03/02/2022

I began to create the database for the application using cloud firestore. Using the entity model diagram that I’ve designed previously, I created two collections. The first collection named ‘available seats’ will have a document titled ‘vehicle’. This will contain every individual vehicle associated with the transport operator. Each vehicle document will have a field for each seat with a Boolean value of true or false, which will represent whether a seat is available or not

The second collection is named ‘users’. It will have a document containing all the users that have signed up to the application. Each user will have a collection for tickets and a collection for travel cards, as well as a field for address\_line\_1, address\_line\_2, city, county, phone number and post code.

The ticket collection will contain a document that will store multiple tickets, with each ticket having a field for activated, amount, date, operator, price, route, transaction ID and type. Every ticket will have one transaction associated with it as the tickets are single use only.

The travel card collection will also contain a document which will store multiple travel cards. Each travel card will have a field for balance, bus cap, multimode cap, train cap, tram cap and type. A collection for the transactions associated with the travel card is included. Similar to the ticket collection, each transaction will contain the amount, date, operator, and route.

I’ve setup the pre-requisites for firebase in the flutter environment by following the instructions from <https://firebase.flutter.dev/docs/overview> and watching some YouTube tutorials <https://youtu.be/sfA3NWDBPZ4>