PARKSENSE: ARDUINO-EMBEDDED PARKING MANAGEMENT SYSTEM

IMPOSSIBLE

GROUP AND ADVISER

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ADVISER: MR. ALVIN LIMPIN

OBJECTIVES

Main Objective

ImPossible aims to automate the manual process of checking parking slot availability. By implementing this system, it will be easier to check the status in the basement parking area of Asia Pacific College, ensuring a more efficient and organized parking experience for everyone.

Specific Objectives

The specific objective of the project is to develop a tracking system that can help:

1. To advertise Asia Pacific College's basement parking to the customer segments.
2. Install parking sensors and a monitoring system to provide real-time visibility of parking slot availability.
3. To reduce the reliance on manual labor for parking management tasks.

COMMENT MATRIX

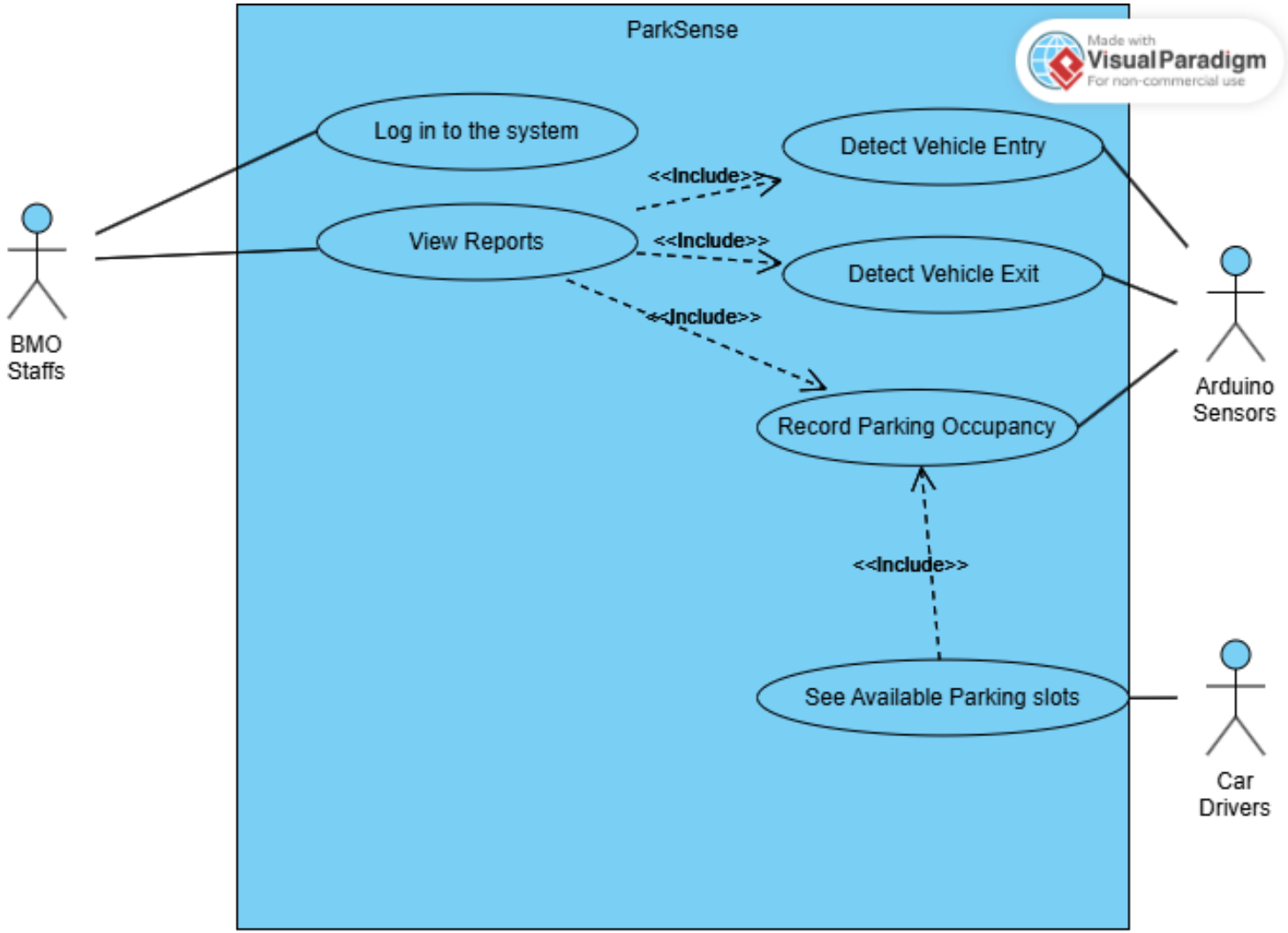
Dr. Manuel Calimlim:	
• **Inconsistency in Process: The described process of "vehicle entry, monitoring parking space occupancy, and vehicle exit" is seen as inconsistent and not a clear process.**	• **Process Definition:** Clearly define the steps involved in the parking process, from entry to exit, ensuring a logical and efficient flow.
• **Guard's Role Ambiguity: The guard's responsibilities are unclear. It seems they are involved in monitoring parking space occupancy, which should ideally be automated by the system.**	• **Guard's Role Clarification:** Clarify the guard's role, focusing on security aspects and minimizing their involvement in tasks that can be automated.
• **Data Flow and Analysis Concerns: The flow of data within the system is not well-defined. The role of the BMO in analyzing data and the triggers for this analysis are unclear.**	• **Data Flow Optimization:** Establish a clear data flow diagram, outlining how data is collected, processed, and analyzed within the system. Define the role of the BMO and the triggers for data analysis.
• **Registration for Parking Users: The feature of the data may involve having a Mobile Application for Parking Users to register.**	• **Client requirements:** The client mainly focuses on giving the display to those users that will use the parking facility without requiring the parking users to register in the system.

