

# PetrolHead

Presenters,

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# Project Description

- The project focuses on automobile industry. The primary task is to display the car models and their specifications.
- Will create a social community wherein, users can login and provide ratings for any car.
- Feedback about the car can also be given in the form of comments.
- Users can comment or rate the car models even though they are not direct owners, but could have driven that car anytime.

# Problem Solution

- The solution to this problem is done by retrieving the data provided by Edmunds API.
- The complete specification of each of the car is provided by the Edmunds API.
- The social community is created, by maintaining the activities of each user in the database.
- The profile of each of the user has the recent searches, the comments or ratings given by the user, along with his favorite cars.

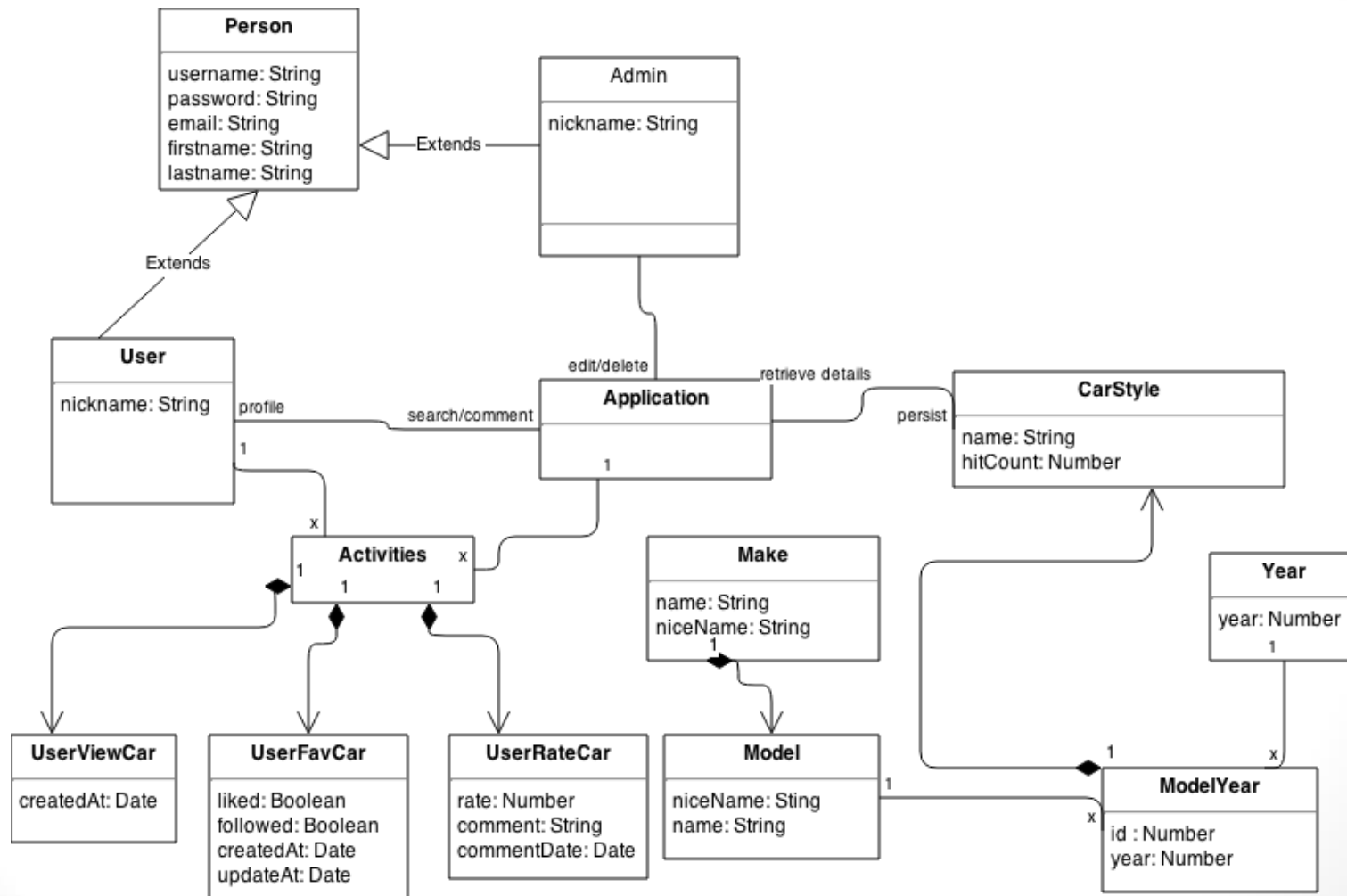
# Edmund Api

- All the api data are picked from the below URL,
- <http://developer.edmunds.com/api-documentation/vehicle/>
- The team maintained a single key throughout the application for making all the api calls.

# Technology Stack

1. Presentation Tier (jsp, angular.js, jquery, html, css)
2. Middle Tier (JPA, JWS, JSON Parsers)
3. Database (MySQL – Tables, triggers, normalised tables, different table strategy)

# Class Diagram



# Class Diagram

- Generalization
  - The classes like user and admin are generalized from the Person class. We have used single table strategy in JPA.
- Class vs Attributes
  - Certain activities like review a car is used as a attribute instead of keeping it as a separate class.
- Composition
  - Admin can edit/delete a user and his comments. So cascade delete is required for all the user activities.
- Reification
  - Many to Many relationship that exists along the classes like model and year, user and application are broken down into association tables.

