*CS 353 Software Engineering*

Specifications Document



A carpooling app for Habib University Students

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*Invite Link for trello board:* <https://trello.com/invite/b/qVjGp6rH/7c36474812b54827f39838d0326c7dde/carpool-system>

**EXECUTIVE SUMMARY:**

The project dealt with a web-app/Phone app through which students of any institution (starting from Habib University) could effectively connect with each other for carpooling.

The idea for this app stemmed from the fact that most students studying at any institute face conveyance problems one-way or the other. We categorized them as:

1. Students who cannot afford to pay for their conveyances.
2. Students who have vehicles that they can use for travel however; they still have a hard time affording the fuel expenses.

and tried to make a solution that can be feasible for both type of users of this app.

**REQUIREMENTS:**

* We have a login
* We have a sign-up page
* The home page has an option to post and to search rides
* For posting ride, driver enter all required information
* For searching rides, rider can see all available posts of drivers
* If there are no current requests then it should be empty
* It also has a log out button.
* We include a directory of all registered users
* All registered users also have access to the directory.
* The home page have the entire current request listed in a queue.
* If there are no current requests then it should be empty
* There is a button that is able to start a new request
* The details of the ride can also be edited
* If a user has requested to carpool then they have the option to delete the request
* The request gets deleted

**The software/tools that were used are:**

* Angular/Ionic 2/3 for frontend
* Python(Django)/NodeJS/ASP.NET/Firbase for backend
* Visual Studio
* NoSQL
* DB Designer
* Visual Code
* Adobe Photoshop
* Trello
* Ionic DevAPP for app testing

**NON-FUNCTIONAL REQUIREMENTS**

* The app should be available 24/7
* There should be a good internet connection established for the app to work and show content.
* Device should have location access enabled.
* The interface should be easy to use for all kinds of people.
* Security requirements; abstraction of user information, password protection, access control based on user role (driver/rider).
* The app should be capable of having 1000 (strength of the HU student body) users support.
* Should be able to run on all popular phone and desktop browsers.

**USER STORIES**

* As a user, I would like secure access to my account to protect my information
* As a user, I want to see who else is registered on the app in a list so that I can know who I can share rides with
* As a user, I want to travel home with a person I know so that I don't have any fear
* As a user, I want to see the details of each user I share a ride with so that I know who I'm riding with
* As a user, I should be able to see if my ride is confirmed or not
* As a user, I want to be able to see all the carpool requests so that I can choose the suitable one for me
* As a user, if I have sent a request and someone has accepted that, I should be able to give them confirmation after looking at their answers on the request notifications so that they will know I will ride with them
* As a user, I want the ability to cancel requests in case I change my mind
* As a user, I want to be able to make a request where I enter the estimate amount for the ride, the number of people I can accommodate, the time of meeting the people and the destination
* As a user, I want to be able to accept any request where I will provide my drop-off as well as the number of people with me