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Group 7A's Technical Design Document

GOALS

- Reveal the parking data kept by the Parking Administration office and communicate it effectively to students via data information visualization.
- Help UCSD students efficiently locate vacant parking spaces on campus or close to campus.
- Give students a general overview in terms of time slots when parking spaces would be available.

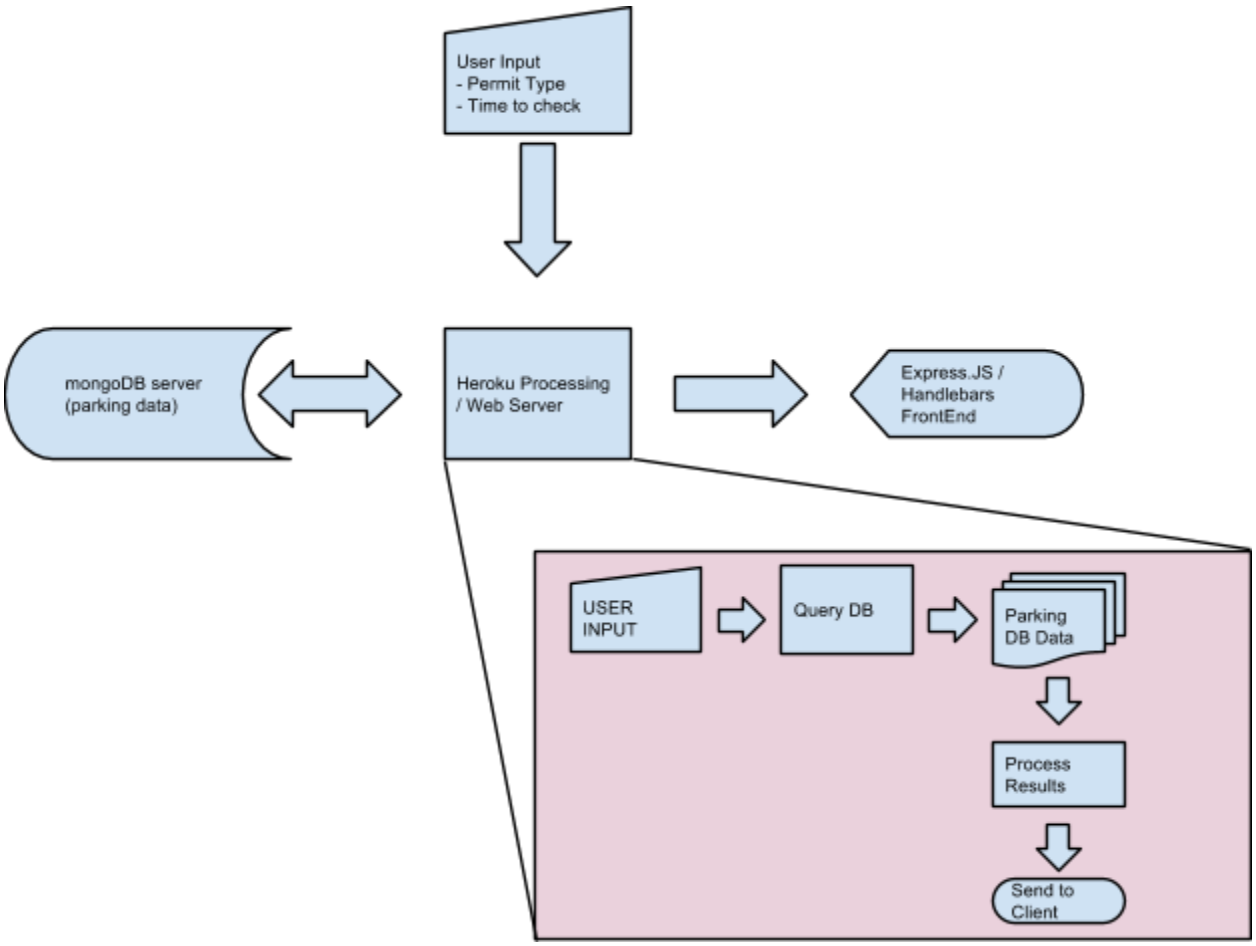
FUNCTIONAL REQUIREMENTS

- Enable the user to choose optimal parking location based on probability of open spaces per permit type based on time to park vehicle.
- Allow the user to lookup parking spaces based on their own permit type: student/faculty/grad/motorcycle space (A/B/S/V/M)
- Help the user clearly visualize the parking space data based on the user's mental model of the campus space and where parking garages/lots are located
- Display the breakdown of parking data within each parking garage/lot and where available spots are located by level if possible

NONFUNCTIONAL REQUIREMENTS

- The application should be a responsive web based mobile application to allow for a multitude of devices to access data.
- Use appropriate forms and data selection inputs to help the user efficiently arrive at his or her goal.
- Minimize usage of images and other bandwidth-heavy resources to optimize loading time for mobile devices, which may be in use in a vehicle.

ARCHITECTURE DIAGRAM



DATABASE SCHEMA

This possible database schema is a representation of data in a provided UCSD Database, and may not accurately represent the actual database schema.

ParkingDataRecord		
startWindowTime	time	//window opening time
endWindowTime	time	//window closing time
permitType	char	//ucsd permit type (A/B/S/V/M)
unusedSpaces	int	//number of unused spaces
lotID	text	//name of lot record