COMMENT MATRIX

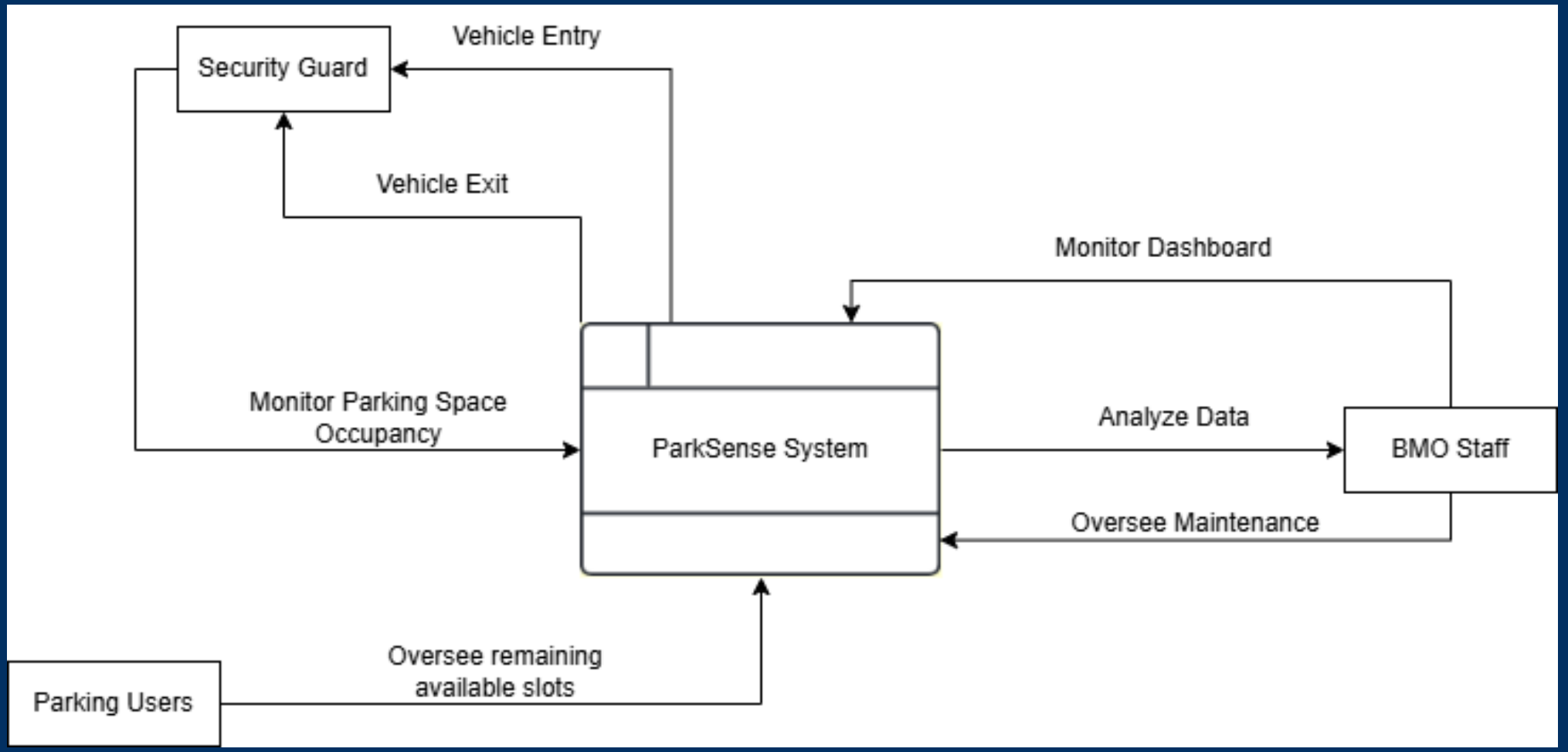
Gonzalo Gumogda	
Lack of Clarity: The purpose of each database (vehicle exit, display, parking space) is not clearly defined, making it difficult to understand the overall system architecture.	**Process Definition:** Clearly define the steps involved in the parking process, from entry to exit, ensuring a logical and efficient flow.
Roselle Wednesday Gardon	
Data Access and Usage: The purpose of granting data access to different roles (e.g., guards, BMO) needs to be clearly defined.	**Actor Definition:** Clearly define what roles the actors of the project should act in relation to the objectives of the project
Maintenance Oversight: The role of "oversee maintenance" is not clearly defined, and its relationship to the system's functionality is unclear.	**Usage of Terms:** Clearly define what roles the actors of the project should act in relation to the objectives of the project
Inaccurate Use Case Diagram: Three basic roles have been considered. The rest of the actors are not relevant in the system nor misunderstood.	**Usage of Terms:** To have a logical and clear understanding of how the roles should play in the scope of the system.

USE CASE DIAGRAM (MIDTERMS)

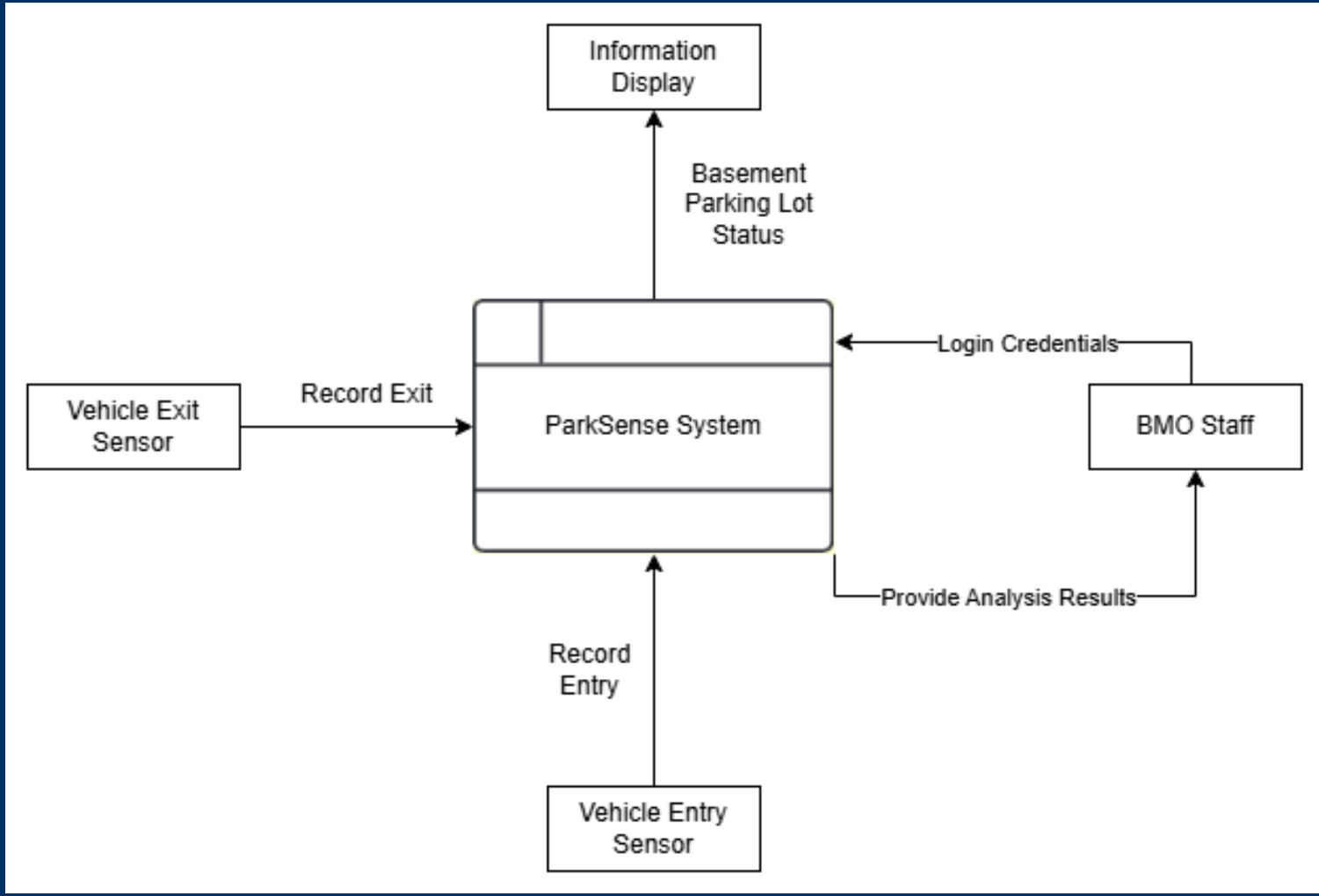
USE CASE DIAGRAM (UPDATED)



