ZIPBIKE

By Abhishek Arun Tatke and Rahul Kumar

Details...

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- Project Name: ZIPBIKE
- Project URL: https://github.com/abhishektatke/ZipBike
- License Information: Copyright © MIT License

Who is this Software meant for?

- ZipBike is intended for the people who want to rent a bike.
- This is an app designed using the Biketown API (Biketown is a bike sharing system in Oregon, which has around 100 hubs (bike stations) with over 1000 bikes across Portland, which are primarily used in the downtown area), to make all the information about Biketown and its bikes available to the users at the click of a button.

How does it meet their needs?

- This app provides its users with the 4 nearest bike stations based on their current location.
- Users can then find the desirable route with the help of Google Maps.
- Information about the pricing plans offered by BikeTown is also provided. The user can then ride the bike using the link to the website provided by our app.
- The user can also get the number of available bikes at a bike station by searching the station name in our list of bike stations.

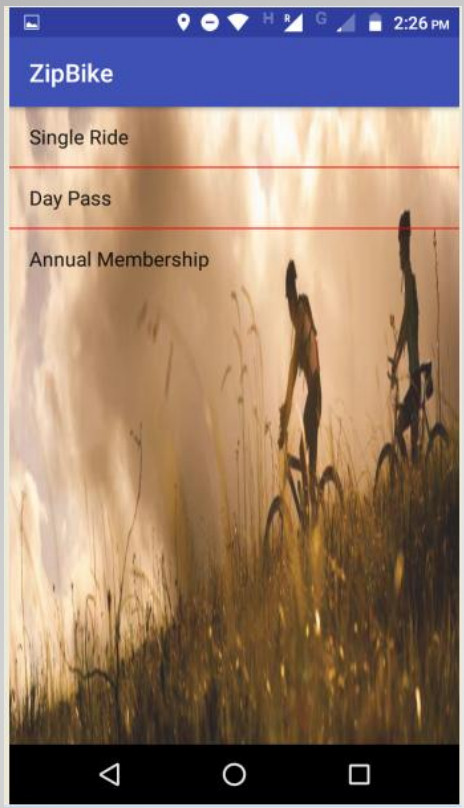
Demo...

- This is the landing page of the app.
- To initiate booking click on the RIDE button.

Demo(Continued)…

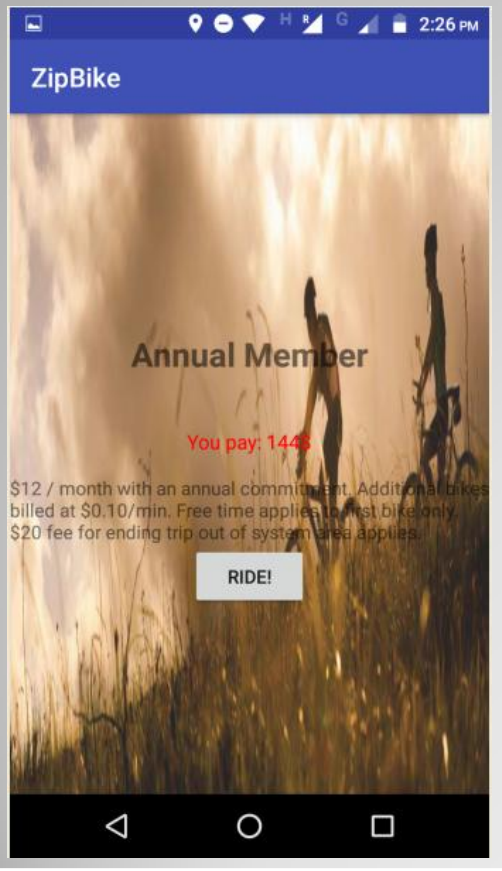
- After clicking on the RIDE button, we will reach to this page, where we have 3 available options.
- Pricing Plans (to see the available price plans).
- Find me a bike station (to get 4 nearest bike hubs).
- Free bikes by station (to see the available bikes).

