Weekly report 2

CIS 453 M001
Group 10
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1. Objectives for this Week:

- Map requirements from Phase 1 to design decisions
- Create UML-based design diagrams (architecture, class, dynamic flows)
- Select and justify technology stack
- Set up initial repository and environment configuration

2. Work Completed:

- Designed UML structural diagrams identifying primary classes (`User`, `Vehicle`) and their respective associations.
- Mapped requirement specifications to class attributes and functions.
- Designed Flow diagram to model user interactions and functional logic, representing the communication between the application layer and the database.
- Designed a three tier architecture diagram showing Client, Server, and Data layers using Mermaid
- Developed a Design Decisions Diagram to model actions across varying classes, showing integration between application modules and the database layer.

3. Challenges Encountered:

- Creating UML diagrams that were detailed enough but not overly complex for the assignment
- Determining appropriate level of abstraction for class diagrams
- Learning curve with Mermaid syntax for some team members

4. Next Steps:

- Finalize chosen programming language, frameworks, and database.
- Begin initial setup of the development environment with our selected stack
- Finalize repository set up and ensure that all team members have established access and a shared understanding of it.
- Begin to Implement core functionalities (registration, viewing cars, booking)

5. Team Contributions

Hussein:

- Developed UML class diagrams with detailed attributes and methods
- Designed database schema and relationships

- Created entity relationship diagrams
- Documented design patterns to be used

Ryan:

- Drafted weekly report 2
- Validated requirement specification with design decisions
- Confirmed UML diagram against functional requirements with the group
- Developed and discussed database architecture with the group
- Discussed basic application flow with the group

Zichen:

- Created test scenarios based on system design documents
- Documented system design assumptions and constraints
- Prepared supporting documentation to validate design decisions

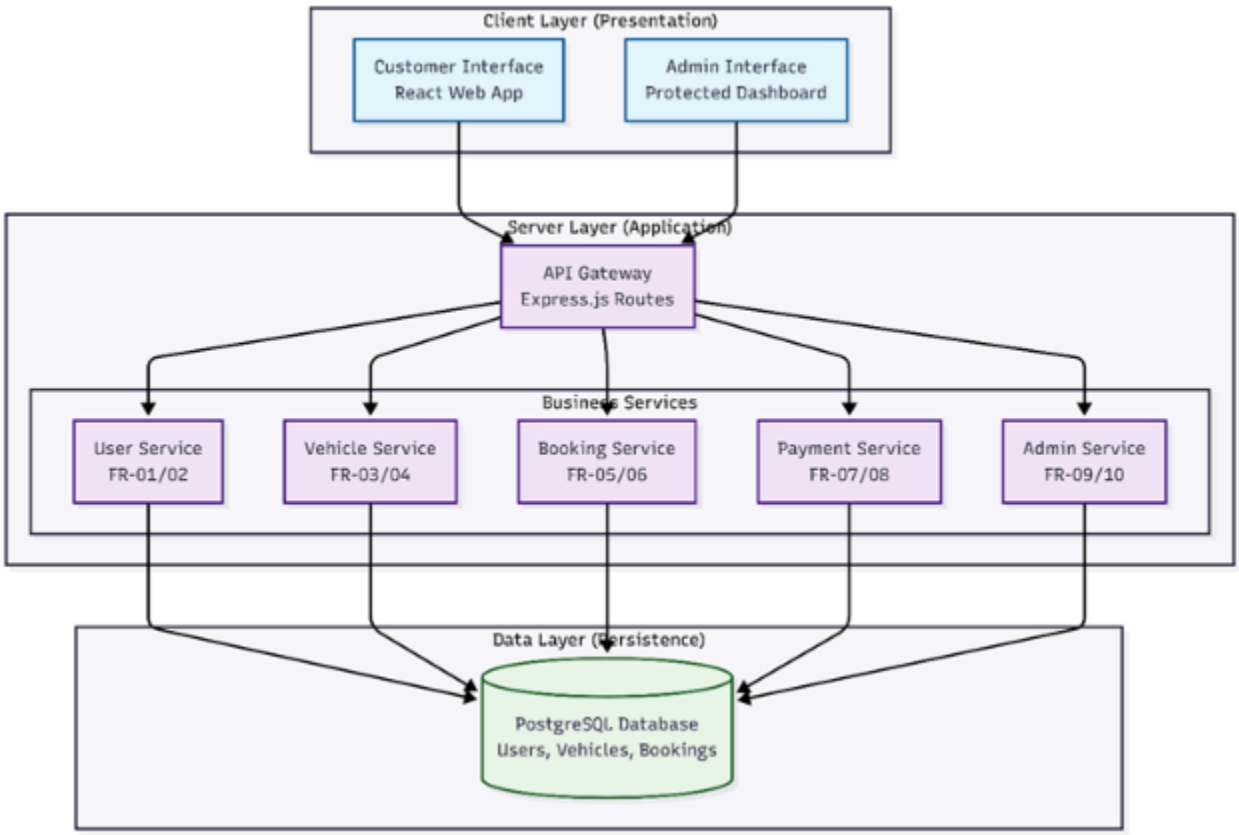
Chang:

