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Knight Foundation
School of Computing
and Information Sciences



python



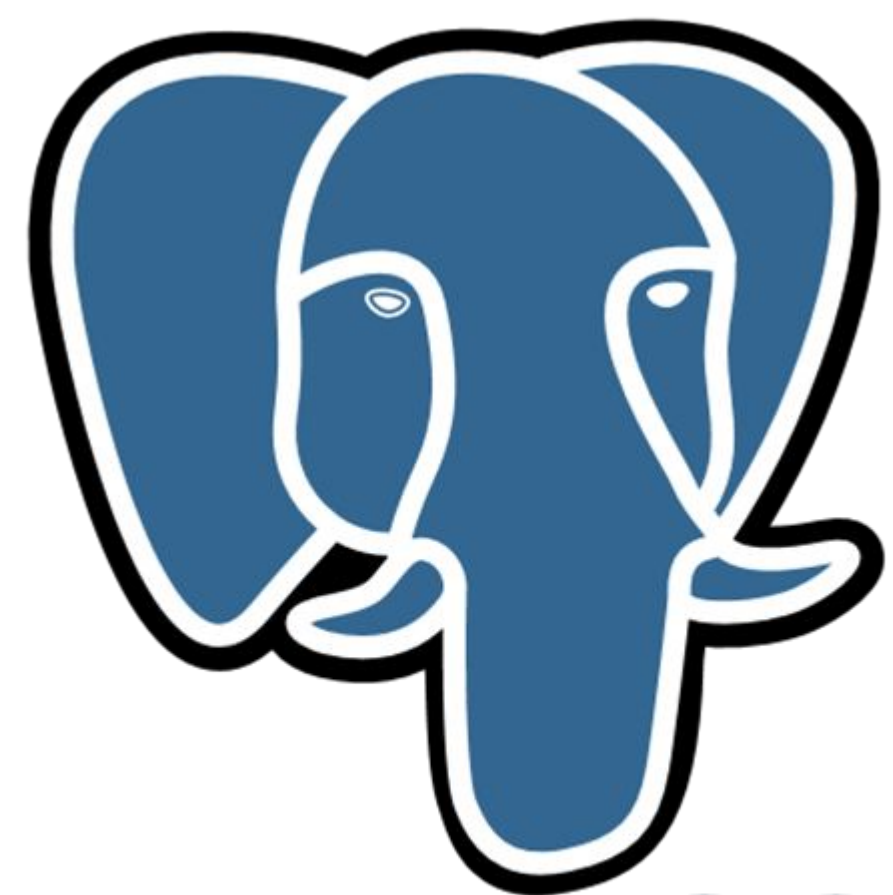
Flutter



