Taxi Booking System

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Introduction to Application

The main objective of the application is to dispatch taxis from the taxi stand to the relevant location where the customers are at the application will determine the shortest route to get to the customer. To achieve this, we use data structures to efficiently organize data.

A doubly linked list has been created to store the relevant taxi data which includes taxi ID, driver's name, vehicle registration number, cost, and the current availability.

To create the significant locations a graph has been used where each city (vertex) if the location of a customer and each (road) has the amount of distance (KM).

1.1 Advantages & Disadvantages of the system

Advantages

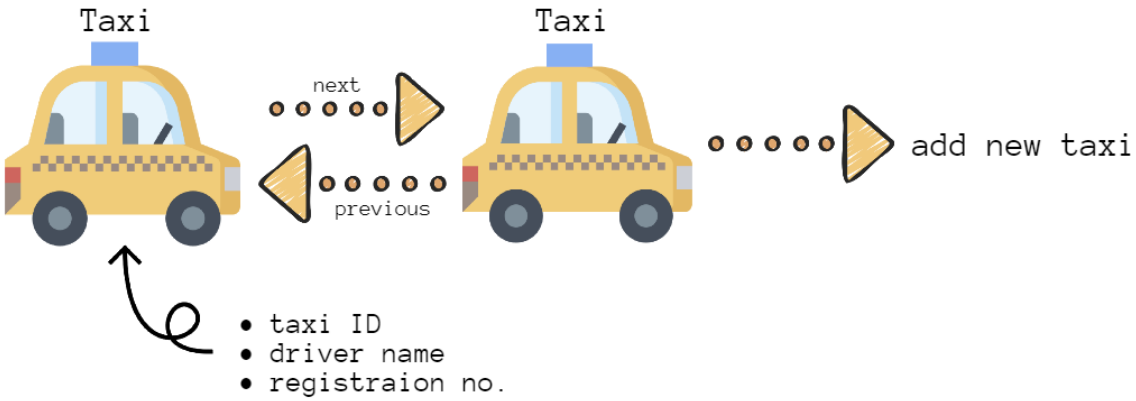
i. With the implementation of the Kruskal's Algorithm the application can find the shortest path, where it will dispatch taxis to customers efficiently.
ii. Secure & dynamic taxi data allocation. A doubly linked list provides previous and the next taxi information which finds the available taxi to be dispatched.

Disadvantages

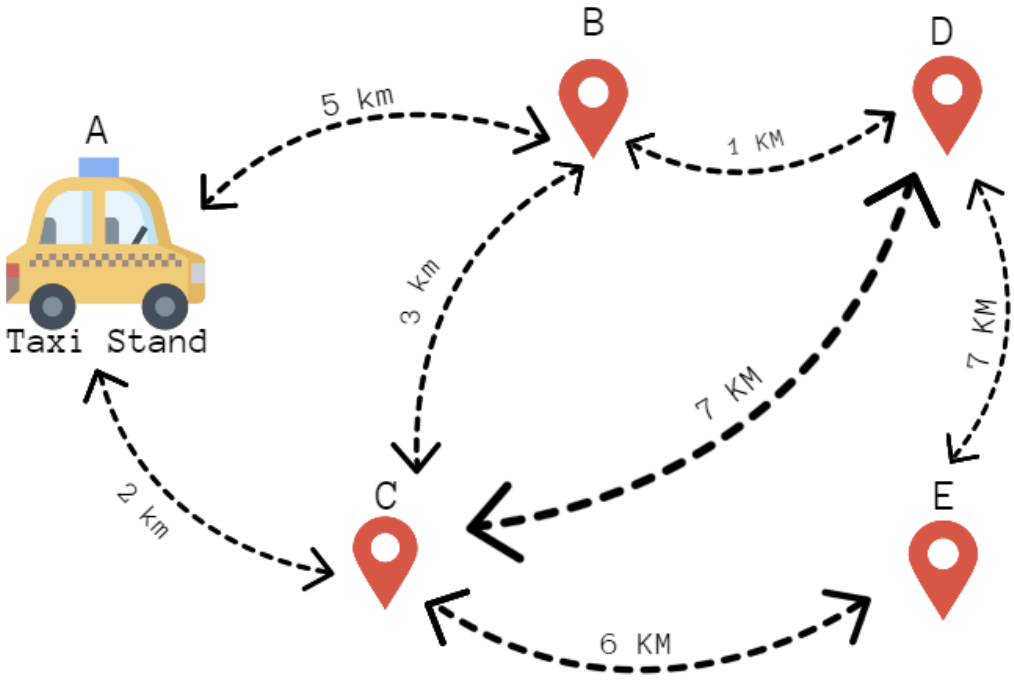
i. Timing & availability, if there are no available taxis the customer must wait until a taxi is available.
ii. Possible glitches within the system to find the customer which causes more wait time & customer dissatisfaction.

1.2 Implemented Data Structures

Doubly Linked List



Graph



1.3 Conclusion

In conclusion, this application's successfully meets the desired results for secure and robust implementation of data structures & algorithms to store and organize valuable data. This system not only enhances efficient dispatch management but also creates a timeless and satisfied customer experience.