**Project Background**

Toyota Financial Services (TFS) relies on multiple disjointed systems to record, store, check and correct all the data that exists in their current ecosystem.

**The problem** — Lack of a holistic view of data for employees and business partners who want to leverage the data as part of TFS. This approach results in unorganized data, and a manual, time-intensive process of linking physical and business data elements.

**Project goal** — TFS requires a solution that would allow:
- Data to be organized by business areas such as Loan Originations, Insurance, Servicing etc.
- The ability to do google-like search for data elements to bring up business definitions, physical attributes, data quality rules & profile, along with any related data.

**Software Architecture**

**Level 1: System Context Diagram**

The user is allowed to register on the portal and use it via email invitation only.

**Level 2: Container Diagram**

Registered user makes request using RESTful API from frontend to backend. The backend processes the requests and makes PostgreSQL database calls using Psycopg2 library.

**Level 3: Component Diagram**

- **Controller**: Takes requests from the front-end and passes it to the service or passes the results to the front-end.
- **Service**: The logic layer of the application. Performs all the computations needed.
- **Repository**: Fetches the data from the database or commits the data to the database as needed.

**Data Hierarchy**

- **TFS Data Portal**
  - Business Area 1
  - Business Area 2
  - Business Area N
  - System 1
  - System 2
  - System N
  - Table 1a
  - Table 2a
  - Table 2b
  - Table 2(N)
  - Data 1
  - Data 2
  - Data N

**Tools Used**

- React
- Flask
- PostgreSQL

**Business Areas**

- Toyota Financial Services Data Portal

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**Business Areas (Finance)**

- System 2
- SysData 1

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