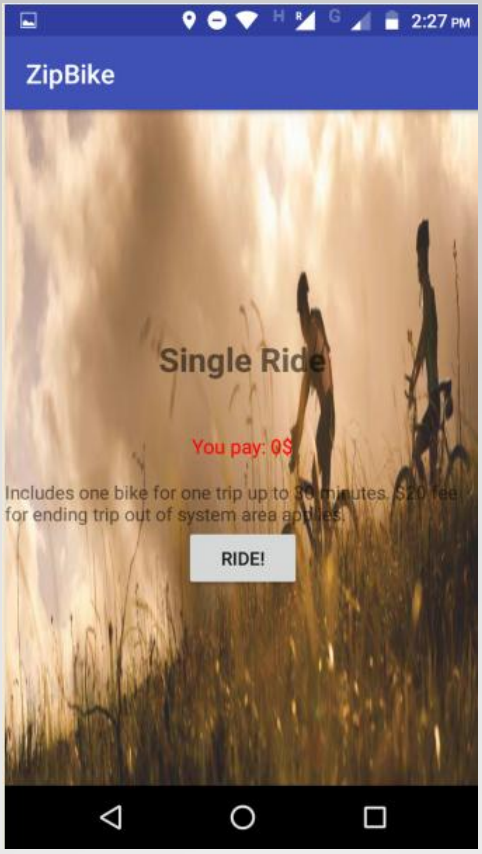
Demo(Continued)…

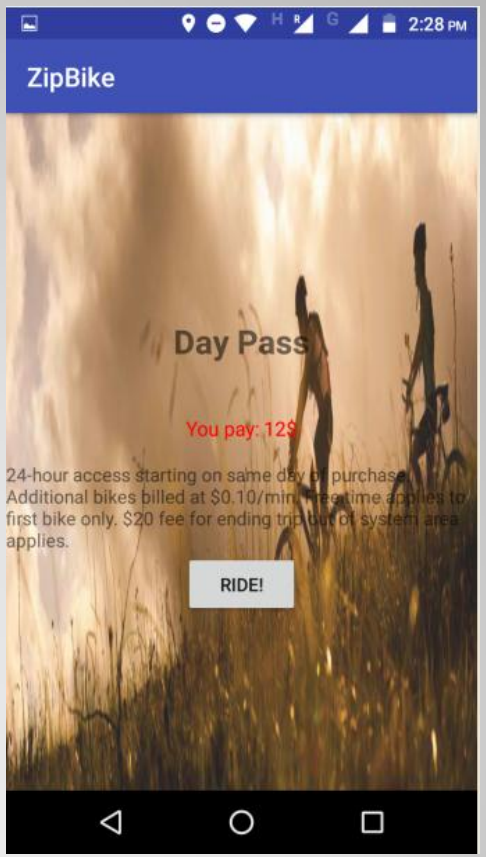


- On Clicking the Pricing Information Button you can see a list view with all the available pricing plans and clicking on any of the plan will lead you to another activity showing the price and a short description about the plan (shown on the next page). On clicking the "Ride" button, the user is redirected to a webpage to sign up and ride.