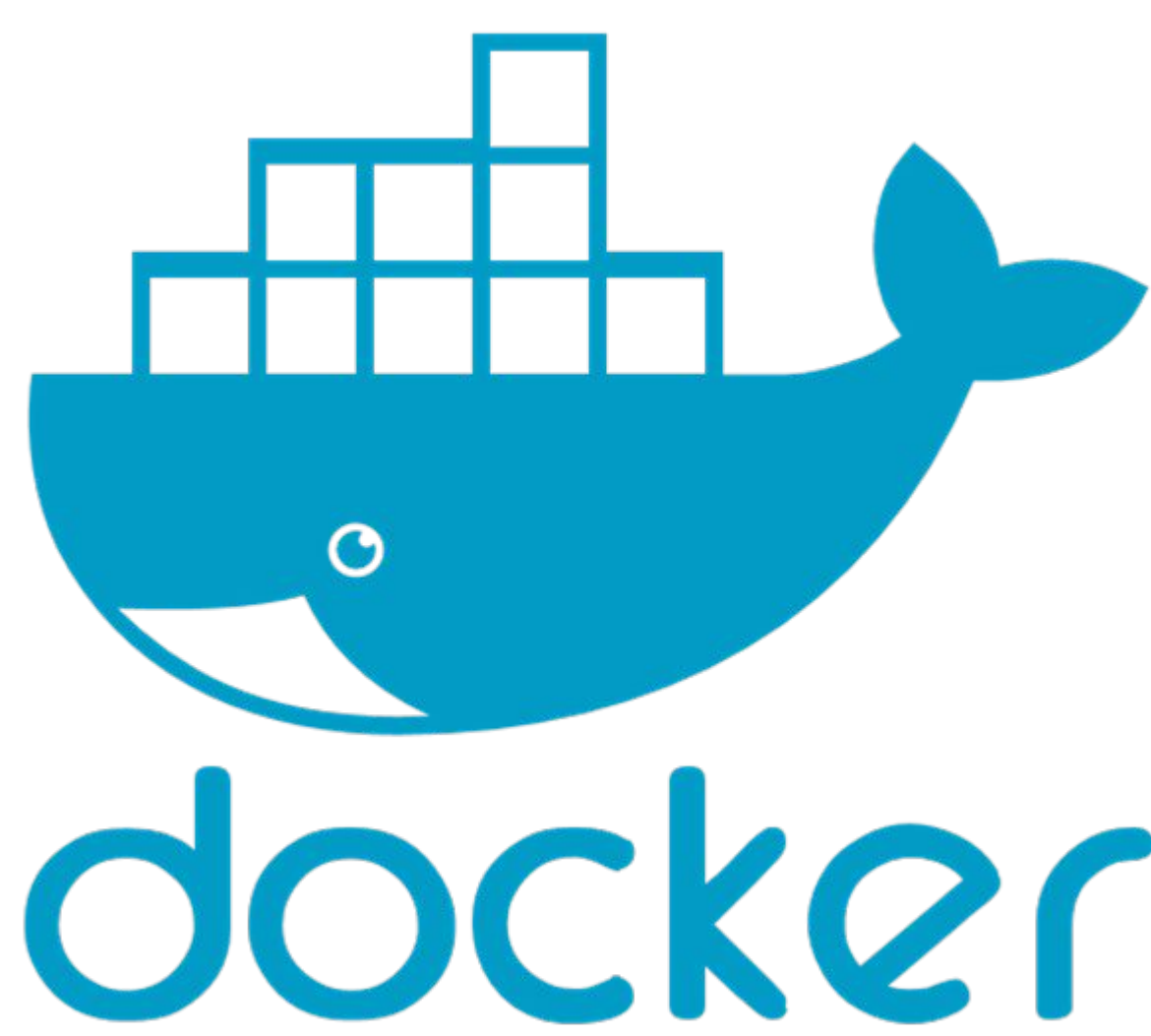
Dart



Figma



PostgreSQL



docker

FIU

Engineering
& Computing

Knight Foundation School of Computing and Information Science

Fall 2023 Senior Design Project