# Schema

- Mapping tables
- Association tables



# JPA

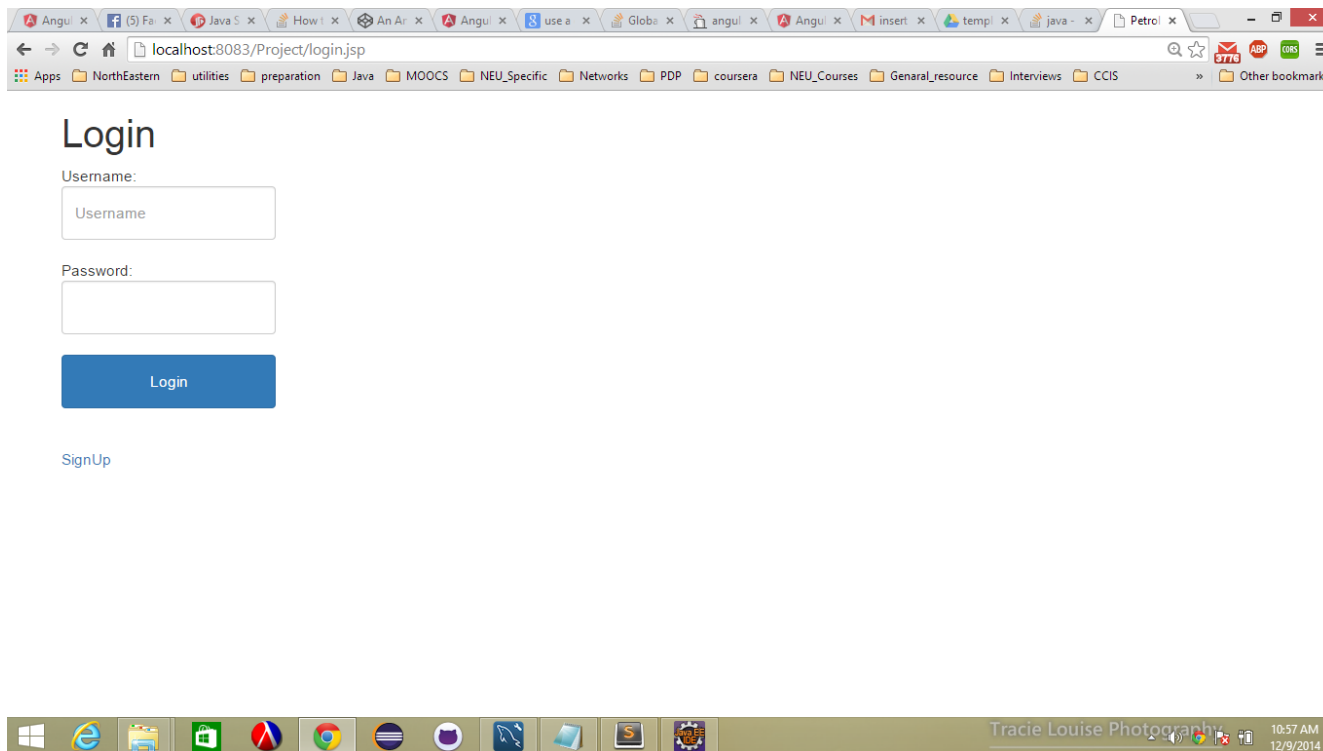
- We have used JPA for the representing the entity classes.
- We have used the techniques discussed in the class, like single and multiple table strategy.
- We have used a separate package to represent all the dao classes.
- Difficulty faced: Many to many table mappings along with new fields.

# JWS

- We have used JWS to expose all our database services in form of GET, POST, PULL and DELETE requests.
- Our project web services produces and consumes JSON for transferring data to and from the application.
- Our web pages creates a AJAX requests to consume the web service and parse the JSON object and display it on the page.
- We insert the Edmunds Api call data as a web service into corresponding tables.

