Software Design Specification

Partitioning of Tasks

First, we would break down into two teams: one team that focuses solely on the mobile application for the car rental system and the other team that implements the website version of the system. We would have specific front and backend teams for each respective system. Vincent would be in charge of the backend team for both systems, Cameron would be in charge of the backend team for both systems, and Brendel would be in charge of the full stack team, ensuring that both front and backend aspects of the website and app are connected properly. The front-end part of the team would deal with implementing functionality and visual elements that make the system easy to use by the user. The backend part of the team would deal with managing databases and connecting them to our systems to store user information car directories and user payment information. There would be a separate team for communicating and facilitating the functionality across the two systems.

Front-End

The tasks for Vincent and the front-end team members would be to implement an easy-to-use and intuitive UI, ensure functionality across web pages or different parts of the system internally, make sure that the information is displayed correctly across the system, verify that car images are clearly visible, and use a universal text format to ensure professionalism and cost-efficiency. Each of these tasks would be given to talented members of the front-end team selected by Vincent.

Back-End

The tasks for Cameron and the back-end team members for their respective systems would set up each database (car rental database, user information database, and user payment database), connect the car rental database to the central Beavis database, connect each database to the web and mobile applications, implementing a payment API to allow users to add/update payment information that will be stored in the payment database, testing the systems to ensure that users can log in and change personal information, ensure that the system can handle large amounts of traffic, test to see if the code is scalable across different devices, and verify that new cars can be added/removed from the rental database. Each of these tasks would be given to talented members of the back-end team selected by Cameron.

Timeline

This project is expected to be implemented with full functionality as specified by the client, by Month 8, no later than Month 12.

Timeline	Task Type
Month 0	Meet up with Software Engineers: front-end, back-end, and full-stack; to discuss expectations and specifications listed in the documents. In this time period, the designers (us) will make sure that all teams are on the same page before we start implementation, such as formatting of code and documentation to create a professional and unified style.
Month 1 – Month 2	Back-end and front-end meet with their respective teams and partition the listed tasks amongst the individuals. During this time period, each team respectively will start the implementation process before the full-stack starts looking at the interaction between the teams. This is meant for the back-end and front-end developers to get a proof of concept for the full-stack to start working on. Tasks To Be Completed: Front End: Create web pages, use universal text format Back End: Set up databases, connect databases, start creating payment API
Month 3 – Month 6	Full-stack developers start integrating back-end and front-end systems and verify that they work in unison. Back-end and front-end teams continue to develop beyond the proof of concept and work more toward full implementation. This is a pre-testing stage to make sure that the teams are on the same page. These developers can flex between the teams as necessary. Tasks To Be Completed: Front End: Verify that images can be displayed on webpages, ensure user information is displayed correctly, and create code that allow webpages to interact Back End: Test backend code to see if it is scalable across different devices, create disaster scenarios for high traffic situations, ensure system accurately stores and accesses user, payment, and car information.
Month 7 – Month 8	Present the project to the client, make sure it functions as desired. Also serves as extra time to clean up loose ends, bugs, etc. Tasks To Be Completed: Front End: Finalize UI to ensure efficiency and functionality across both systems

	Back End: Test edge cases and adjust implementation/code as see fit
Month 9 – Month 12	**Flex Time: This period is a built in buffer in the event that the 8 month period is not sufficient for the team. Avoid taking more time beyond Month 12.**