- Assisted in the verification process to ensure that Phase 1 requirements were accounted for within the design.
- Reviewed all diagrams for consistency and completeness
- Researched and proposed deployment strategies

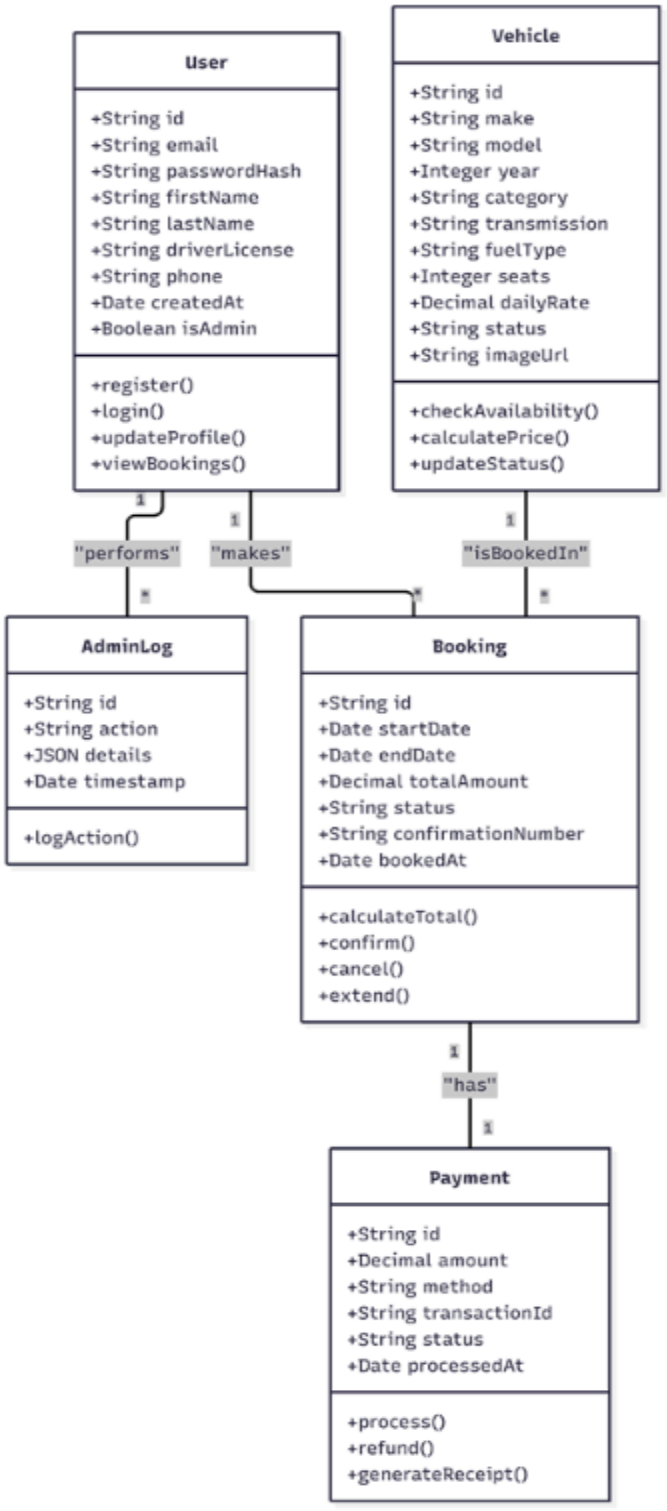
All Members:

Contributed to the drafting of the Week 2 report, discussed specification mapping and verified diagrams

1. Architecture Diagram



2. Class Diagram (UML) (phase 2)



3. Dynamic Flow Diagrams (phase 2)

4) Design Decisions

Weekly Reporting Rubric

Criteria	Excellent (9–10)	Good (7–8)	Fair (5–6)	Poor (0–4)
Clarity of Objectives	Objectives are clear, measurable, aligned to assignment phase.	Objectives mostly clear, some lack detail.	Objectives vague or incomplete.	No clear objectives provided.
Progress Documentation	Comprehensive and accurate reporting of deliverables.	Adequate reporting with some gaps.	Minimal reporting of progress.	No meaningful progress documented.
Challenges & Reflection	Clearly stated challenges with thoughtful reflection/solutions.	Challenges listed but not well addressed.	Challenges mentioned without clarity.	No mention of challenges.
Next Steps Planning	Concrete, realistic plan for next week.	Plan outlined but vague in details.	Minimal or unclear plan.	No plan presented.