DATAFLOW DIAGRAM LEVEL 0 (MIDTERMS)



DATAFLOW DIAGRAM LEVEL 0 (UPDATED)



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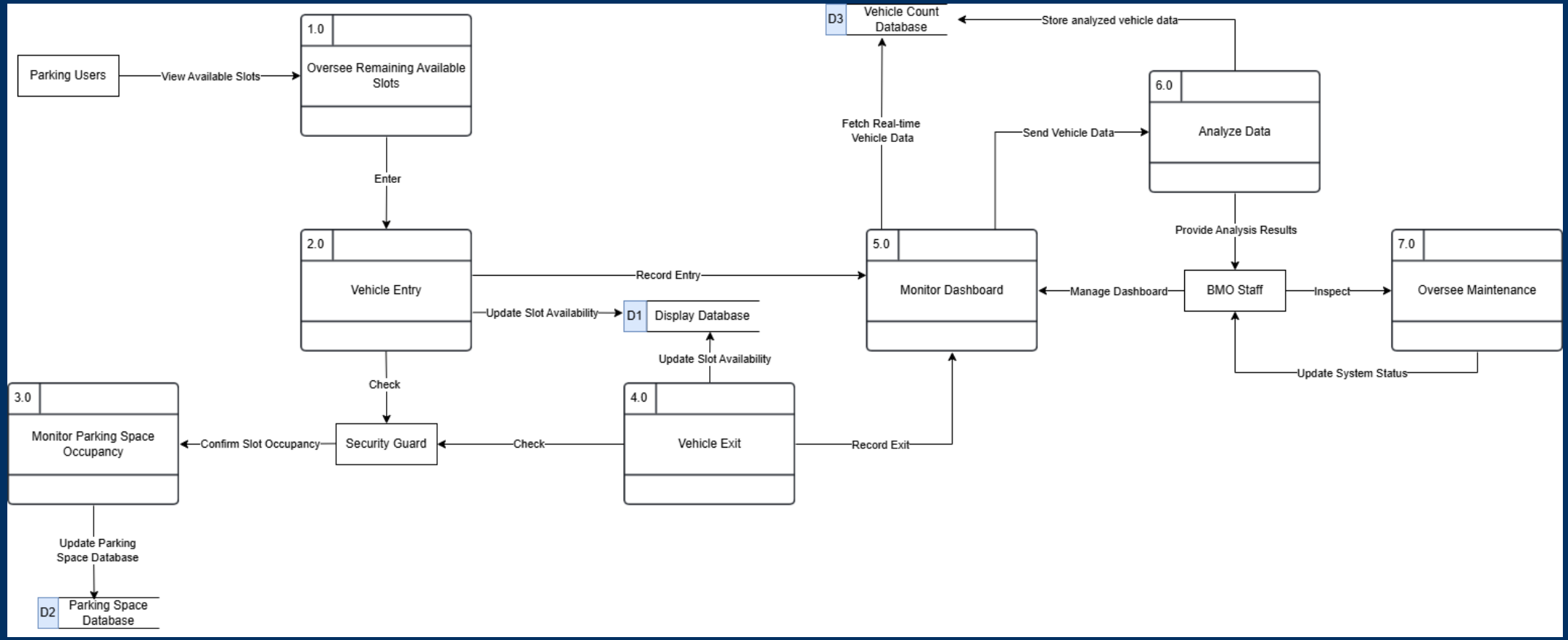
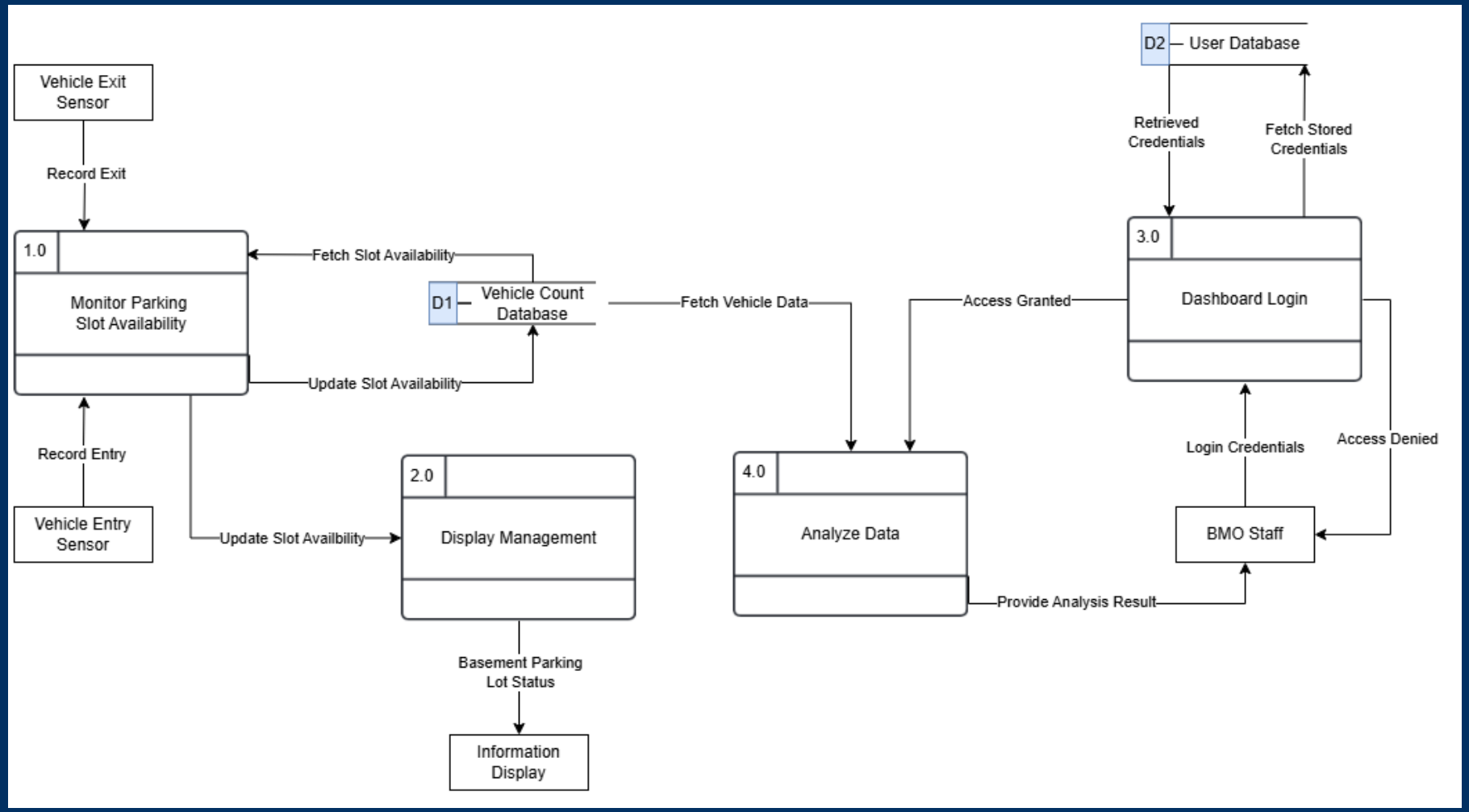


