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# EasyTrip

Car Rental System

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*Requirements Doc*

*CSP 595*

*Computer Science*

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## 1. Project Overview

'EasyTrip Car Rental' aims at providing a one-stop solution for renting out cars. One can search for and book various types of cars ranging from eco-friendly to convertible types. This system gives the renter a flexibility to choose between various cars for selected days from different locations. Apart from renting a car, renter can write as well as view reviews (posted by other renters) for cars. While renting a car, a renter can also choose between following – *accessories* (such as GPS Navigation System, Booster seats etc.) and *insurance packages*.

'EasyTrip Car Rental' system does not only cater to a renter's need but also provide a robust platform for an administrator (of the system) to manage the system. Few features for administrator, provided by the system, are managing – car fleet, users/renters (registered with the system), accessories, insurance packages and reservations made by renters.

The system also provides the renter with the interesting feature for viewing '*what's trending*' such as Top 5 most booked cars, Top 5 most reviewed cars etc. Also, the administrator can also match the deals with the competitors (via trends in Twitter) to provide and maintain the best deals in the market. These deals will be available to renter as promotions which he/she can use for getting discounts.

## 2. Requirements

### 2.1 Corresponding to renter/user:

- a. Renter can register/signup with the system, thereafter he/she can login into the system via selected username and password.
- b. Renter can provide the requirements to rent out a car such as – pickup location along with date and time, return location along with date and time, vehicle type (such as eco-friendly, compact, sports, SUV, convertible etc.) as well as age category (as above 25 years or below).
- c. Once the basic renting requirements are provided by renter, system should display the available cars to renter to choose from.
- d. Renter can then choose from various insurance as well as accessories options.
- e. Once all the options are selected, system should display the itinerary to renter. After which, he/she can apply for various promotions to get discount over the cost of the reservation.
- f. Renter then provides the driver information as well as billing information (such as card details, billing address etc.). If, at this point the renter is not logged-in to the system, he/she should be displayed with the message to login first and then proceed with the final car renting process.
- g. Once the reservation is made, final receipt should be displayed.
- h. Renter, at any point of time, can login to system and view his/her reservation(s). Renter can also cancel the reservation before the start-date.
- i. Renter can also search for the renting location via zip code or city name.

j. Renter can also view the car fleet and write reviews as well as view reviews (posted by other users/renters). Car fleet can be viewed by on basis of selected car/vehicle type.

k. Renter can view the latest trends, in EasyTrip car renting services, such as – top 5 booked cars, top 5 most liked cars, top 5 most reviewed cars, top 5 most booked locations etc.

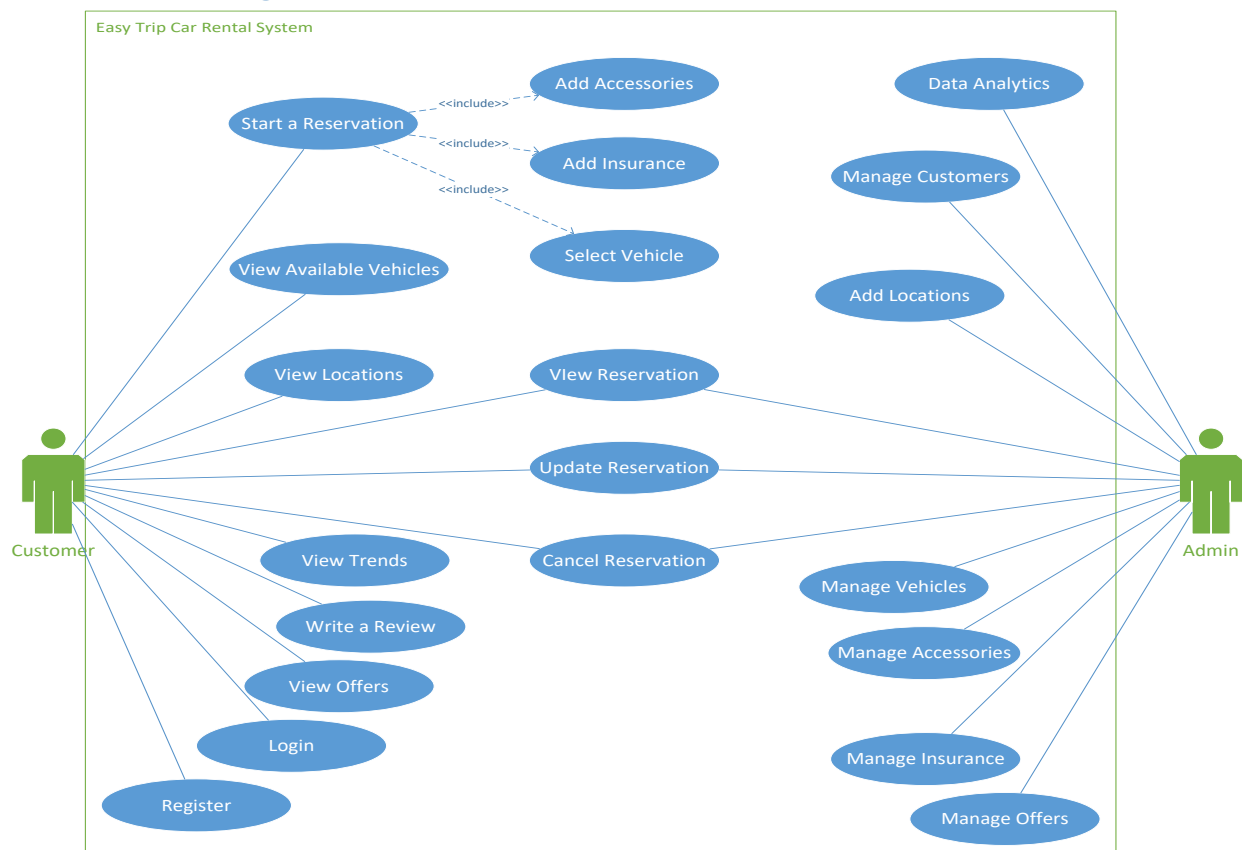
## 2.2 Corresponding to system administrator (admin):

