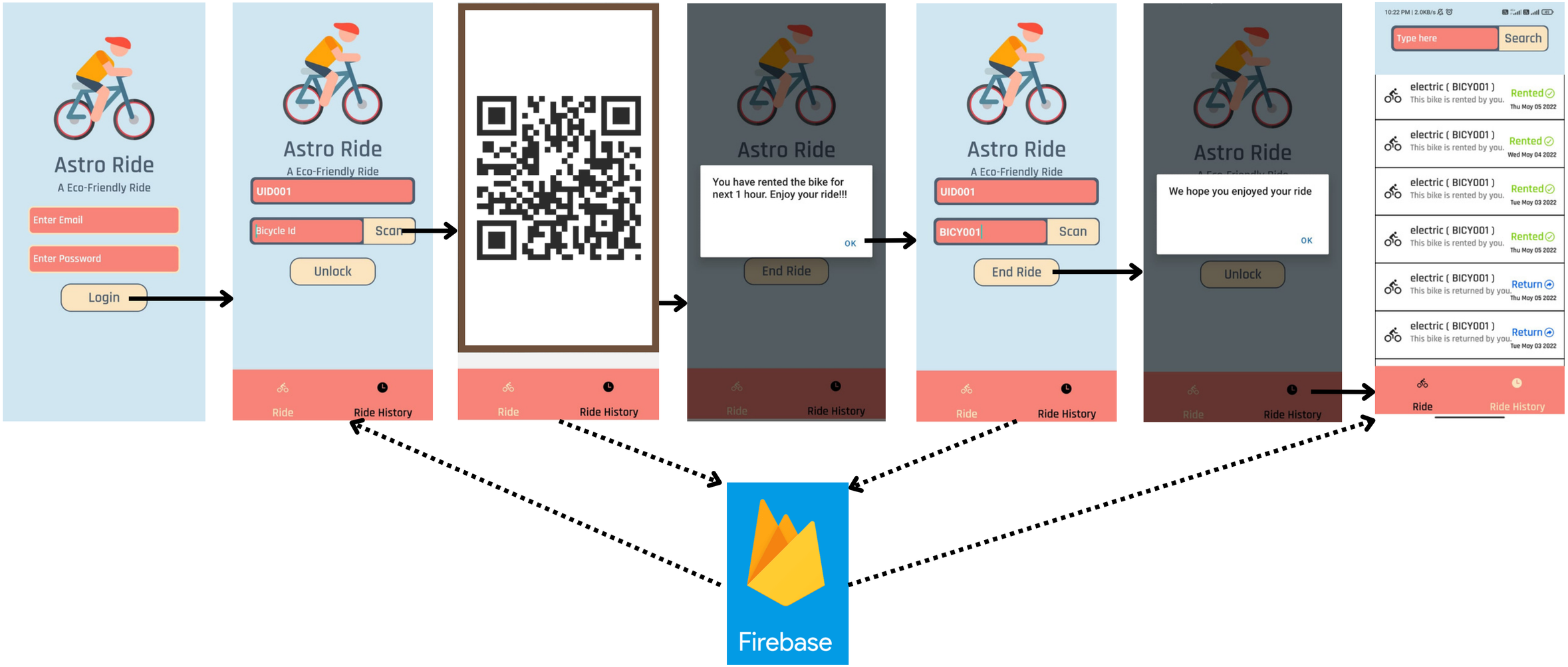
MOTIVATION

- The main motivation is to have an e-bike management system in our campus.
- It is designed for a quick ride to go to a nearby location.
- For the students who need to visit a nearby shop.
- It would be beneficial for the general population as well.

Platforms and Languages used



Framework


Astro Ride
A Eco-Friendly Ride
Enter Email
Enter Password
Login
Astro Ride
A Eco-Friendly Ride
UID001
Bicycle Id
Scan
Unlock
Ride
Ride History
You have rented the bike for next 1 hour. Enjoy your ride!!!
OK
End Ride
BICY001
We hope you enjoyed your ride
Type here
Search
electric (BICY001)
This bike is rented by you.
Rented
Thu May 05 2022
Wed May 04 2022
Tue May 03 2022
This bike is returned by you.
Return
Firebase
(Database)