DATAFLOW DIAGRAM LEVEL 1 (UPDATED)



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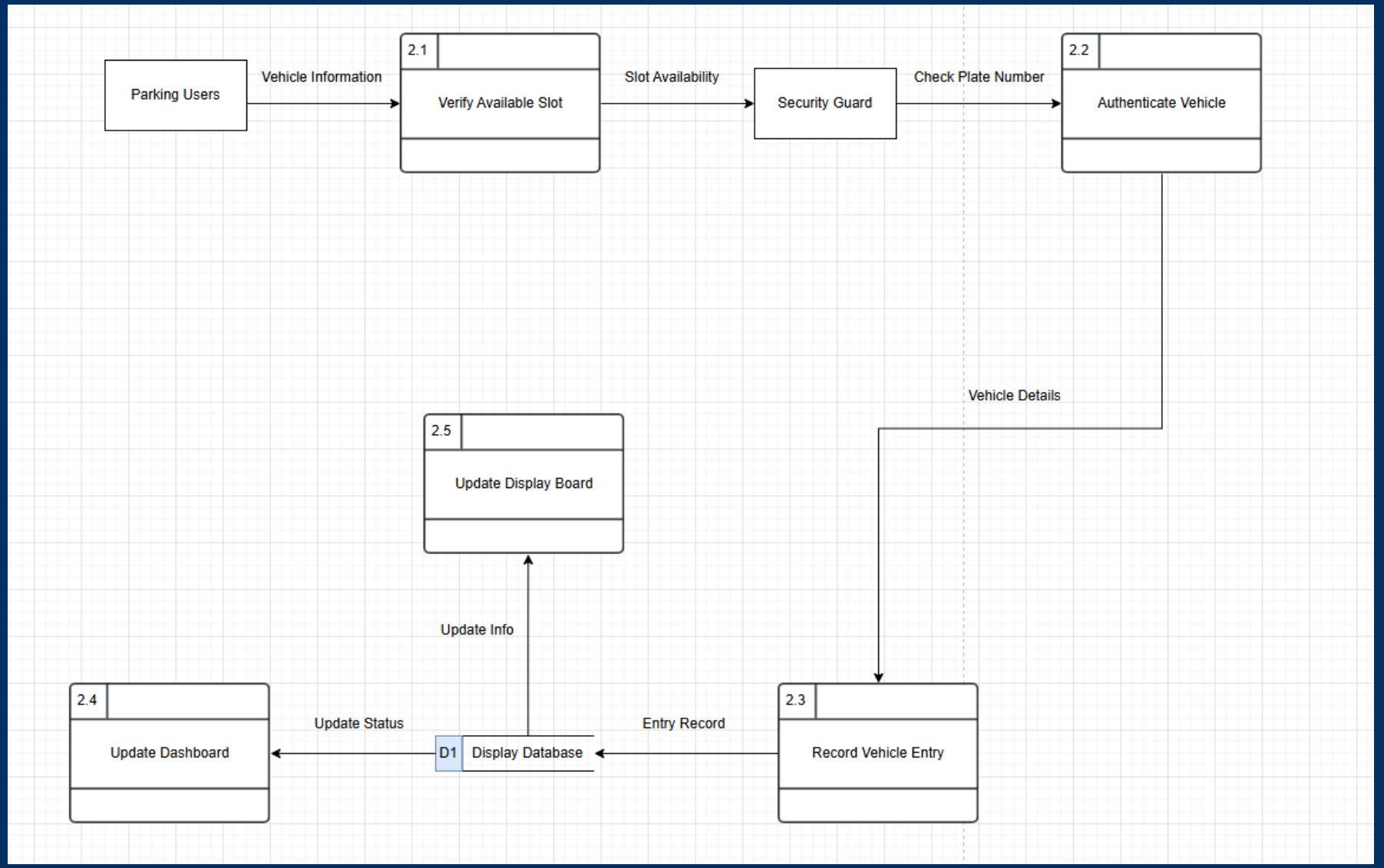

