Software Design

CarManagerDB

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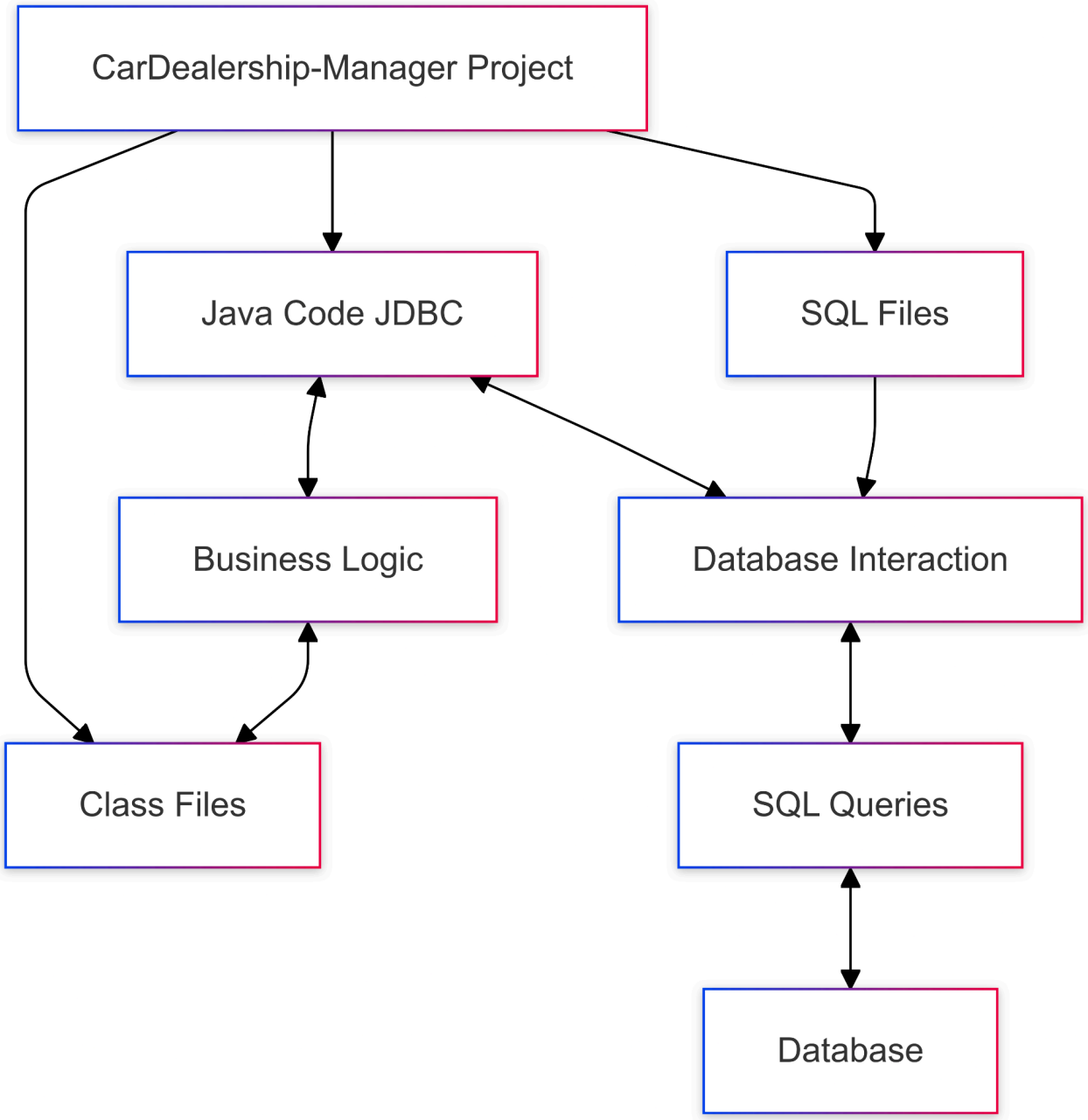
Software Architecture Diagram