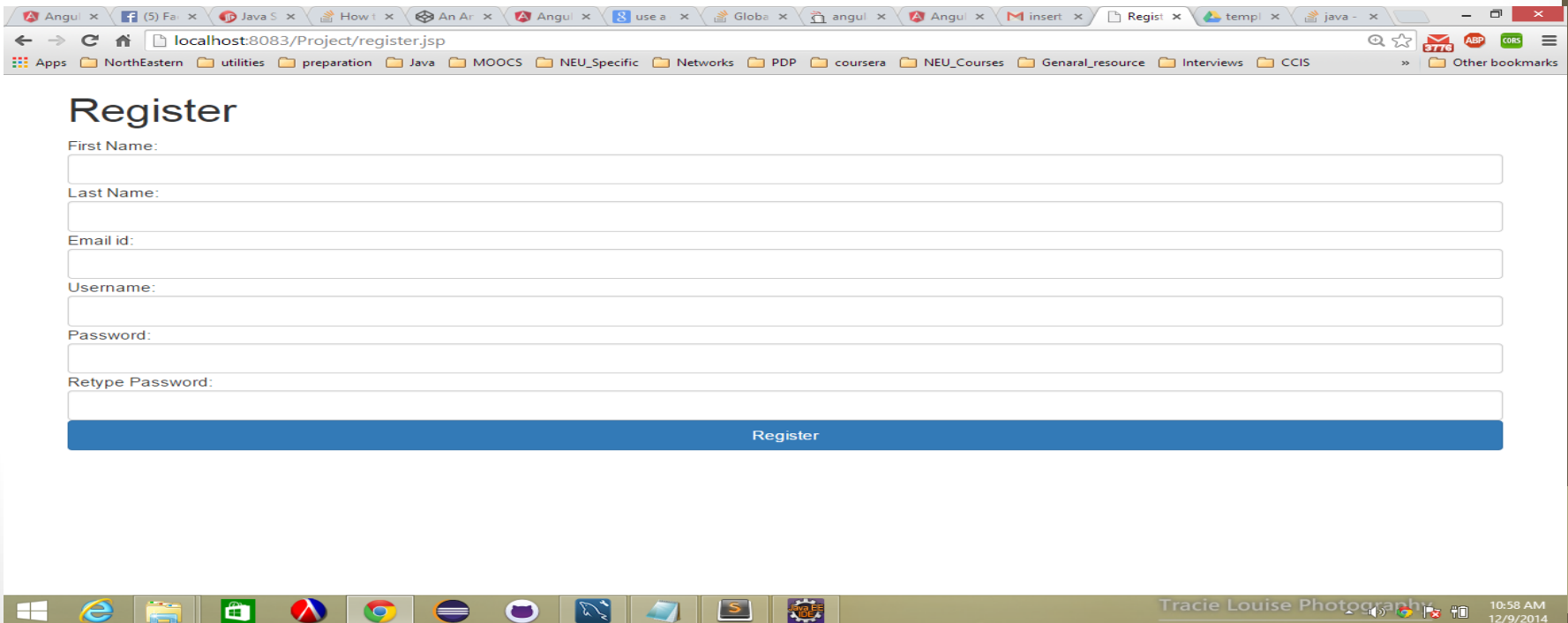
# Login Page

- We have used Servlets and JSP to validate the user of the system. Our system allows only authorized users.
- Screenshot



# Register Page

- Makes a new user for the system and uses the same technology like login page.
- Screenshot



The screenshot shows a web browser window with the address bar displaying `localhost:8083/Project/register.jsp`. The browser's tab bar shows several open tabs, including 'Angul', 'f (5) Fa', 'Java S', 'How i', 'An Ar', 'Angul', 'use a', 'Globa', 'angul', 'Angul', 'insert', 'Regist', 'templ', and 'java -'. The browser's bookmark bar shows various folders like 'Apps', 'NorthEastern', 'utilities', 'preparation', 'Java', 'MOOCS', 'NEU\_Specific', 'Networks', 'PDP', 'coursera', 'NEU\_Courses', 'General\_resource', 'Interviews', 'CCIS', and 'Other bookmarks'. The main content area of the browser displays a registration form titled 'Register'. The form contains the following fields: 'First Name:', 'Last Name:', 'Email id:', 'Username:', 'Password:', and 'Retype Password:'. Each field is represented by a text input box. Below these fields is a blue button labeled 'Register'. The Windows taskbar at the bottom of the screen shows several application icons, including the Start button, Internet Explorer, File Explorer, Microsoft Edge, and several other programs. The system tray in the bottom right corner shows the date and time as '10:58 AM 12/9/2014' and a notification for 'Tracie Louise Photography'.

Register

First Name:

Last Name:

Email id:

Username:

Password:

Retype Password:

Register

# Home Page

- The index page of the application. It displays the top three trending cars of the application.
- Trending cars is based on the hit count stored internally based on the users activities.
- The main tab page consists of Profile tab, Search tab, About tab.

# Home Page


Angular x (5) Fa x Java S x How i x An Ar x Angular x use a x Globa x angul x Angular x insert x Petrol x templ x java - x

localhost:8083/Project/login

Apps NorthEastern utilities preparation Java MOOCS NEU\_Specific Networks PDP coursera NEU\_Courses General\_resource Interviews CCIS Other bookmarks

**Petrolhead** Welcome sara

Home Profile Search About Us Logout



**Lamborghini Aventador**

THE LAMBORGHINI AVENTADOR IS A MID-ENGINE SPORTS CAR PRODUCED BY THE ITALIAN MANUFACTURER AUTOMOBILI LAMBORGHINI.

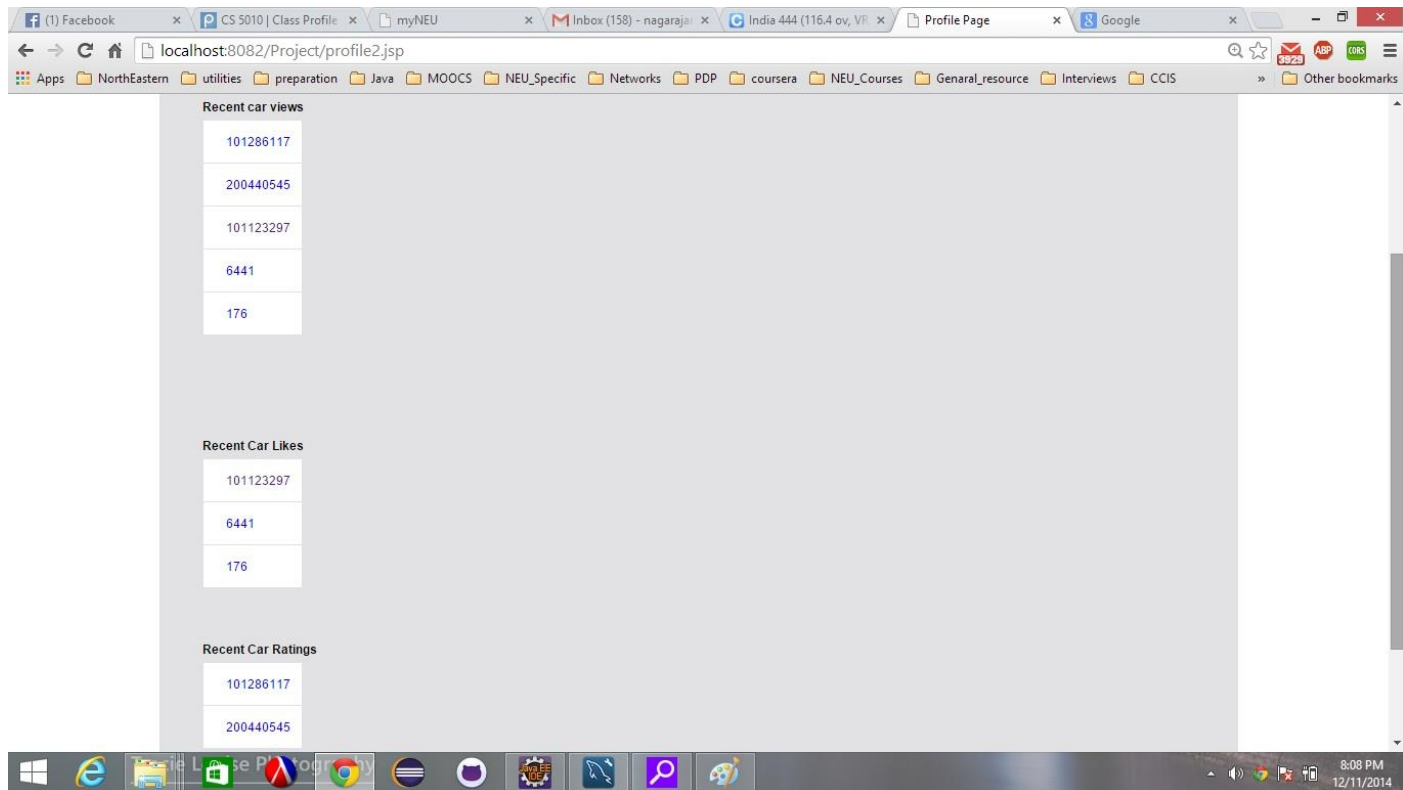
[Read More](#)