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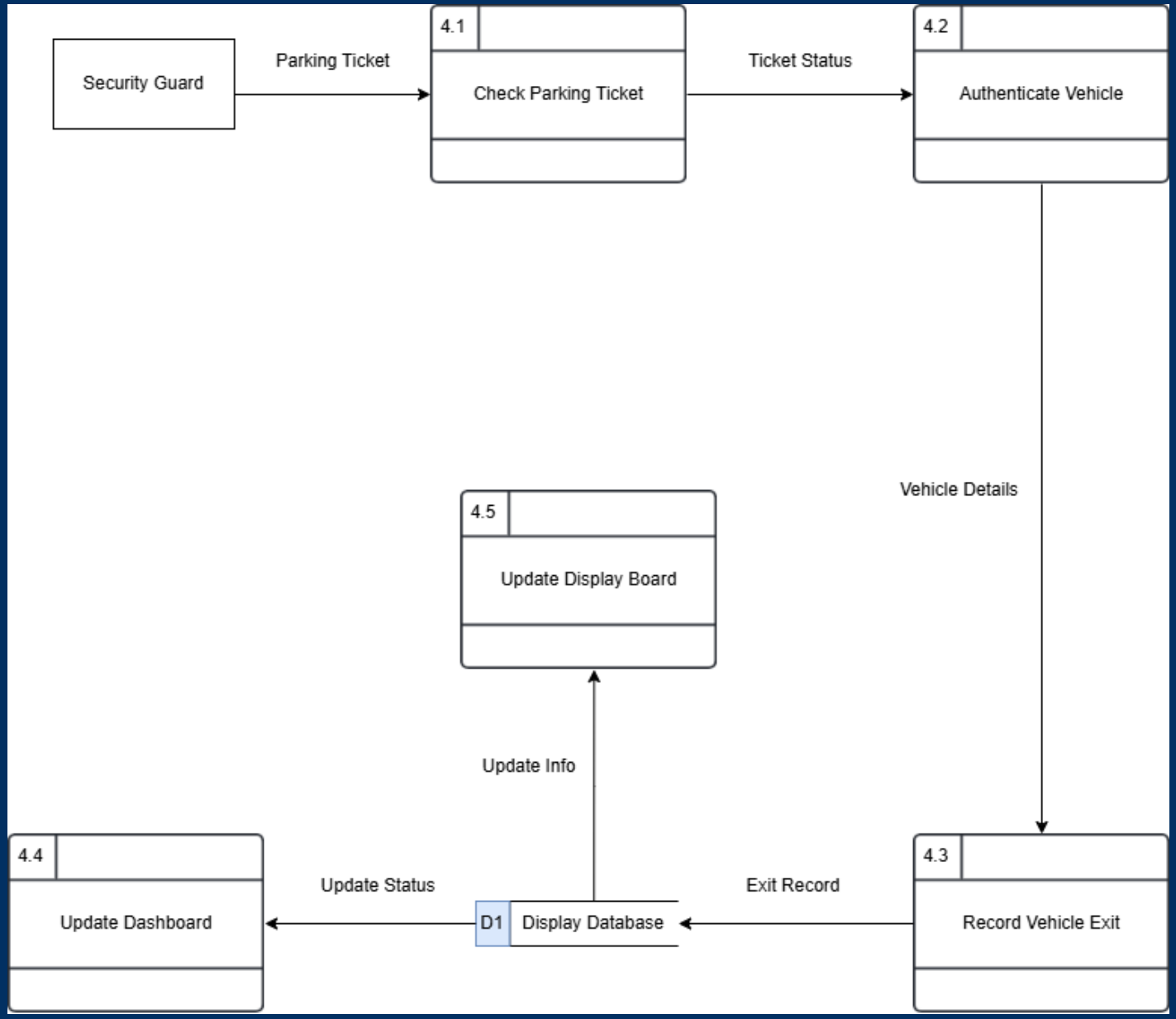

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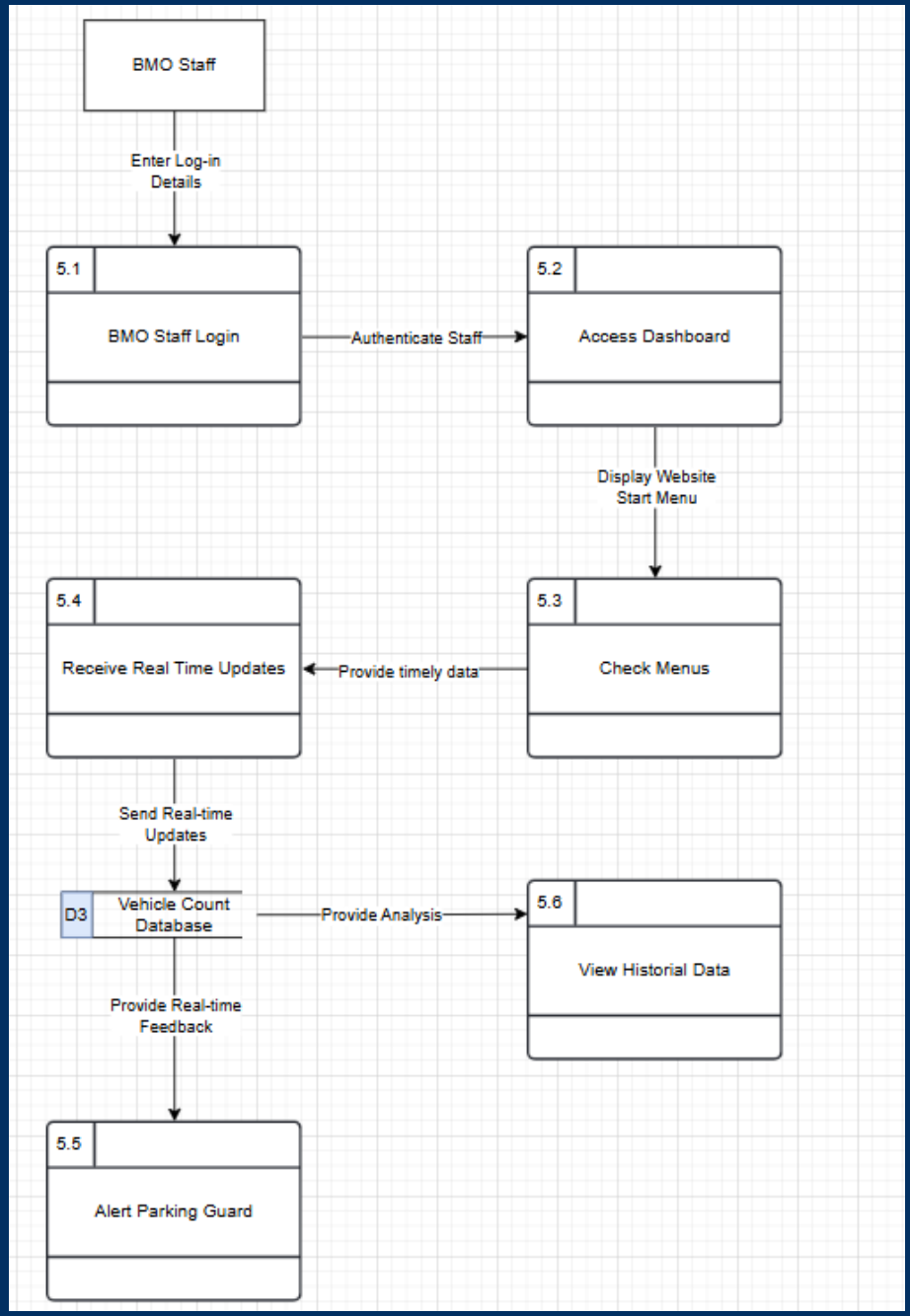