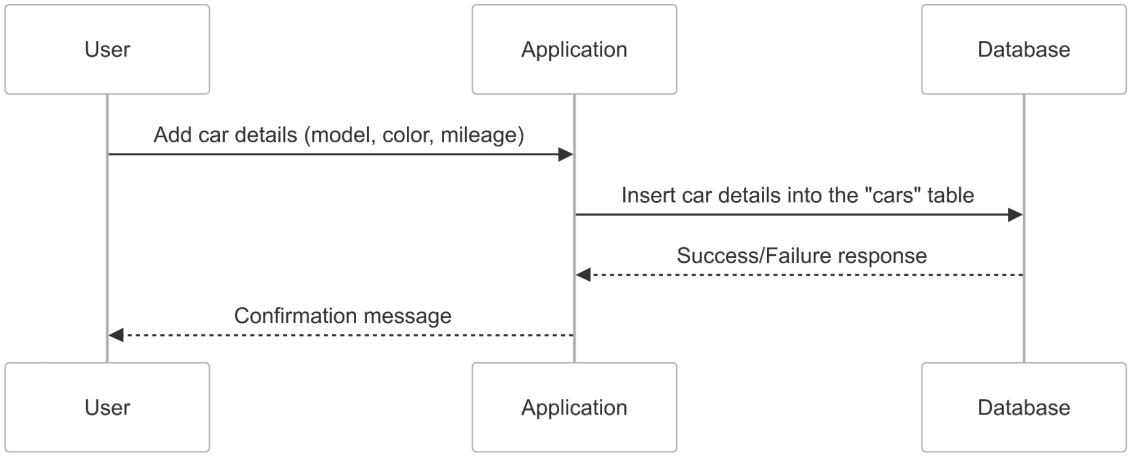


Here, we are using a hybrid architecture that contains a database and follows An object-oriented pattern. JDBC is the interface between OOP software and the database. This diagram showcases the workflow of the application in interacting with the database and also shows how JDBC helps integrate the database into the OOP software.

Sequence Diagram

We use the OOPs-based application as the interface between the user and the database. We implement all functions similarly. This diagram shows how the user, the application and the database interact with each other in case of various events/situations.

1.



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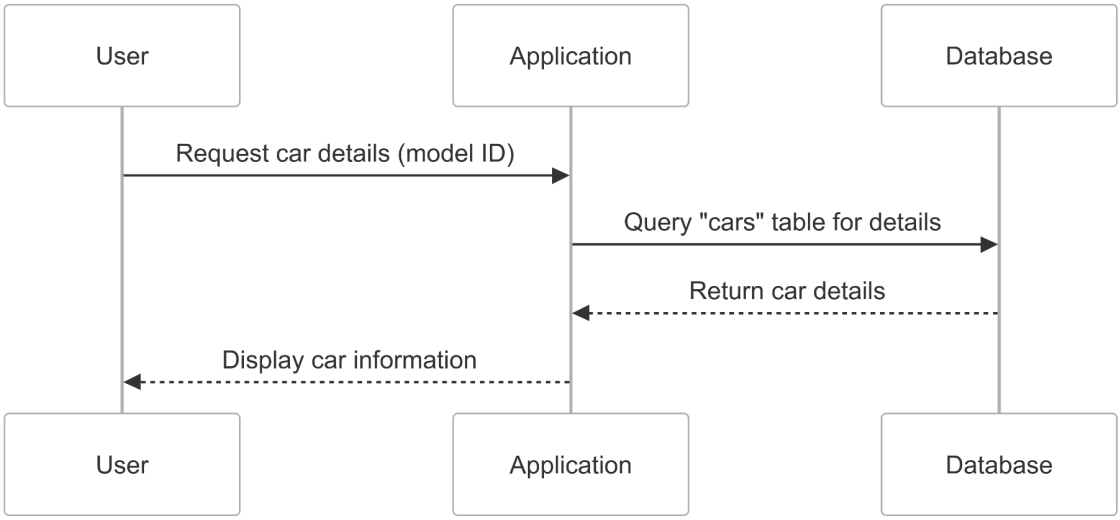

