Databases ERD and SQL Assignment Diagram

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Diagram, schematic

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I was assigned the case study of a taxi company that specialises in corporate work. For this database I have 5 tables that have at least one relation. The first table I made was the company as each customer that uses a taxi is an employee of a registered company. My relation for this was a One to Many as one company can have many employees. These tables are related though the fields Company\_Name and Employer\_Name.

Next, I created Taxi and Driver tables as these are not dependent on any other table. These tables hold data on the company’s drivers and vehicles. They are not related as any driver can be assigned to drive any of the taxis.

The last table I made was Journeys as it has many relations with Customers, Taxi and Drivers. These are all One to Many relations. One customer can have many Journeys but Journeys cannot have multiple customers, only the one customer who booked it. One taxi can make many journeys, but a journey is made up of only one taxi. And One driver can make many Journeys, but journeys only need one driver. Both Driver and Taxi are related to Journey through their primary keys.

Queries and Statements

My first few select statements return simple information such as a list of all the registered company’s and the customers who work for a specific company

My next statements are a UNION statement so we can gather all the sensitive information in the database . Phone Numbers in this case

Then I use INTERSECT and EXCEPT statements to find all the taxis that are assigned to a journey and all those drivers except for the drivers who are assigned to a journey on the 2nd of Feb.

Next I use JOIN statements to select the customers details as well as their employers details and then to select drivers and customers to see who has journeys

Then I summed up all the fares the company collected on a specific date and then I made a breakdown of all fares each driver has accumulated

My Transaction is to update customer details as one customer is sick and cannot complete his journey but the journey is booked . We update the same booking with a new Customer name and Phone number for a temporary replacement . This transaction is saved so it can be rolled back once the sick employee is well enough to return to work.