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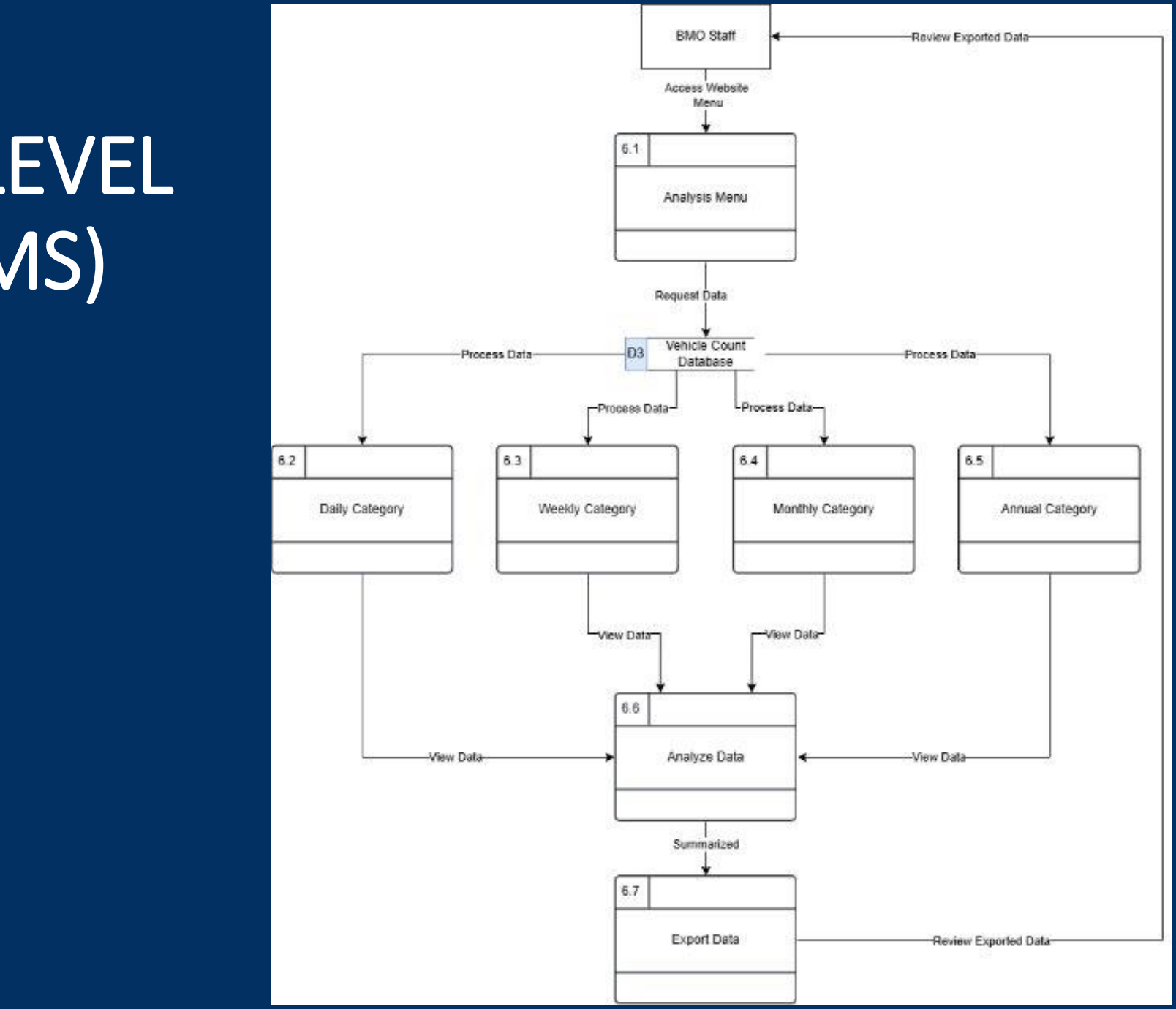

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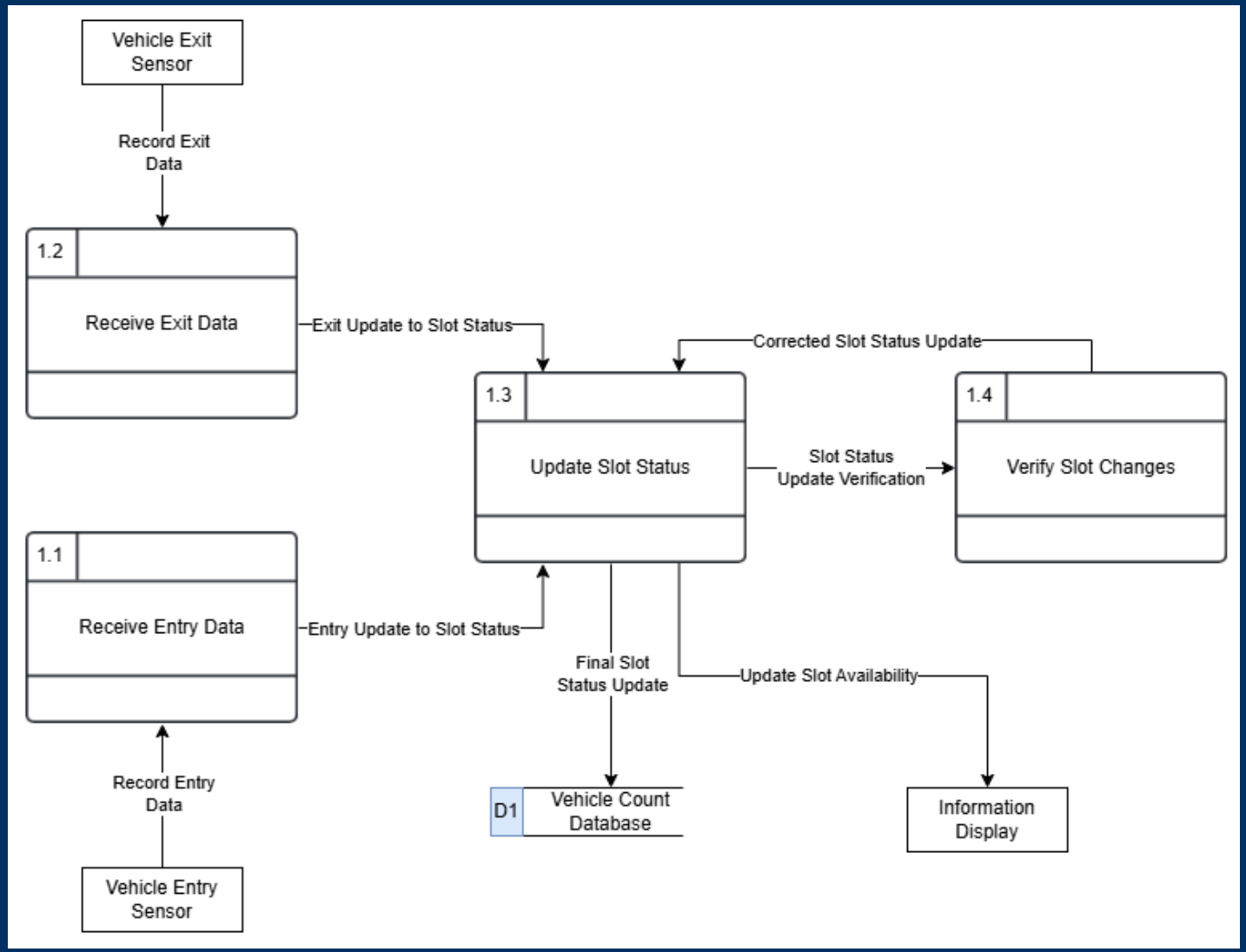