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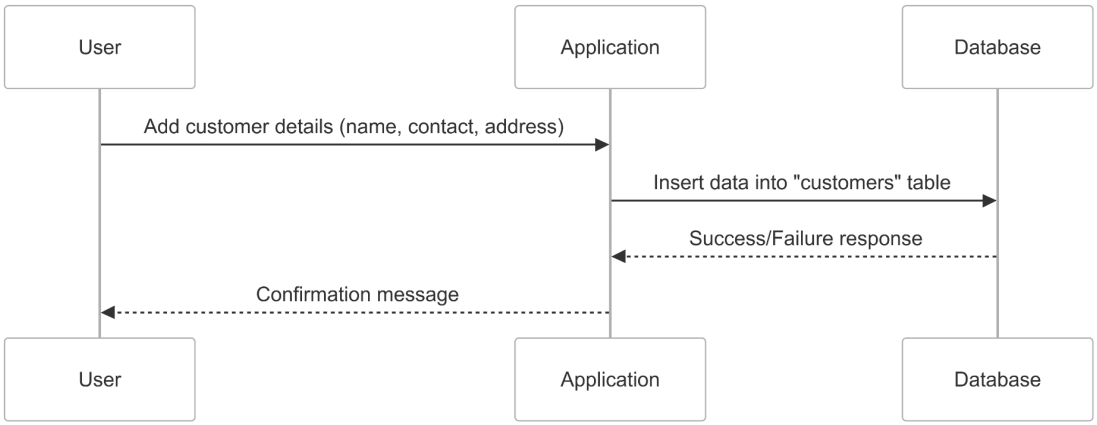
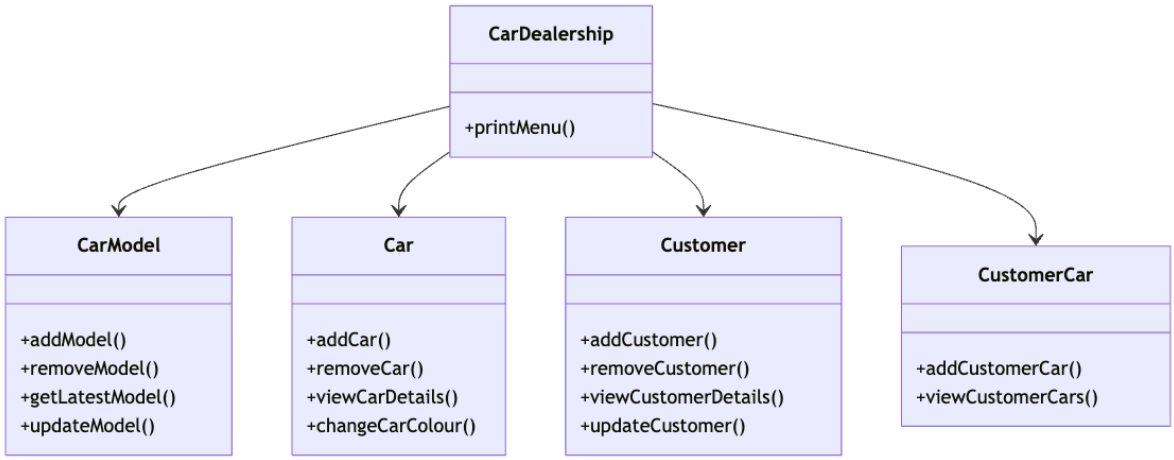
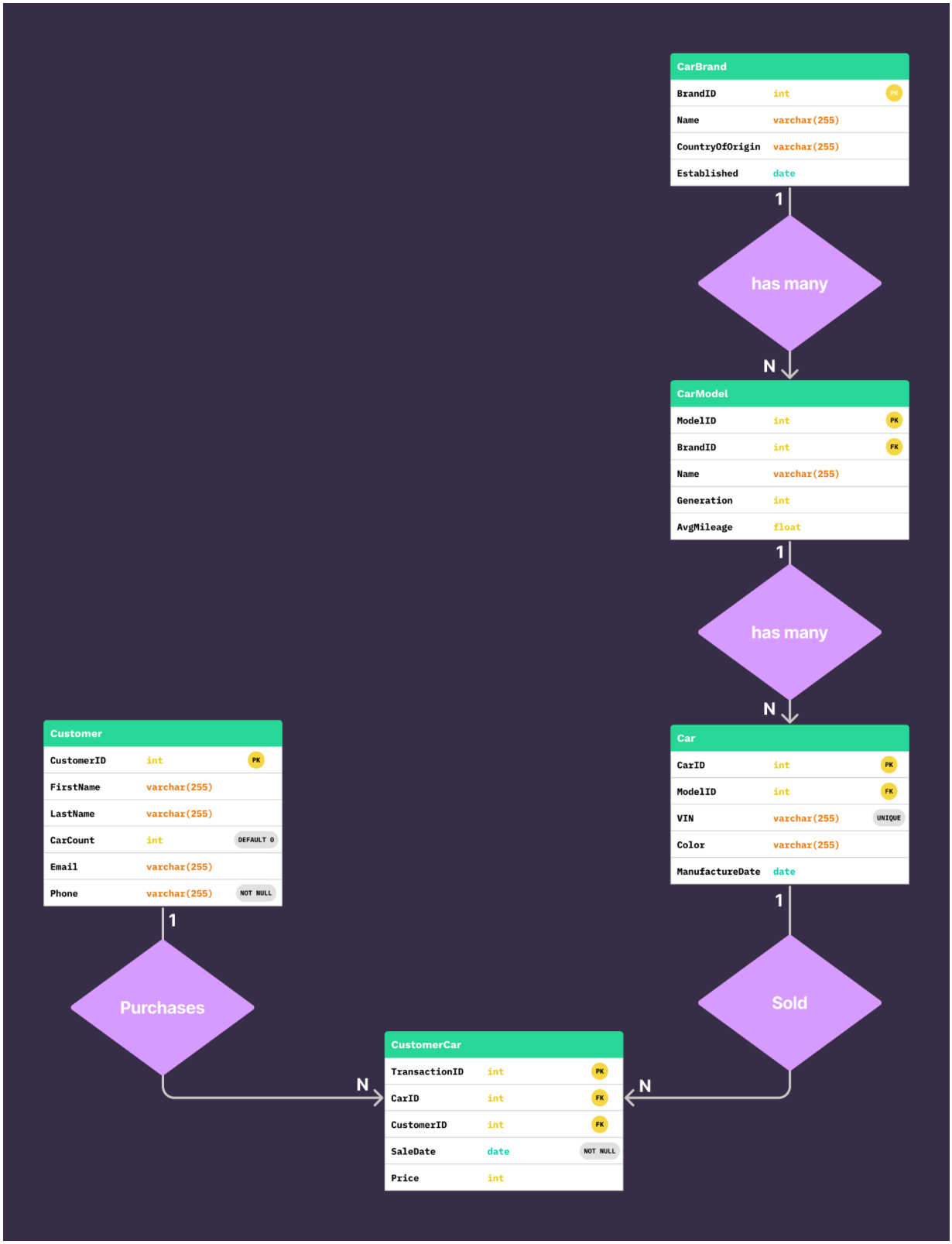


Class Diagram for Java Software



These classes will not be instantiated and be used statically. Their methods will be called in this manner. This helps in visualising which methods belong to which classes so we can know what's happening after an instruction is given by the user, so is used here. This also helps in visualising all the different entities present in the CarDealership software.

E-R Diagram for MySQL Database



This diagram helps in visualising the database schema and the foreign key dependencies of the tables, helping us understand the flow of data and the relationships between various entities of the software.