Tracie Louise Photography 11:00 AM 12/9/2014

# Profile Page

- Every logged in user can view four basic functionalities like,
- Recent Search
- Favorite Cars
- Followed Cars

# Profile Page

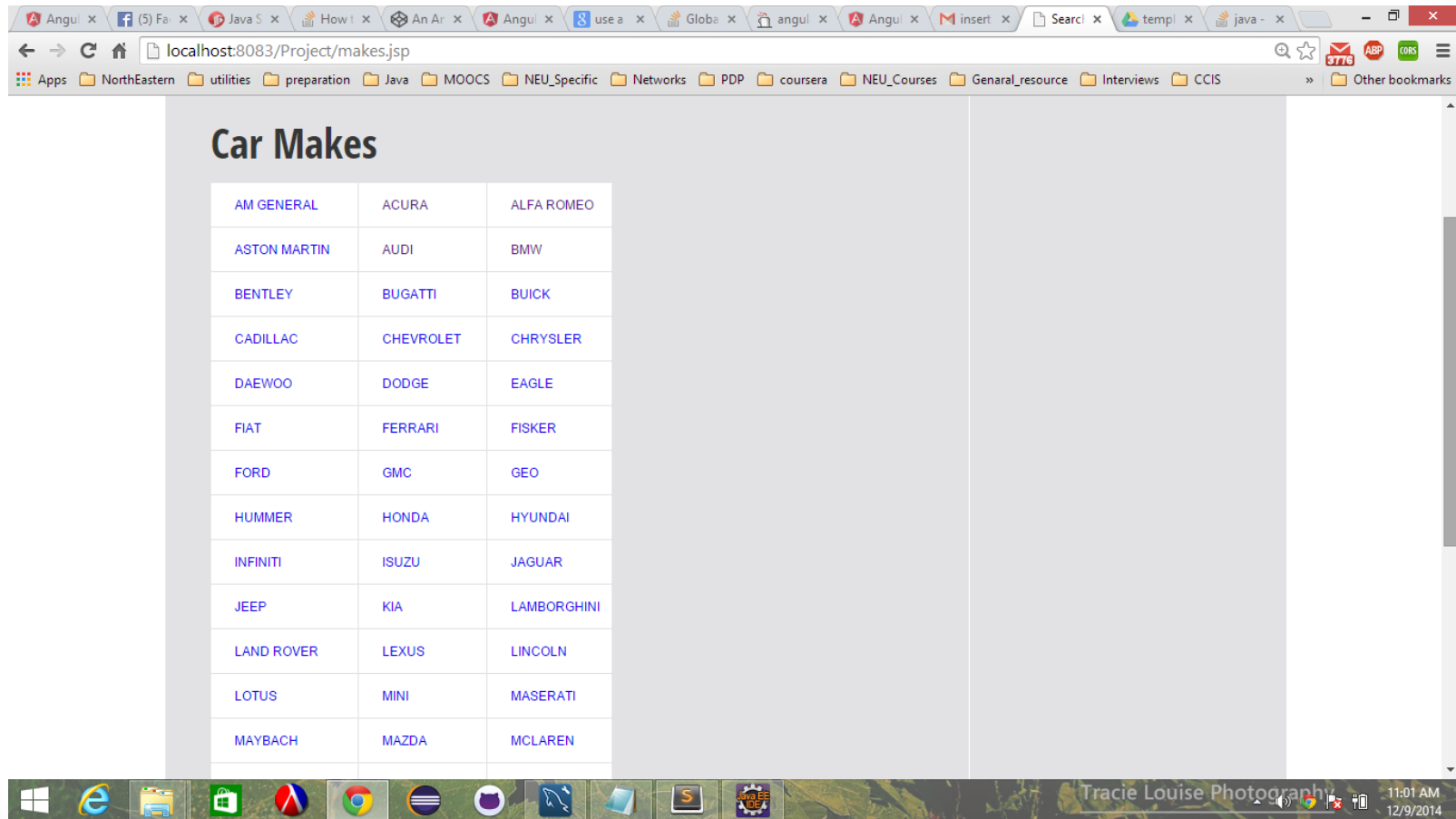




# Search Page

- We provide the search functionality based on the Car makes.
- The user can select anyone of the Car make and then can select the model and the year.
- Based on the year, we display the details of the car on the details page.