Project Manager

Students: Jose Hernandez, Jose Pujol, Naor Vidal

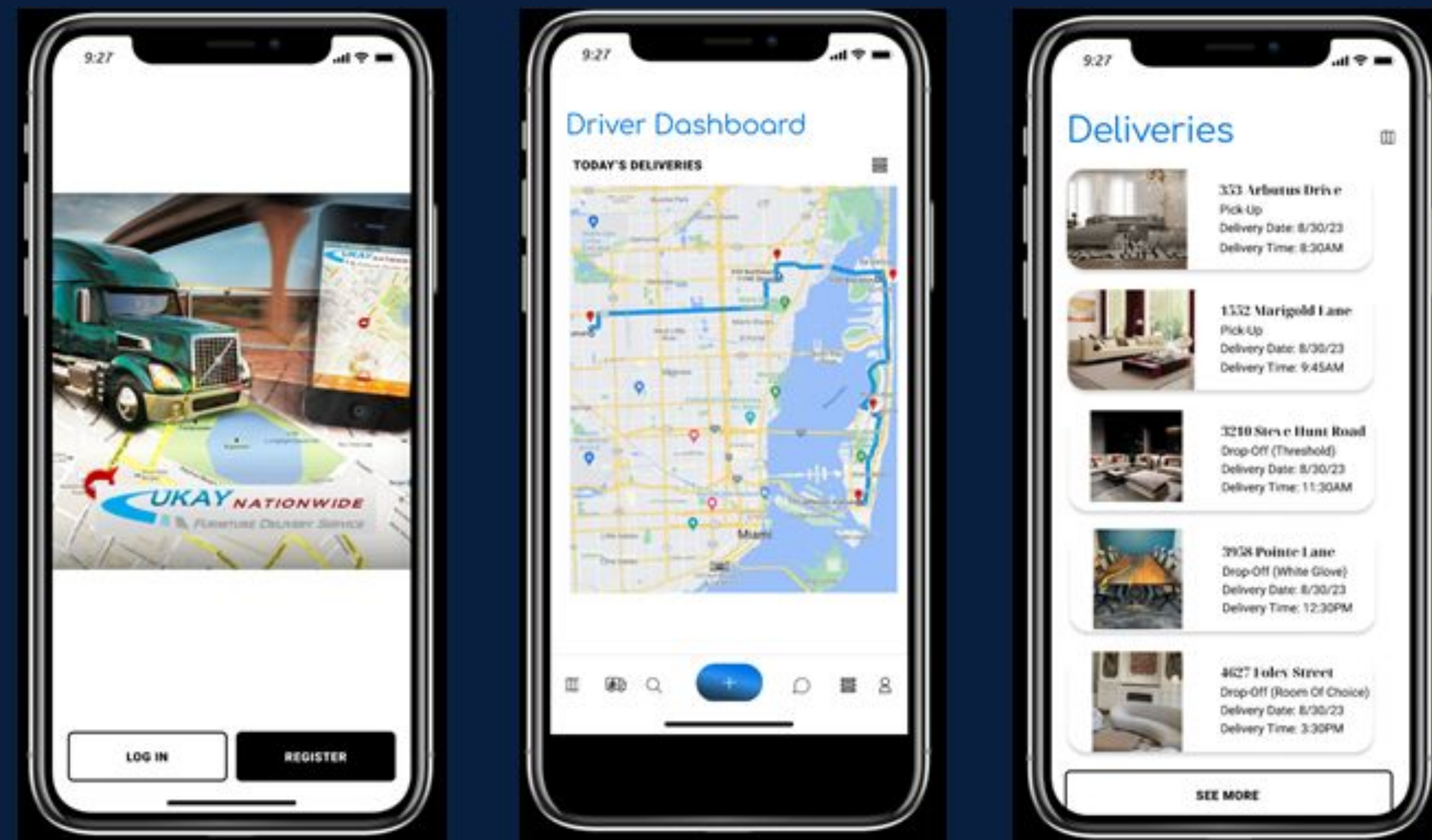
Mentor: Aydin Danaci, Branch Manager, Ukay Trucking and Delivery Services