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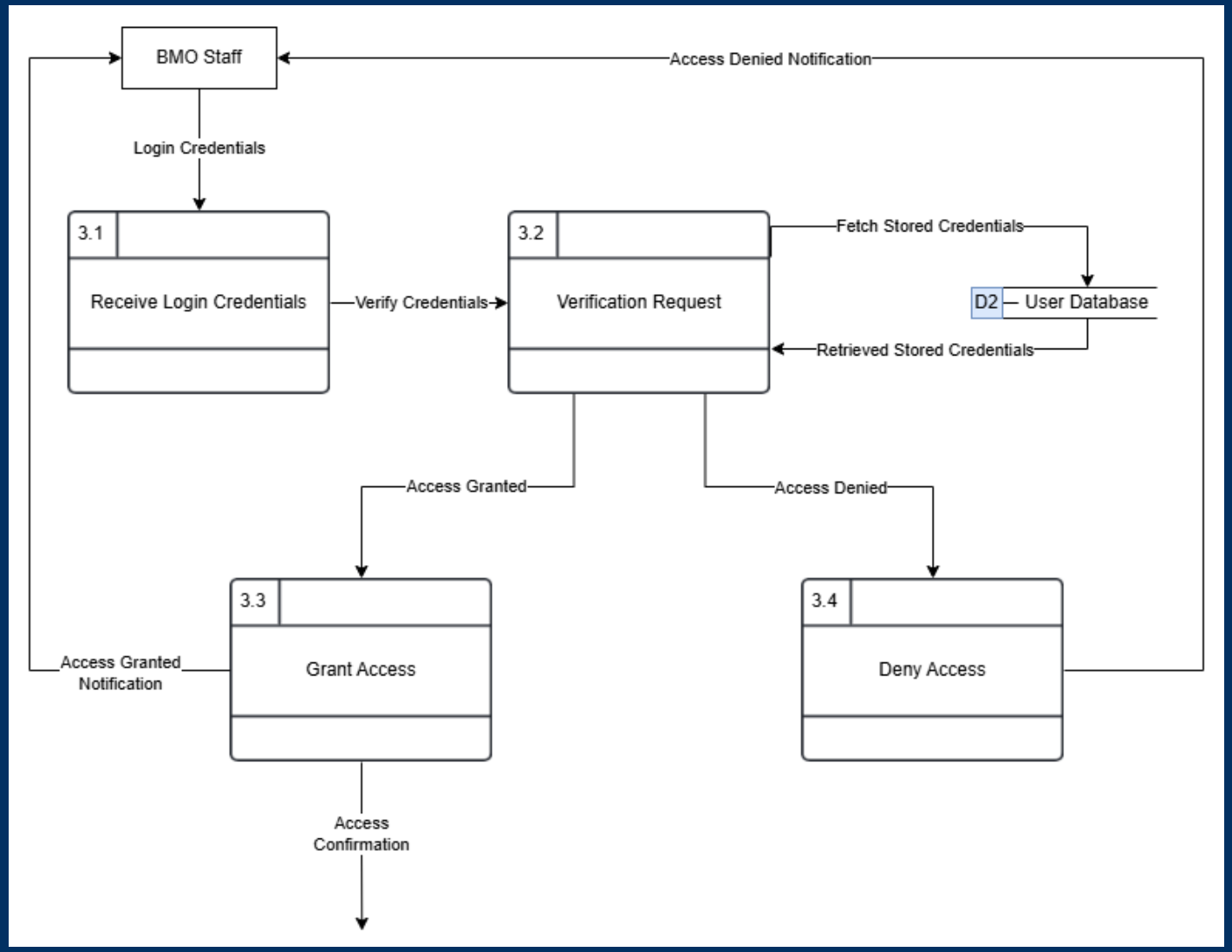

