

Project Proposal¹ : *Top Deal Auto 2*

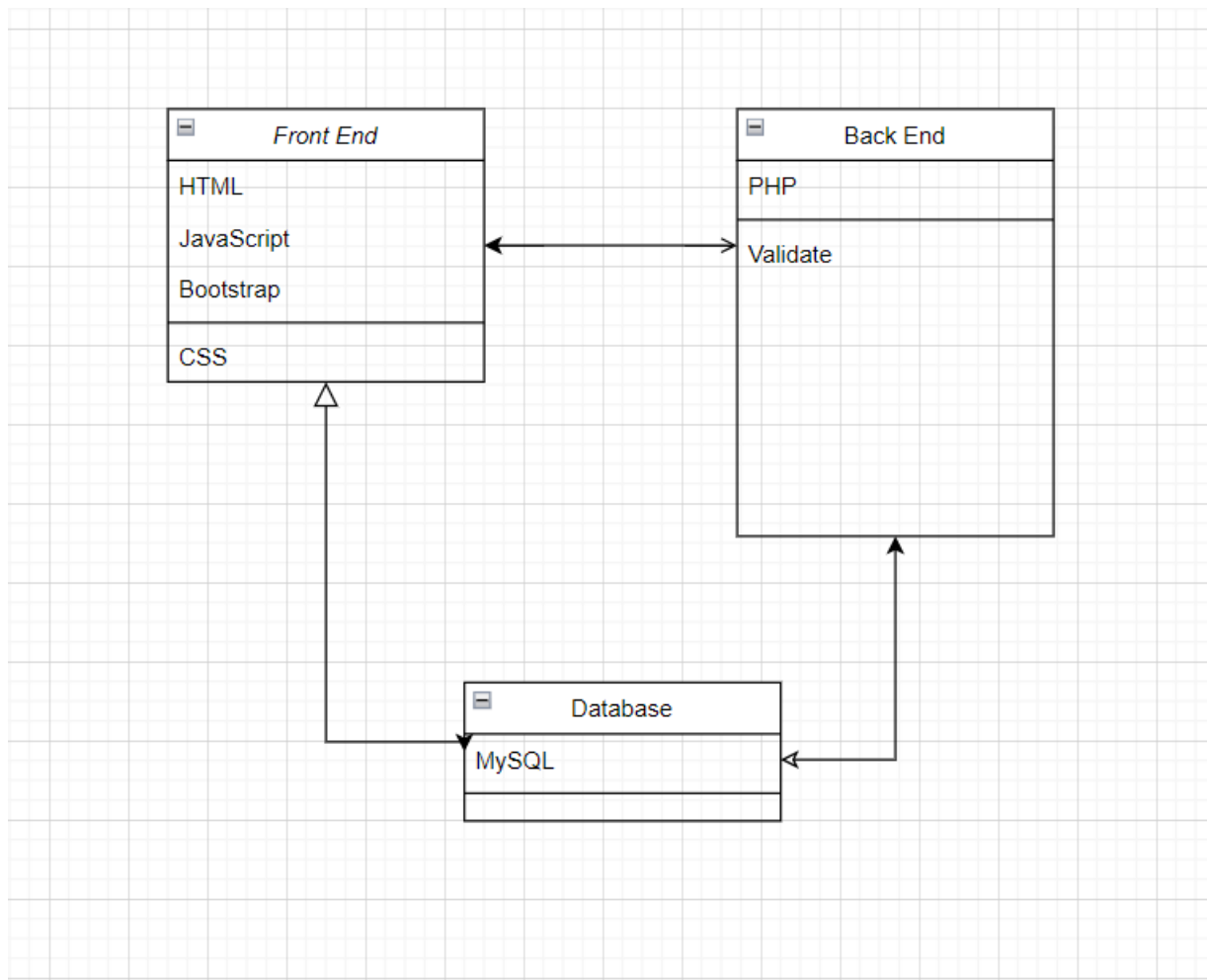
Solution Direction

1. I suggest the following solution direction:

- A **web-based application** that uses **HTML, CSS, and JavaScript** for the front-end, **PHP and MySQL** for the back end, and **Bootstrap** for the responsive design.
- The problem domain is the online presence of Top Deal Auto, a car retailer that wants to improve its services and reach more customers.
- The solution domain is the development of a professional and responsive website that allows users to browse, search, and trade cars online.
- The knowledge in the related business is the understanding of the car retail industry, the customer needs and preferences, and the competitive advantages of Top Deal Auto.
- The knowledge and experiences in programming skills are the familiarity with web development technologies, such as HTML, CSS, JavaScript, PHP, MySQL, and Bootstrap, and the ability to create a user-friendly and efficient website.

2. I have created a rough diagram for the design of the website, as shown below:

¹ This document is by no means a “full project proposal”. It has been simplified and customized for the purposes of SWE30010 teaching. The full project proposal includes many other sections which have not been discussed during the first few weeks of SWE30010 teaching.



The roles and responsibilities of each component are:

- **Front-end:** This is the part of the website that the users see and interact with. It consists of HTML, CSS, and JavaScript files that define the structure, style, and functionality of the web pages. It also uses Bootstrap, a framework that enables the website to adapt to different screen sizes and devices. The front-end communicates with the back-end through HTTP requests and responses, sending and receiving data in JSON format.
- **Back-end:** This is the part of the website that handles the business logic and data processing. It consists of PHP files that execute on the server and perform various tasks, such as validating user input, querying the database, processing transactions, and generating dynamic content. The back-end communicates with the database through SQL statements, storing and retrieving data in tables and columns.
- **Database:** This is the part of the website that stores the data related to the website, such as car information, user accounts, trading activities, and so on. It consists of MySQL, a relational database management system that organizes the data in a structured and efficient way. The database communicates with the back-end through SQL statements, storing and retrieving data in tables and columns.