Instructor/Faculty: Dr. Masoud Sadjadi, Florida International University

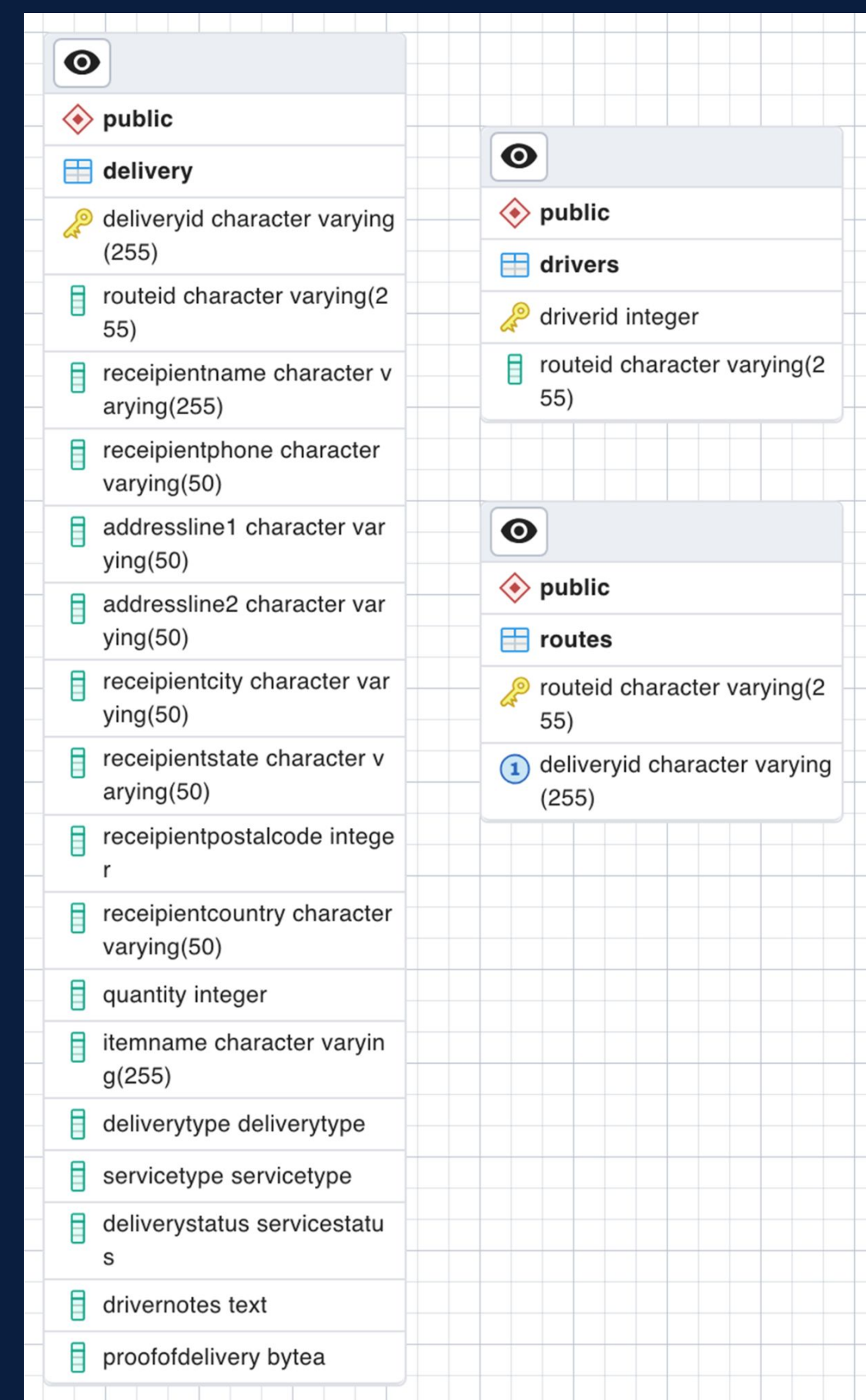
PROBLEM

Ukay Furniture Delivery presently relies on a manual tracking system for its deliveries, utilizing spreadsheets and physical documentation. The absence of a sophisticated, integrated system precludes real-time tracking of item deliveries, verification of delivery status, and route adherence by drivers. This manual process introduces a number of variables that may contribute to delays in shipment and potential loss of receipt confirmations, which, in turn, impedes the administrative dispatch team's ability to verify whether a delivery was attempted or successfully completed.

