Background
Merck: Merck is a multinational research-intensive biopharmaceutical company that works to develop medicines and vaccines.

Problem:
- Lack of standardization in sample storing
- No geolocation system for sample storing
- Lack of data integration systems with Merck and vendor data streams

Project Goal:
Build a dashboard that displays location and other data from RFID tags scanned within Merck facilities

Solution Overview
- Web app displaying location and data of RFID tags scanned at the Merck HQ
- Python script for batch uploading CSV files of scanned RFID tag to a PostgreSQL DB
- Developed a Python script that updates RFID Tags within the PostgreSQL DB whenever the RFID scanner scans a tag.
- Angular CLI, Node JS and the Google Maps API for a platform for Visuals
- Utilized GeoJSON for scanner and zone divisions within the floors
- Process depicted below

Dashboard Features
- Plotting: Selected data will be plotted using the coordinate locations on the map
- Searching/Filtering and Highlighting: Search for characteristics such as name, tag ID, and zone and see them highlighted by color in the datatable
- Batch Uploads: Can select multiple files or directories to import onto the dashboard in order to all be processed.

Conclusions
- The Development of such a dashboard required a large deal of time and resources
- Overall, a connection was able to be established through the utilization of a variety of tools in the back-end which allowed flexibility in data display for the front-end

Future Goals:
- The code implemented within the project can be applied to different locations and serves as a foundation for more advanced functions in the future such as item tracking or representation in a 3D space.