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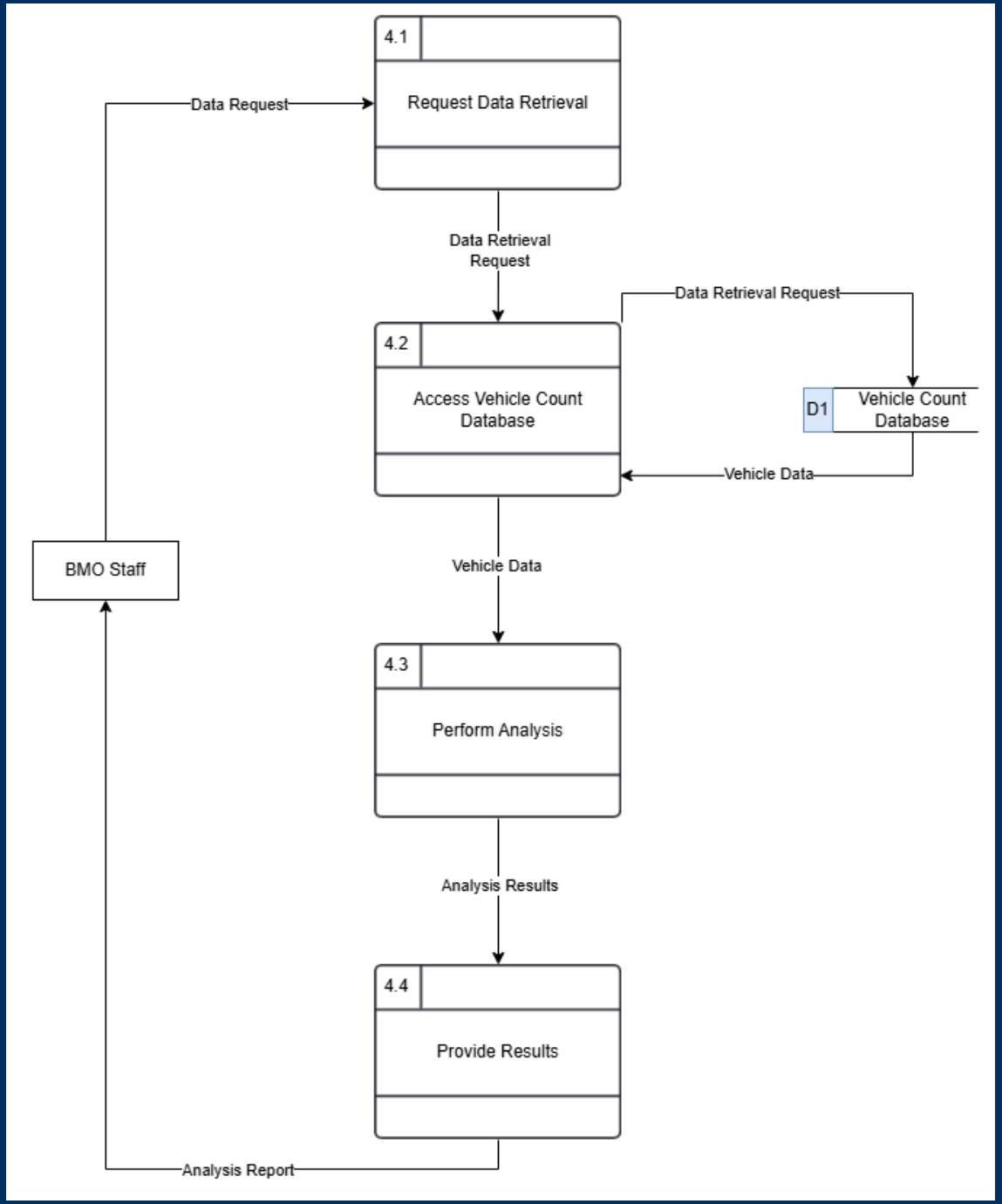
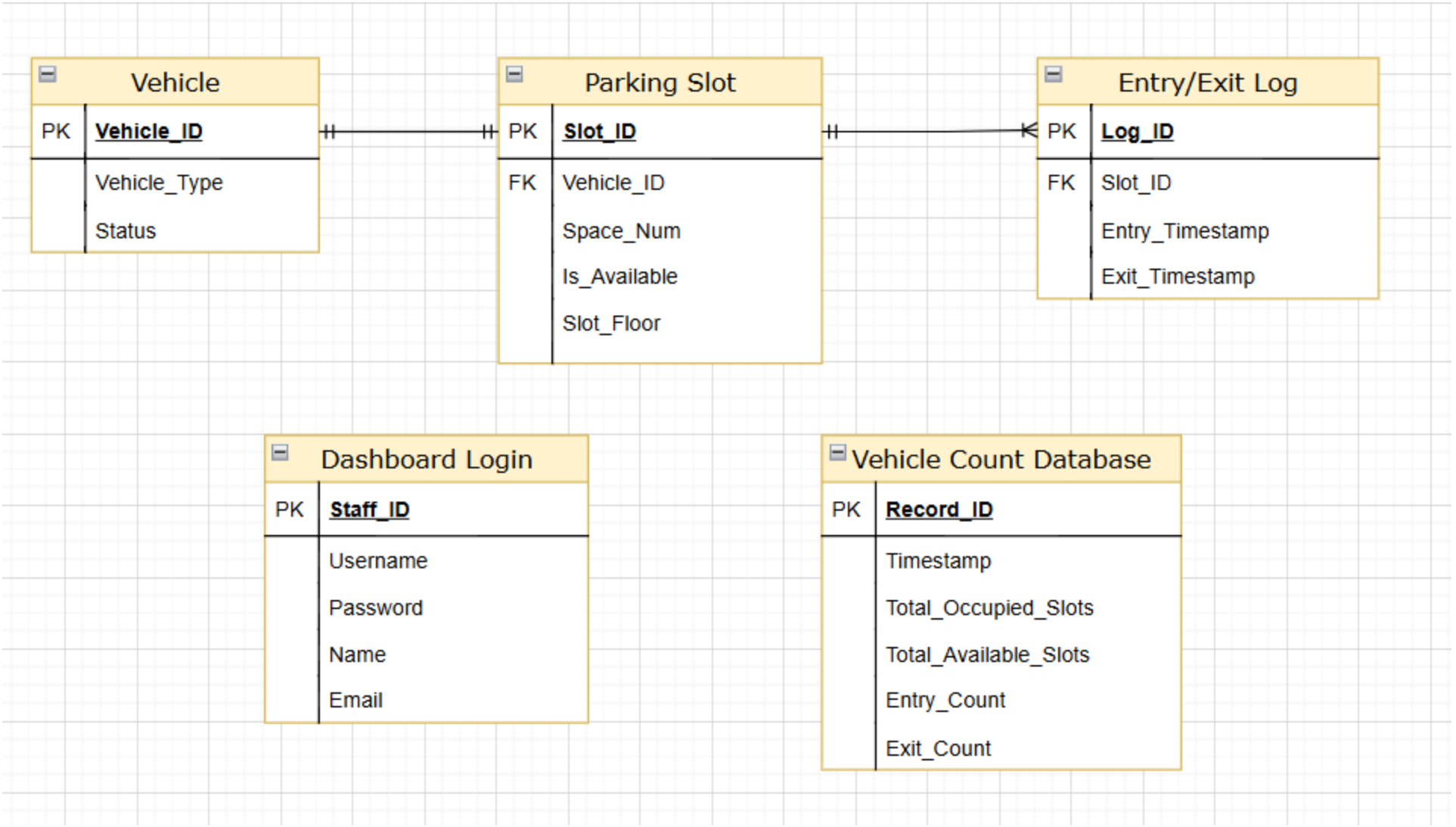


ENTITY RELATIONSHIP DIAGRAM



GITHUB COLLABORATION

DEMONSTRATION (PROTOTYPE)

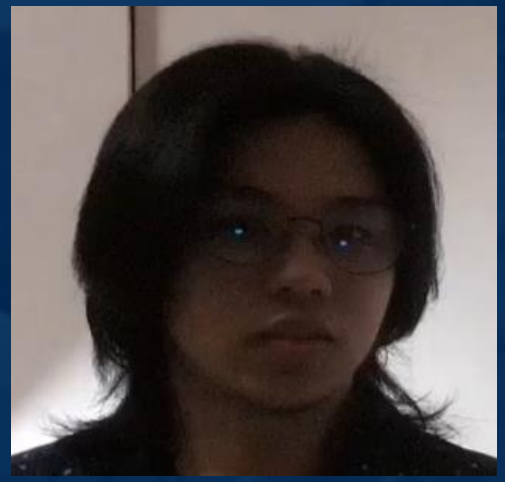
CONTRIBUTION

JOHN JOREL LANDICHO

- Prototype
- Use Case

RCHIE LIBUDAN

- Documentation
- DFD Lvl 2
- Act Diagram



TIMOTHY JAY SAYSON

- Documentation
- ERD
- Transcriber
- Fully Dressed
- Test Case

ANGELA MAE TAUYAN

- Documentation
- Secretary
- DFD Lvl 0,1