FRONT-END DESIGN



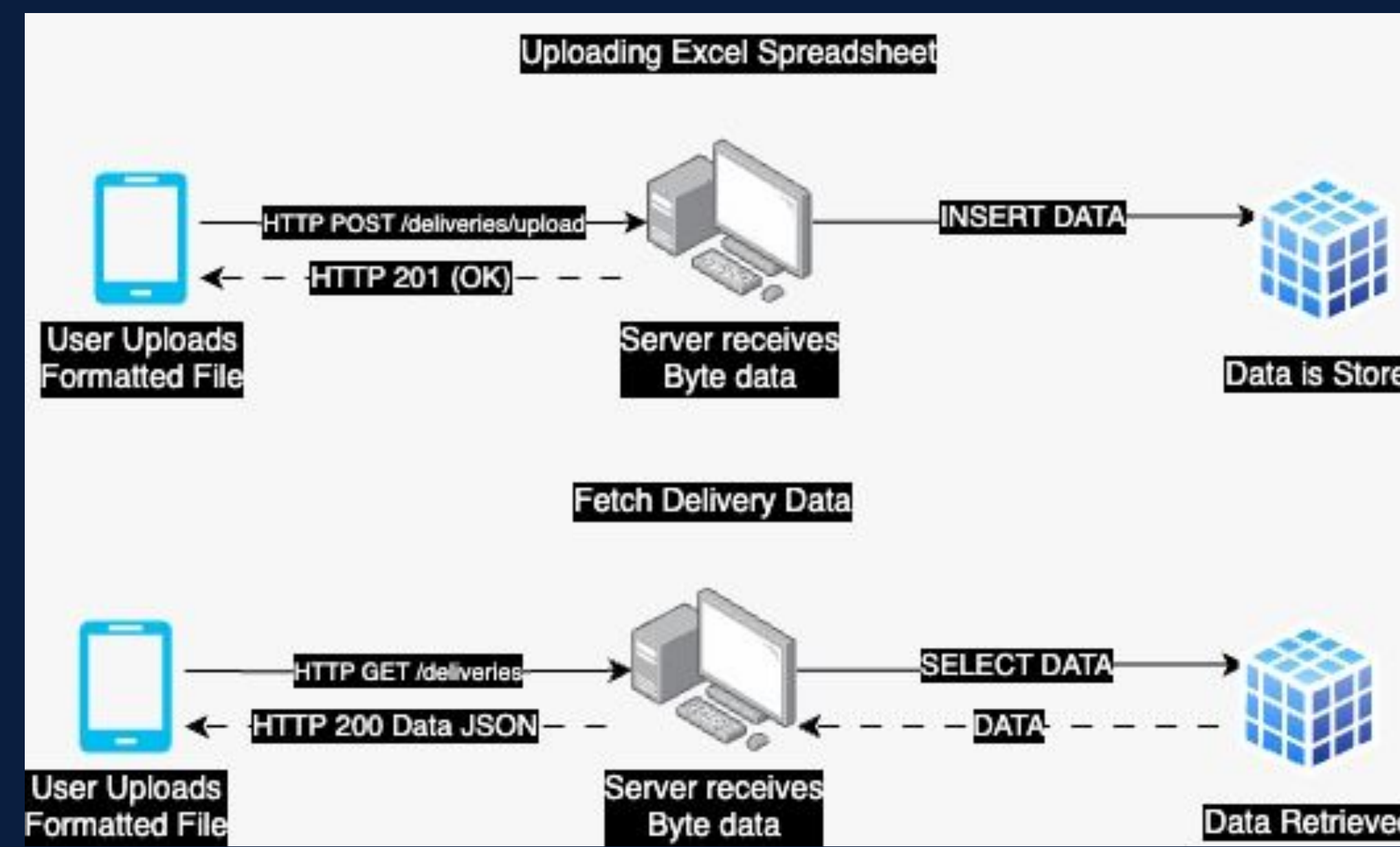
DATABASE DESIGN



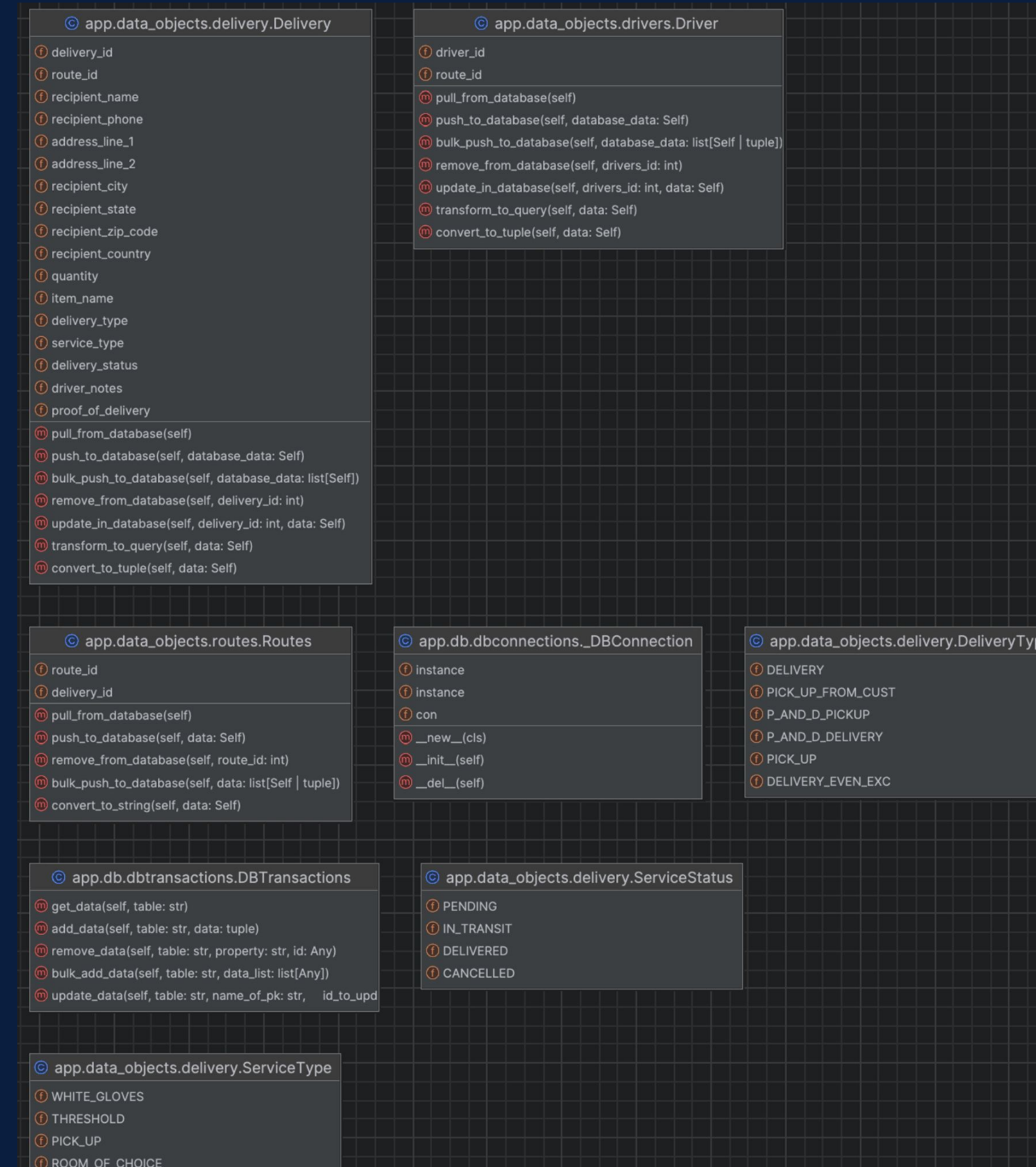
CURRENT SYSTEM

The extant system in operation is suboptimal and labor-intensive. Route planning for deliveries is conducted manually via spreadsheets, which restricts the ability of drivers, dispatch administrators, and clients to ascertain the current status of any given delivery. Furthermore, drivers are obligated to complete physical forms to report on the delivery status, adding to the administrative burden.