# Search Page - Make



The screenshot shows a web browser window with the address bar displaying 'localhost:8083/Project/makes.jsp'. The page title is 'Car Makes'. The main content area contains a table listing various car manufacturers. The table has three columns and 14 rows of data. The browser's taskbar at the bottom shows the date and time as 11:01 AM on 12/9/2014.

AM GENERAL	ACURA	ALFA ROMEO
ASTON MARTIN	AUDI	BMW
BENTLEY	BUGATTI	BUICK
CADILLAC	CHEVROLET	CHRYSLER
DAEWOO	DODGE	EAGLE
FIAT	FERRARI	FISKER
FORD	GMC	GEO
HUMMER	HONDA	HYUNDAI
INFINITI	ISUZU	JAGUAR
JEEP	KIA	LAMBORGHINI
LAND ROVER	LEXUS	LINCOLN
LOTUS	MINI	MASERATI
MAYBACH	MAZDA	MCLAREN

# Search Page - Model

localhost:8083/Project/models.jsp?make=Audi

## Car Models

100	200	80
90	A3	A3 E-TRON
A4	A5	A6
A7	A8	CABRIOLET
COUPE	Q1	Q3
Q5	Q7	R8
RS 4	RS 5	RS 6
RS 7	S3	S4
S5	S6	S7
S8	SQ5	TT
TT RS	TTS	V8
ALLROAD	ALLROAD QUATTRO	

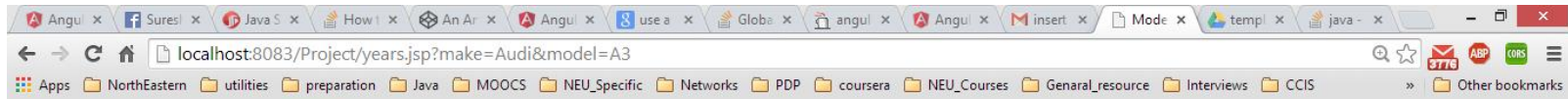
localhost:8083/Project/models.jsp?make=Audi

WEBSITE TEMPLATE DESIGNED BY [TEMPLATEMONSTER.COM](http://TEMPLATEMONSTER.COM)

Tracie Louise Photography

11:02 AM  
12/9/2014

# Details Page - Year



Welcome sara



[Profile](#)

[Search](#)

[About Us](#)

[Logout](#)

## Car Model Years

<a href="#">2006</a>	<a href="#">2007</a>	<a href="#">2008</a>
<a href="#">2009</a>	<a href="#">2010</a>	<a href="#">2011</a>
<a href="#">2012</a>	<a href="#">2013</a>	<a href="#">2015</a>
<a href="#">2016</a>		

WEBSITE TEMPLATE DESIGNED BY [TEMPLATEMONSTER.COM](http://TEMPLATEMONSTER.COM)

localhost:8083/Project/profile2.jsp



# Car Details

- The finer details of the car are presented in this page.
- We provide a whole list of functionalities to the user like,
- Like and follow a car.
- Review and post comments.
- All these user based activities are stored in the database by making use of JWS service calls.

# Details Page


Browser tabs: (1) Facebook, CS 5010 | Class Profile | P..., myNEU, Inbox (158) - nagarajan.m..., FOX FOX SPORTS | Latest Sport..., Details

Address bar: localhost:8082/Project/details.jsp?make=Audi&model=A5&year=2013

Bookmarks: Apps, NorthEastern, utilities, preparation, Java, MOOCS, NEU\_Specific, Networks, PDP, coursera, NEU\_Courses, Genaral\_resource, Interviews, CCIS, Other bookmarks

**Petrolhead** Welcome test\_user

Navigation: Home, Profile, Search, About Us, Logout



**2013 Audi A5**

Engine

Cylinder:4

Displacement:1984

Fuel Type:premium unleaded (required)

Horse Power:211

Torque:258

Transmission

Transmission Type:AUTOMATIC

Taskbar: Windows, Edge, File Explorer, Google Chrome, Firefox, Visual Studio Code, Steam, Discord, Spotify, 7:00 PM 12/11/2014

# Like Car


- We maintain all the records of a user liking the car from the application.
- We also maintain the other side of this relationship as well, like how each car is liked by various users.
- We maintain this relationship in the form of 'Like' button.
- The user can 'update' his action by unliking the car as well.

# Like Car

Facebook CS 5010 | Class Profile | myNEU Inbox (158) - nagarajan.m FOX FOX SPORTS | Latest Sport Details

localhost:8082/Project/details.jsp?make=Audi&model=A5&year=2012

Apps NorthEastern utilities preparation Java MOOCS NEU\_Specific Networks PDP coursera NEU\_Courses Genaral\_resource Interviews CCIS Other bookmarks



**2012 Audi A5**

Engine

Cylinder:4

Displacement:1984

Fuel Type:premium unleaded (required)

Horse Power:211

Torque:258

Transmission

Transmission Type:MANUAL

Number of Speeds:6

Driven Wheels:all wheel drive

Number of doors:2

Unlike Follow

Windows Taskbar: 6:50 PM 12/11/2014




# Unlike Car

Facebook CS 5010 | Class Profile | myNEU Inbox (158) - nagarajan.m FOX FOX SPORTS | Latest Sport Details

localhost:8082/Project/details.jsp?make=Audi&model=A5&year=2012

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### 2012 Audi A5

Engine  
Cylinder:4  
Displacement:1984  
Fuel Type:premium unleaded (required)  
Horse Power:211  
Torque:258

Transmission  
Transmission Type:MANUAL  
Number of Speeds:6  
Driven Wheels:all wheel drive  
Number of doors:2

Like Follow

Windows Taskbar: 6:52 PM 12/11/2014

# Follow Car


- It is implemented on the same lines of 'Like' functionality.
- Only difference is that, we need to update the user about any activity performed on that particular car.
- These updates are in the form of comments given by other users for the same car.
- User can update his action by 'unfollow' button feature.

