

DASS (2023-24): Team 14 Hire Truck Project

Team Members:

Vrinda Agarwal

Mitansh Kayathwal

Yashaswi Pasumarthy

Swayam Agrawal

Requirements List:

Requirements	Yes	No
Login and Sign up page for Truck owner and Freight Owner (Taking input the appropriate details along with input validation).	✓	
Home page displaying the currently listed tickets after logging in as a freight owner, with an option to create a new ticket for freight owner.	✓	
Home Page displaying the currently listed trucks after logging in as a truck owner, with an option to add a new vehicle for truck owner.	✓	
Ask quotes page / dashboard after signing in as freight owner displays the available trucks and a button to ask for quotes for their order. An email notification is sent to the truck owner notifying of the quotation request and its relevant details.	✓	
Send quotes page / dashboard after signing in as a truck owner displays the available freights and a button to send their quotes for any order. An email notification is sent to the freight owner notifying of the quotation offer and its relevant details.	✓	
Search page (logged in as freight owner) - searches for available trucks based on Load Type and Load Weight.	✓	
Search page (logged in as truck owner) - searches for available freights based on Load Type and source pincode.	✓	
Quotation Offers Page (logged as freight owner) displays the quotes which are offered and are available along with details. Functionality to accept or reject the quotation offer.	✓	

Quotation Requests Page (logged as truck owner) displays the freights requesting a quote along with its details. Functionality to accept or reject the quotation request.	✓	
Best Suggestion/Matching Algorithm Page (logged in as freight owner). Gives the best suggestion of a truck based on matching load type and date of shipment.	✓	
Best Suggestion/Matching Algorithm Page (logged in as truck owner) Gives the best suggestion of a freight based on matching load type and date of shipment.	✓	
<u>Added Extra Functionalities Below</u>		
Accepted Quotes page (logged in as freight owner) - displays the accepted truck quotes details.	✓	
Accepted Quotes page (logged in as truck owner) - displays the accepted freight quotes details.	✓	
Added Heuristic of distance extra to be covered in the Matching Algorithm page of both the users. After matching load types and date of shipment, matches are sorted based on the extra distance a truck would need to cover for delivering a freight. Sorting criteria : $\min(\Delta s + \Delta d)$ where Δs is the distance between the source addresses of the freight owner and the truck owner and Δd is the distance between the destination addresses of the freight owner and the truck owner.	✓	
Render Map page which can be viewed by clicking on view map button on quotation requests page. Given a quotation request for a truck by a freight, the truck owner can view the freight's source and destination location on a map with markers on it. Accurate distance between the two points is also displayed on the page at the right-top corner. Distance and map rendering done using free public APIs. Improves ease of access for the basis of accepting or rejecting the request. The same has been duplicated for the freight owner who views quotation offers and can accept or reject it by viewing the truck's source and destination on map.	✓	

The application comes with a range of features that ensure its security, reliability, and user-friendliness. Middleware has been implemented to provide a seamless flow of data between the front-end and the back-end, while JWT authentication ensures that only authorized users can access sensitive data. End-to-end protection is also guaranteed, ensuring that there is no chance of data breach, and user privacy is maintained at all times. The application also includes a nodemailer mail feature, allowing users to send emails directly from the platform. Input validation is another feature that has been implemented to ensure that only valid inputs are accepted, providing an error-free experience to users. The code is modular, which would enable the application to be more flexible and easily maintainable. This would allow for easier updates and improvements, reducing the risk of downtime and improving the user experience. Overall, the features of the application have been designed with the user's experience and security in mind, providing a secure, efficient, and user-friendly platform for all.