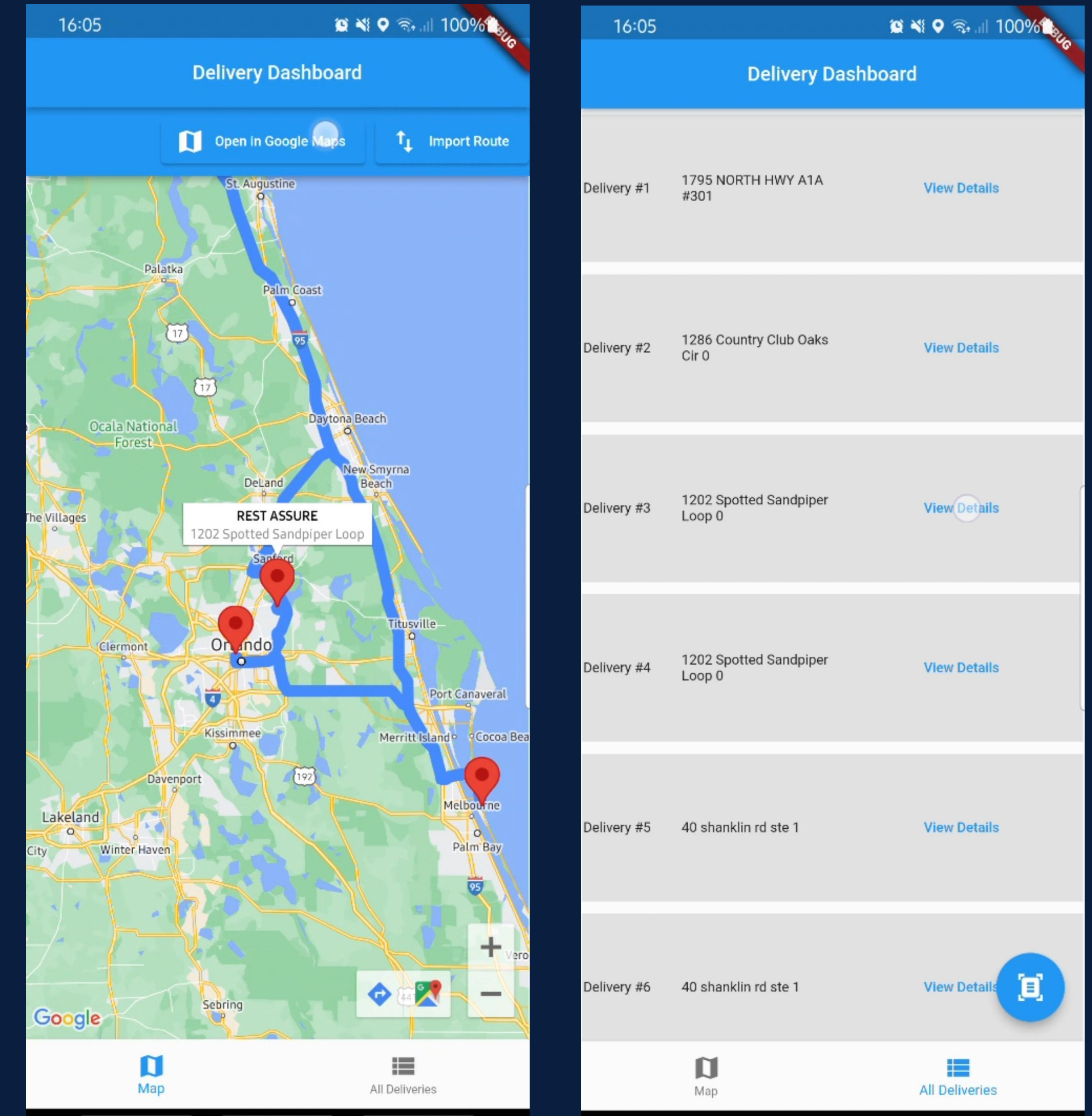
BACK-END DESIGN



OBJECT DESIGN



IMPLEMENTATION



SUMMARY

The existing Ukay Furniture Delivery system, heavily reliant on manual processes involving spreadsheets and physical documentation, faces challenges such as potential delivery delays and unconfirmed deliveries. To mitigate these issues, a cross-platform mobile application has been introduced, enhancing the coordination between clients, dispatchers, and drivers by enabling the digital handling of delivery details, viewing of assignments, and pre-delivery verification with integrated navigation features. While this solution offers real-time tracking capabilities for administrators and promotes scalability, it currently presents security vulnerabilities, and the absence of front-end features like data caching and transaction queuing could affect performance during back-end downtime.

ACKNOWLEDGEMENT

The material presented in this poster is based upon the work supported by Ukay Trucking and Delivery Services. We thank Aydin Danaci for his assistance and mentorship that we received throughout the senior design project.

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