a. Admin should have facilities to manage the contents of the system as well as control the inventory. Thereby, admin should be able to manage (add, modify/update and delete) the following:

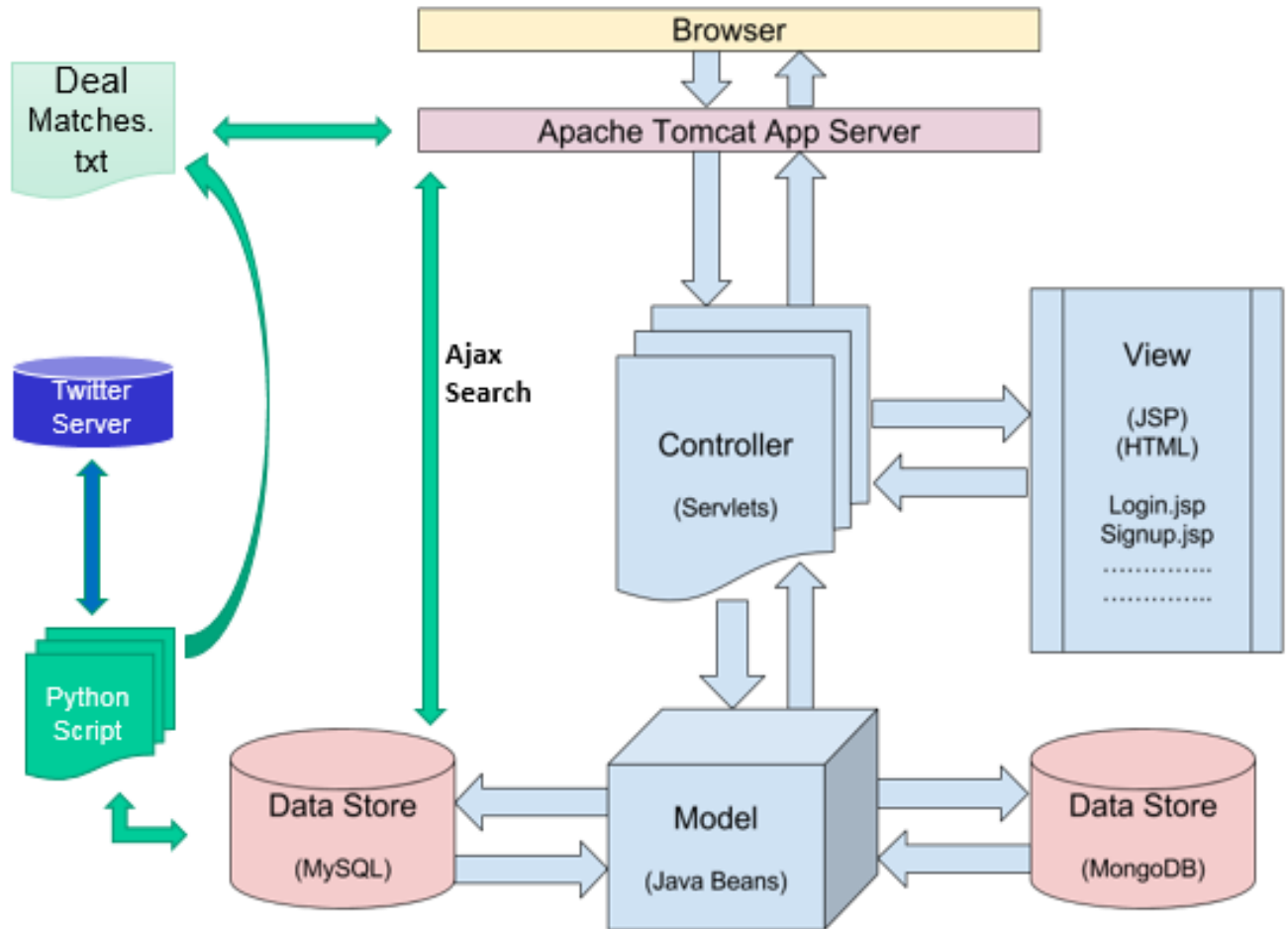
- + Car fleet,
- + Locations (from where the car is being rented and return),
- + Renters/users,
- + Reservations (made by renter),
- + Insurance packages and car accessories, and
- + Promotions.

b. Admin should be able to consider latest tweets, via Twitter, about various promotions and deals offered from competitors to provide best deals in market to EasyTrip's renters. Thereafter, admin should add those competitive promotions and deals in the system to make them available to renters.