# Follow Car

Facebook CS 5010 | Class Profile | myNEU Inbox (158) - nagarajan.m FOX FOX SPORTS | Latest Sport Details

localhost:8082/Project/details.jsp?make=Ferrari&model=599&year=2007

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### 2007 Ferrari 599

Engine  
Cylinder:12  
Displacement:5999  
Fuel Type:premium unleaded (required)  
Horse Power:612  
Torque:448  
Transmission  
Transmission Type:MANUAL  
Number of Speeds:6  
Driven Wheels:rear wheel drive  
Number of doors:2

Like UnFollow


Windows Taskbar: 6:53 PM 12/11/2014

# Unfollow Car

Browser tabs: (1) Facebook, CS 5010 | Class Profile | Piv, myNEU, Inbox (158) - nagarajan.m, FOX FOX SPORTS | Latest Sport, Details

Address bar: localhost:8082/Project/details.jsp?make=Ferrari&model=599&year=2007

Bookmarks: Apps, NorthEastern, utilities, preparation, Java, MOOCS, NEU\_Specific, Networks, PDP, coursera, NEU\_Courses, Genaral\_resource, Interviews, CCIS, Other bookmarks



**2007 Ferrari 599**

Engine  
Cylinder:12  
Displacement:5999  
Fuel Type:premium unleaded (required)  
Horse Power:612  
Torque:448  
Transmission  
Transmission Type:MANUAL  
Number of Speeds:6  
Driven Wheels:rear wheel drive  
Number of doors:2

Like Follow

Taskbar: Windows, e, File Explorer, Google Chrome, and other applications. System clock: 6:54 PM 12/11/2014

# Review and Rating


- Every authorized can provide a valid rating and review for the car.
- The user need not follow or like that particular car to comment on it.
- User can make use of the search functionality to access all the cars present in the application.

# Review Car

Facebook CS 5010 | Class Profile | myNEU Inbox (158) - nagarajan.m FOX FOX SPORTS | Latest Sport Details

localhost:8082/Project/details.jsp?make=McLaren&model=P1&year=2015

Apps NorthEastern utilities preparation Java MOOCS NEU\_Specific Networks PDP coursera NEU\_Courses Genaral\_resource Interviews CCIS Other bookmarks



**Cylinder:8**  
**Displacement:3799**  
**Fuel Type:premium unleaded (required)**  
**Horse Power:727**  
**Torque:531**  
**Transmission**  
**Transmission Type:AUTOMATED\_MANUAL**  
**Number of Speeds:7**  
**Driven Wheels:**  
**Number of doors:**