Modules and Submodules

Login Screen

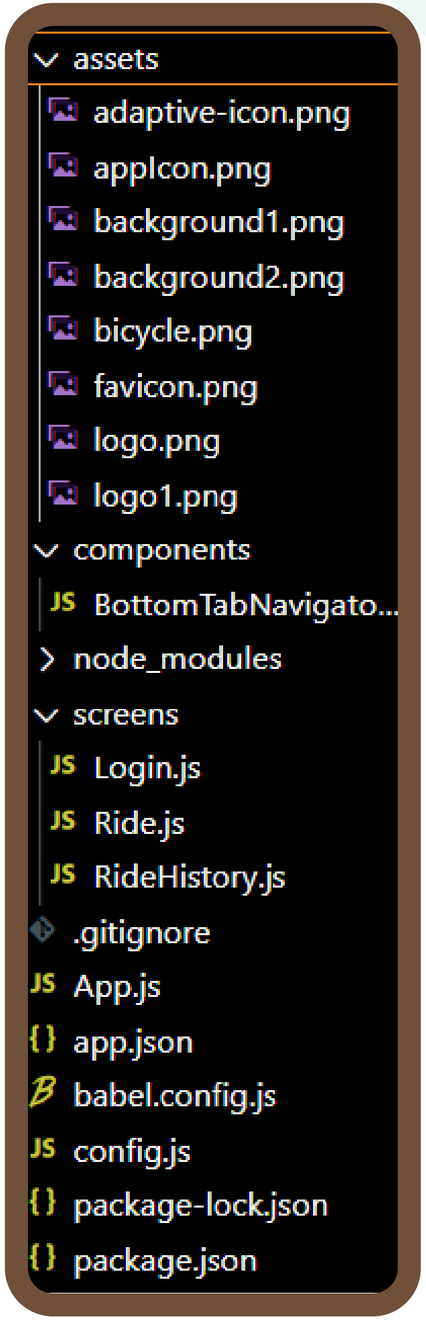
- Input Email and Password
- Authenticating using firebase authentication

Ride Screen

- Adding user data from the database by comparing email.
- Get camera permissions and scanning the barcode.
- After pressing unlock -> handleTransaction

HandleTransaction

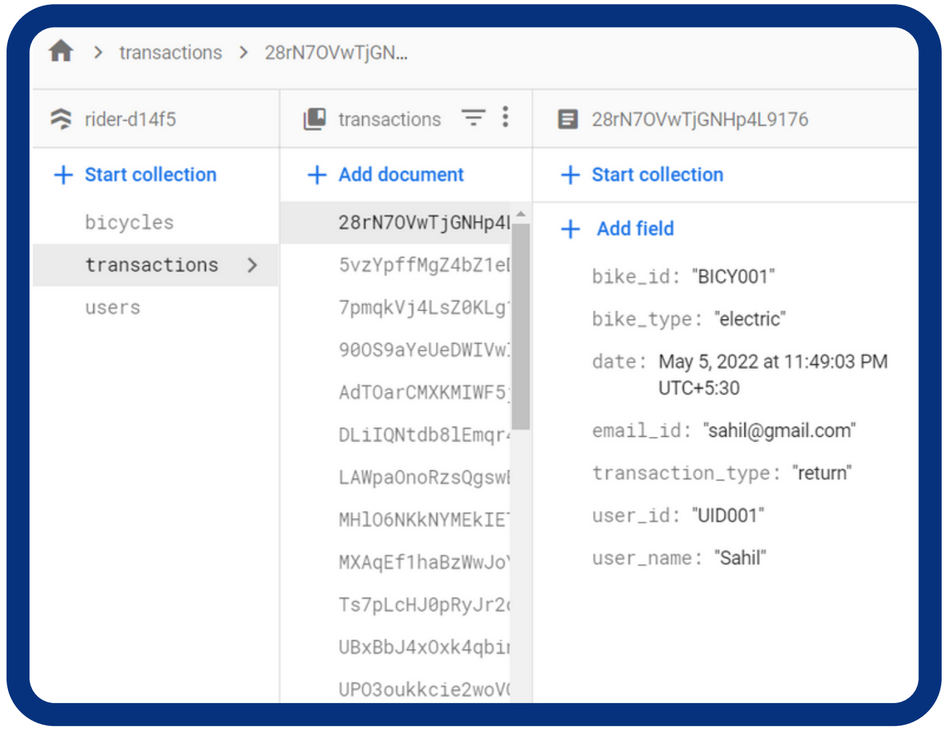
- Get Bike details
- transaction Type -> checkBikeAvailability
- if bike is available then returns rented else return
- if (transaction Type = false or underMaintainance) then, show error message.
- else (if transaction Type = "rented"), assign the bike after checking user eligibility to start ride.
- else (if transaction Type = "return"), end the ride after checking user eligibility to end ride.