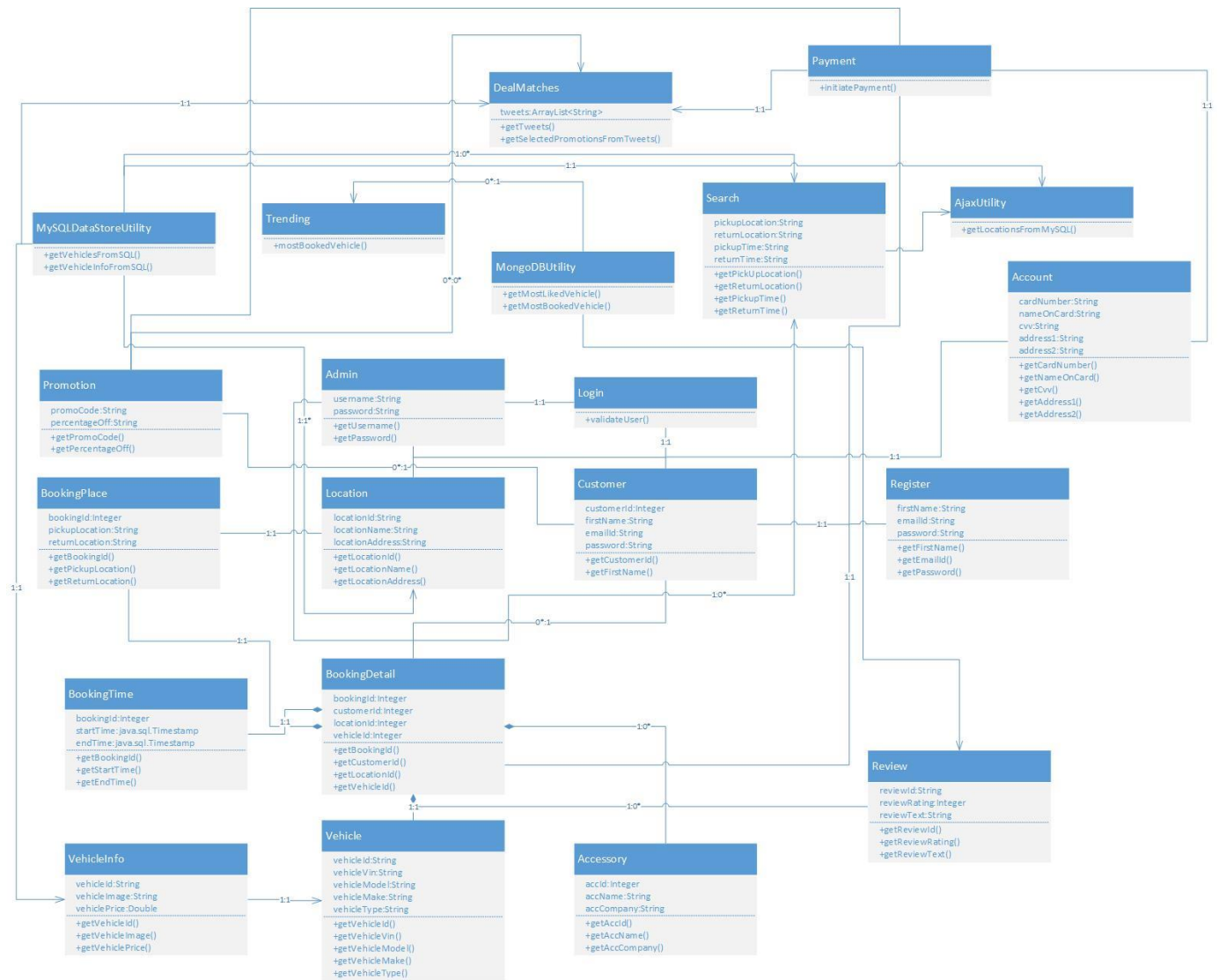
## 3. Use Case diagram



#### 4. Application Structure and Class diagram



*Application Structure*



### Class Diagram

## 5. Technologies used

- ✚ Java
- ✚ Servlets
- ✚ JSP
- ✚ Java Beans
- ✚ MySQL
- ✚ MongoDB
- ✚ CSS
- ✚ JavaScript
- ✚ AJAX
- ✚ Python