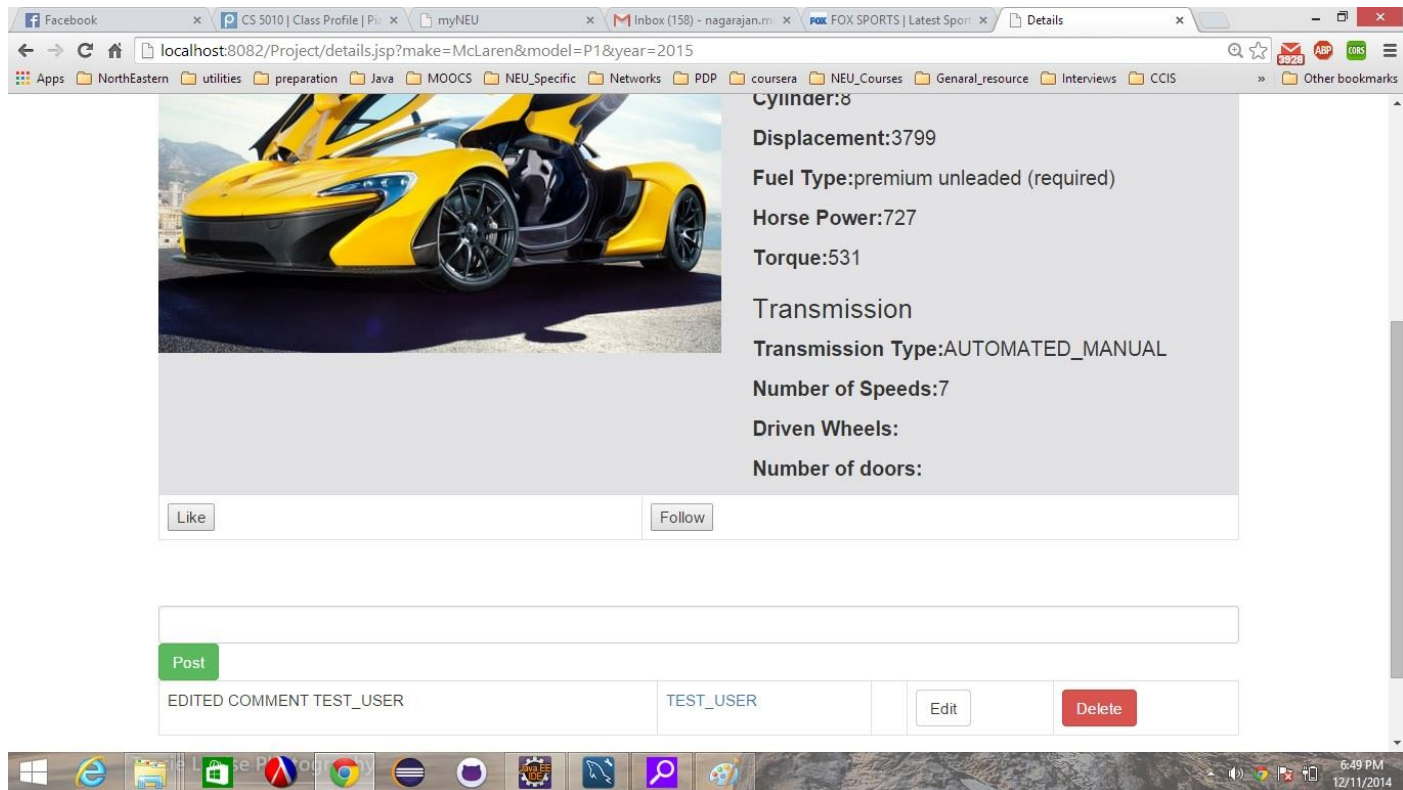
Like Follow

Post

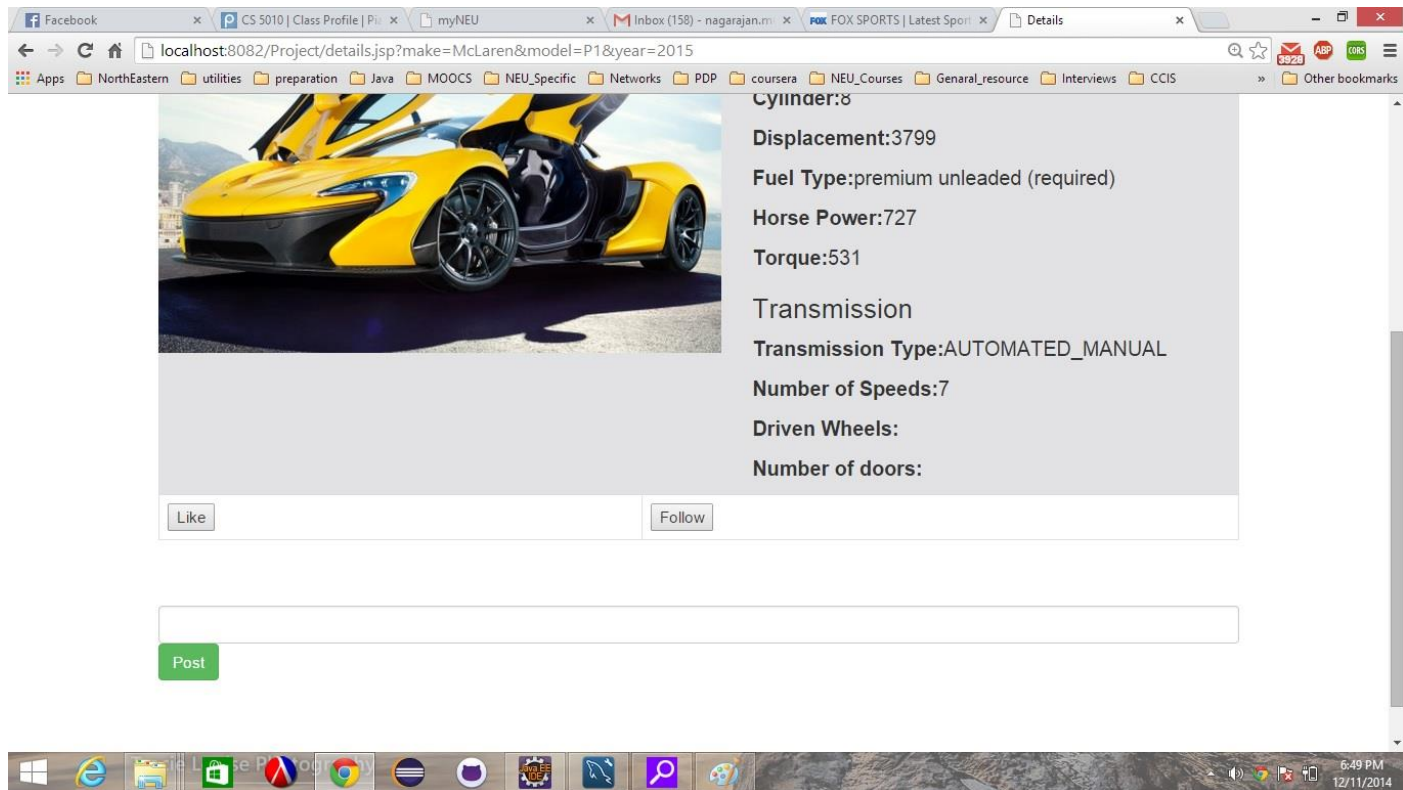
COMMENT FROM TEST\_USER TEST\_USER Edit Delete