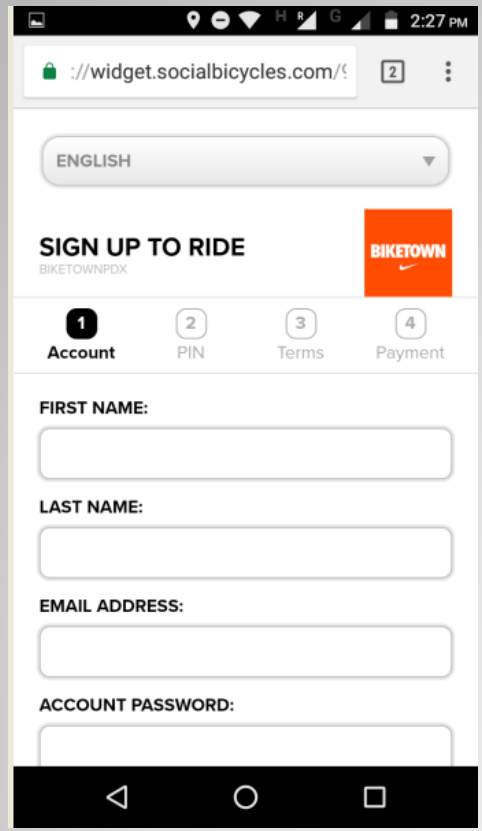
Demo(Continued)…







Demo(Continued)…

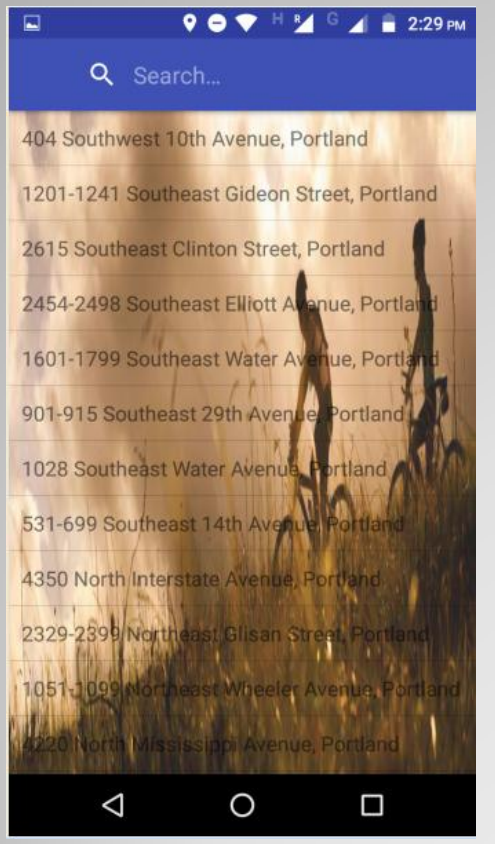


- On clicking on the RIDE button from any of the previous shown pages, you will be redirected to this BikeTown page to Sign Up and book the bike.

Demo(Continued)…

- On clicking on the "Find me a Bike Station" button, the user can see the 4 nearest bike stations based on the current location. It also shows the distance to that location and the number of bikes available at that location.
- On clicking on "Show On Map" button, it will take us to Google map and we can see the directions.

Demo(Continued)…



- On clicking on the "Free Bikes by Station" button, the user sees a list view with all the station addresses and then on clicking on any of the addresses, the user can see the number of available bikes at each location.

Results Achieved...

- Json Parsing is implemented successfully from the Biketown API. Data is being read correctly in the app.
- Current location is being updated correctly.
- The Search Algorithm is working as expected. We are getting the nearest locations accurately.
- All the milestones and stretch goals have been achieved.

Other Options and Comparisons…

- BikeFinder is an application which can help you see the available bikes all over US.
- Where as ZipBike help us to find as well as book bikes near you.

Various Decisions and Failures…

- JSON Parsing - There are bugs in the API like incorrect pricing information and incomplete addresses. We used geocoder to get the correct address to resolve this.
- Location detection - The GPS does not function properly in some areas leading to inaccurate search results.
- UI - Many iterations were done to get a best possible user experience.
- Passing data between activities - We tried to pass a custom object to other activities but for some reason it did not work and so ended up passing arrays.

Things which we learnt...

- We have learned about Android Studio, BikeTown API, how to integrate it with Android Studio and how to work in an Open Source environment.

Possible Improvements / Future Enhancements...

- We have built an app to provide users the requested data from BikeTown API in an organized manner. Further improvements can be made in the UI and there is also scope to improve the search functionality to include multi keyword search.

Code and Contact Information..

- Github Link- https://github.com/abhishektatke/ZipBike
- Contact Information-

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Thank you ☺
Any Questions??