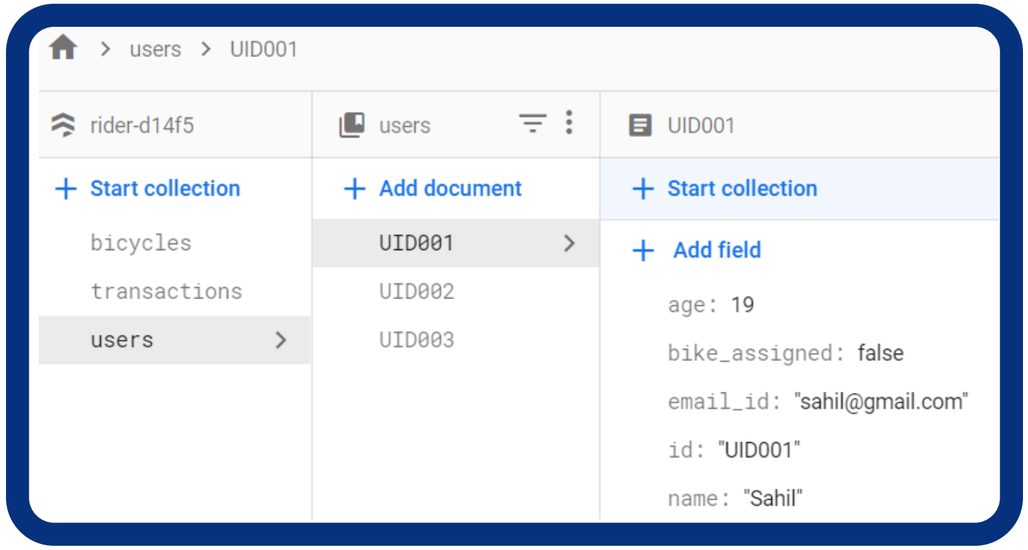


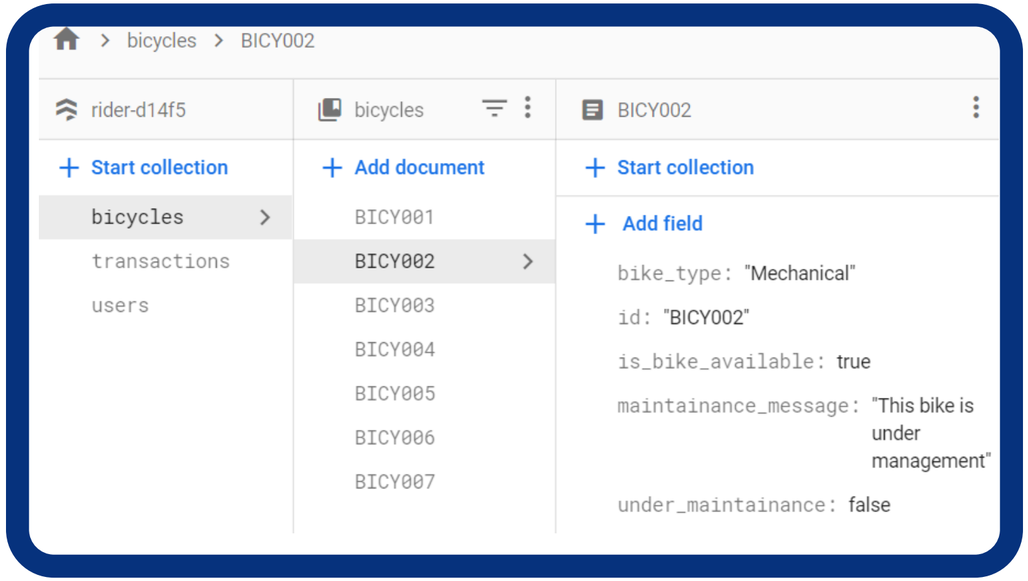
Modules and Submodules

Firebase Database Configuration

- User
- Bicycle
- Transaction



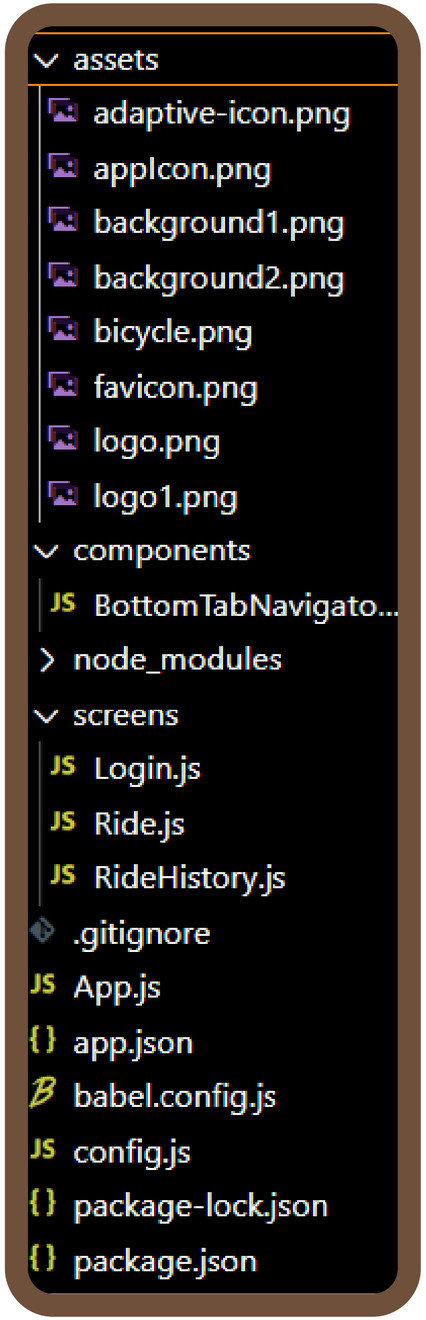




Modules and Submodules

Ride History and Search Screen

- Get10 transactions based on user email id.
- Render these transactions as default on the screen using flatlist component.
- Get Input as bike id from the user and get transactions based on that bike id and email id.
- When the user reaches the end of the content, another 10 transactions will be load.



Thank you!