Windows Taskbar: 6:45 PM 12/11/2014

# Edit Comment



# Delete Comment

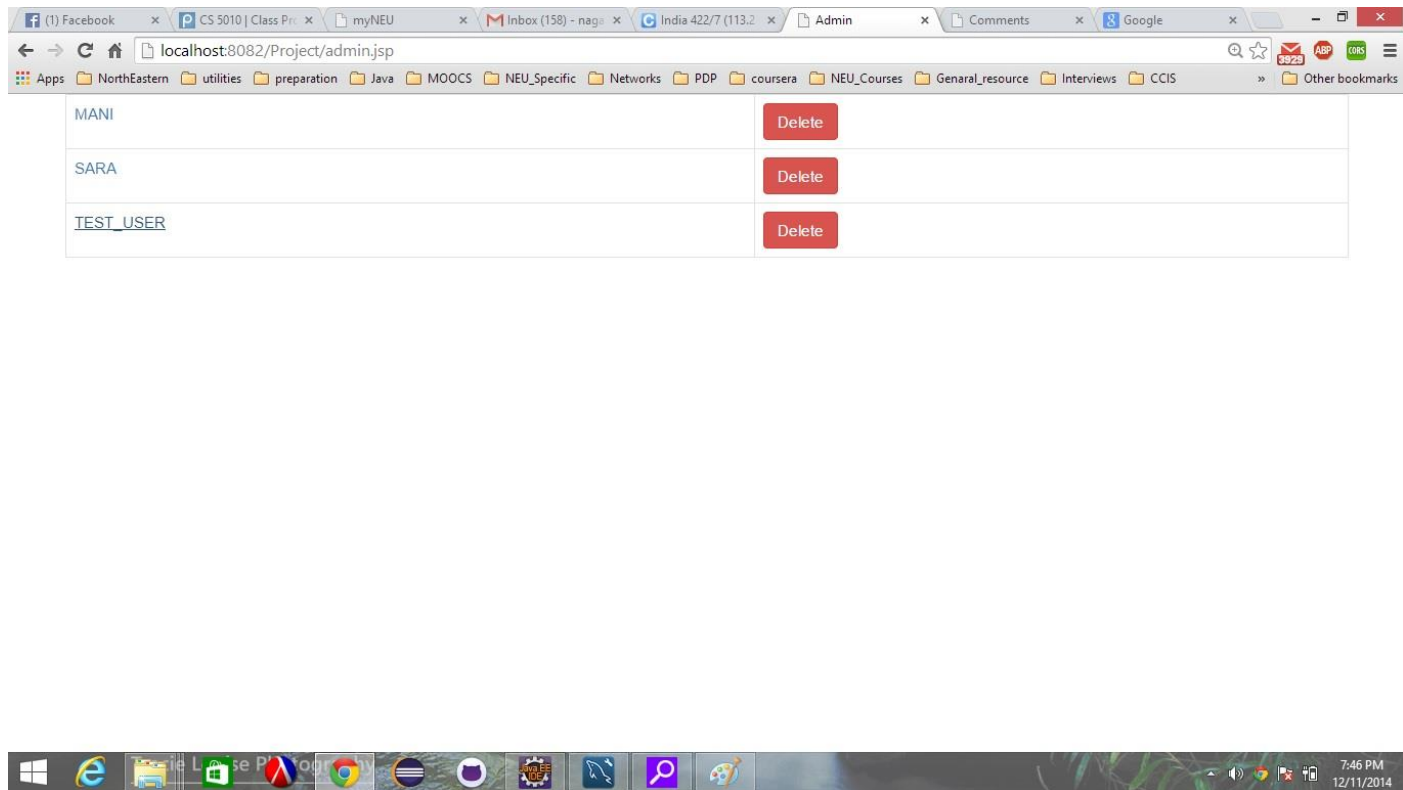




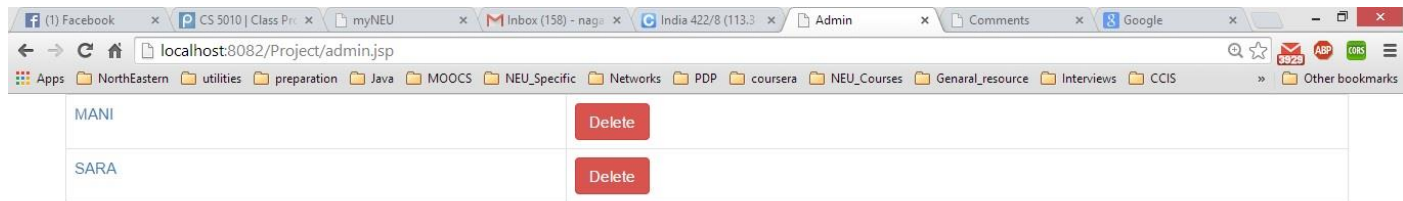
# Admin Page

- Admin users are created through the back door.
- Main functionality is to provide a filter mechanism for weeding out the dummy users.
- Some inappropriate comments need to be removed as well with the help of super user like admin.
- We have created a trigger to store the admin log into a new table.

# Admin Page



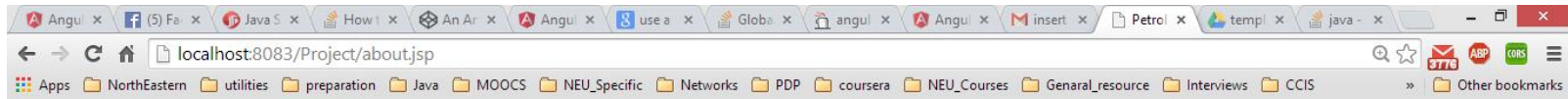
# Delete User



# Delete Comments



# About Us



Welcome sara



Profile

Search

About Us

Logout



GANESH ARUMUGAM

Interested in sporta and technology.



MANIKANDAN NAGARAJAN

Bookworm. Determined to work for google.



SARAVANA GANDHI

Final year masters student.

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# TODO

- We need to complete the hit list count in the home page. We have developed the back end JWS services.
- A nice feature to have is a community based on the price tag/range. Edmund api provide price information.

# References

- Piazza Resources
- MySQL resources
- <http://developer.edmunds.com/api-documentation/vehicle/#sec-5>
-