

SamuelParkin T3A3 - Design Document

App explanation, pages and lists of fields:

This is a ridesharing app that illustrates the use and control of various datatables and application layers.

The app allows users to create an account within the app, and from there they are able to choose between creating a rider profile and/or a driver profile.

Each profile allows the user different permissions throughout the app such as a rider creating a trip or a driver to register their vehicle.

When first opening the web app the user will need to either sign in or create an account.

When signing in the user will have to provide:

- Username.
- Password.

If the user needs to create an account they will need to provide:

- The user's name.
- an email address that is unique to the user.
- A password greater than 6 characters long.

Once logged in, the user is brought to their personal account.

The user at this point can see all the other information shared from other users but are unable to upload any information until they register as either a rider and/or driver.

This account page also displays the total amounts that have been charged or received from their rider/driver accounts and calculates the total amount owing.

The trip page allows a rider to create a journey they wish to take.

To create a trip the rider will need to input:

- The pickup location.
- The destination.

This journey will then be displayed in the registered trips table displaying the Ride number, the Riders details, Journey details and Cost. The table also allows a driver to review the trip and accept the rider's request. The driver's information will then be stored within the table. If the rider wishes to update or delete the trip, they are able to do so by selecting the ride number. Note: only the rider that created the trip has the ability to update or delete it.

On the Vehicles page a driver is able to register their vehicle. A driver is only allowed to register one vehicle and a vehicle registration has to be unique to one driver.

To register a vehicle the user will need to input:

- make
- Model
- Year
- Registration (must to unique to that driver)

If the driver wishes to update or delete their vehicle, they are able to do so by selecting the vehicle id number. Note: only the driver that registered the vehicle has the ability to update or delete it.

The Rider page displays all the riders that have registered within the app.

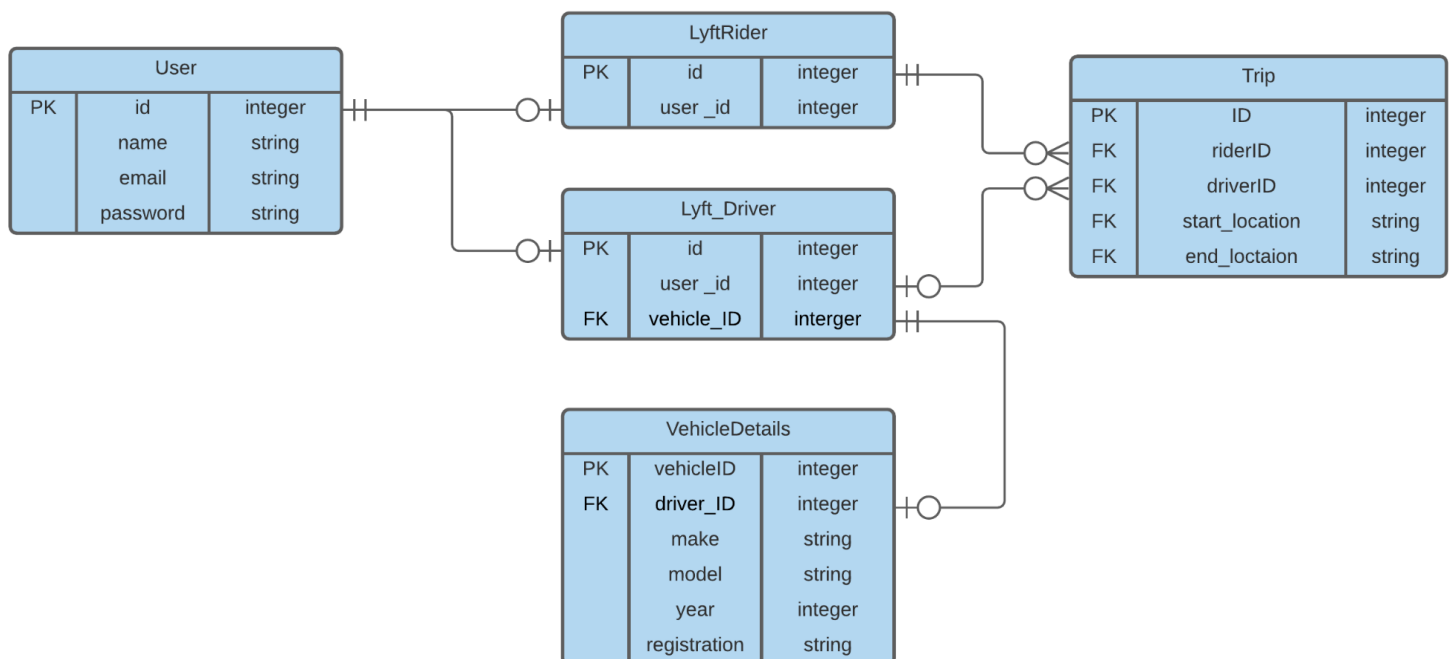
If the rider wishes to delete their profile, they are able to do so by selecting their rider id number. Note: only the rider has the ability to delete their profile.

The Driver page displays all the drivers that have registered within the app.

If the driver wishes to delete their profile, they are able to do so by selecting their driver id number. Note: only the rider has the ability to delete their profile.

T3A3 Database ERD

Samuel Parkin | December 18, 2021



Security:

This app utilises Python's object-oriented approach to mapping data, known as object-relational mapping (ORM). With the use of SQLAlchemy it is able to communicate these objects with the SQL database. Using an ORM means that this application will not communicate using explicit SQL, which in turn prevents the chances of SQL Injections.

All users' passwords will be protected by flask login and werkzeug security. All users' passwords are saved to the database in a Hash sha256 format. These Hashed passwords can only be generated and decrypted with the use of a secret key.

All passwords will be protected in the event that there was a database breach which contains the users' personal information.

Professional, Ethical and Legal obligations:

Due to the contract asking for an application to be designed in a small time frame and a budget to only have one junior developer to work on the project, the client needs to understand what a realistic finished product may be. This involves taking the client through their options prior to commence work and creating a timeline for the project to follow. This will also provide the junior developer a structure to follow that prevents an additional workload.

This app needs to ensure the personal safety of all its users. Because this will be sharing personal information between its users it will need to ensure that only the necessary information is shared. This includes not sharing unnecessary personal information such as home address or phone numbers.

Depending on the state or country this app is to be used, there may be legal obligations that must be followed. For example, within Australia each state and territory have their own regulations on how rideshare companies must operate within them.