

Jagannath University

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Course Title: Database Management System Lab

Course Code: CSEL-2204

Project On: Car Sales and Management System

Submission to...

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1. Introduction

Overview (Summary of the Project): The main goal of this "Car Sales And Management Project" is designing and developing an interactive car sales system. These details are routinely maintained depending on the numerous inputs and the changes made in the systems database. The alterations in the database can happen spontaneously, for example, after the system performs calculations on the direct inputs. This system essentially works on input-output entry mechanism. The car sales system follows closely with other developed information Systems focusing on achieving better transactions and more customer satisfaction.

Motivation (Why I choose this project):

- 1) Environment friendly. (Less paper work, less tree cutting.)
- 2) Practical and timely project. (Car users and dealers are increasing rapidly.)
- 3) Enhance software development skills (For instance, we have to use basic OOP concepts like inheritance, encapsulation, polymorphism, abstract class and interface and we have to relate these concepts in various tools activities efficiently.)
- **4**) We will come to realize the importance of teamwork in developing a user-friendly software efficiently and successfully.

Objectives (Outputs that helps society): The objective of this project is to overcome the limitation of the manual approach. This project is

started towards systematically automating all the work that is done manually at present. Our aim is to focus following aspects:

- 1) The main objective is to automate non computer environment.
- 2) To save manpower.
- 3) It will speed the processing of data and transaction.
- **4)** It will provide all the error reporting and handling features, so that the user is warned and made aware of any foreseen errors. Thus, it will reduce the error rate.
- 5) It will provide best security features such as provisions of password.
- 6) It will manage all the information about Inventory, Cars, Car Owners and Inventory. This project is totally built at administrative end and thus only the administrator is guaranteed the access.

Report Organizations (Which section contains what): We will divide the whole project into 5 sections. They are described below:

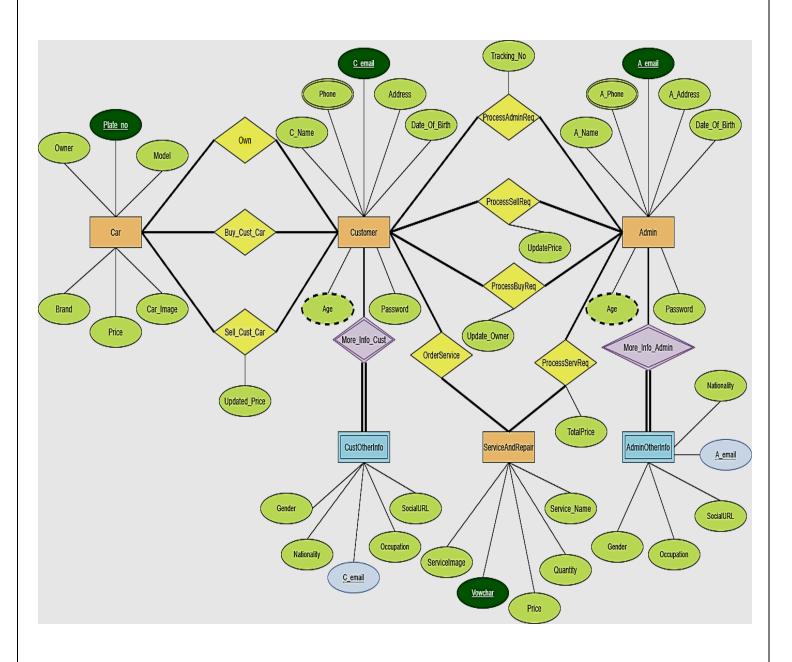
- 1) Customer Section: In the customer section we have 2 categories. First category is buying cars. Here customer can buy numerous cars based on Brand or Model or Car Plate No or Price. The second category is selling cars. Here customer can sell his car/cars (if he has multiple cars) to the admin. In that case those cars will be recorded as used cars to the admin.
- 2) Admin Section: In this section also, there are 2 categories. First the admin will process the requested brand or model cars for the customers. Secondly admin can also buy cars of various brand

- from the Car Inventory. In that case the admin has to login in the project system as a customer.
- 3) Service and Repair Section: In this section customer and admin both can buy various parts of cars like Tires, Paintings, Wheel, Glass, Engine, Petrol etc.
- 4) Add Cars and Services Section: Here Admin can add new cars and services (services means different parts of a car) to the Inventory. In this project there is also the facility of adding used cars and services (those cars and services that are sold out by the customer) in the Car Inventory.
- 5) Others: Besides buying or processing cars and services by customers/Admins, there is also some other interesting facilities. For example, in this project we have New Admin Request section i.e. a customer can request to the present admins to become a new admin. Also, we have videos and reviews section where a customer can watch videos on using and manipulating various parts of cars like tire, wheel etc. efficiently. Also, he/she can view the reviews of other customers on facility of this project management.

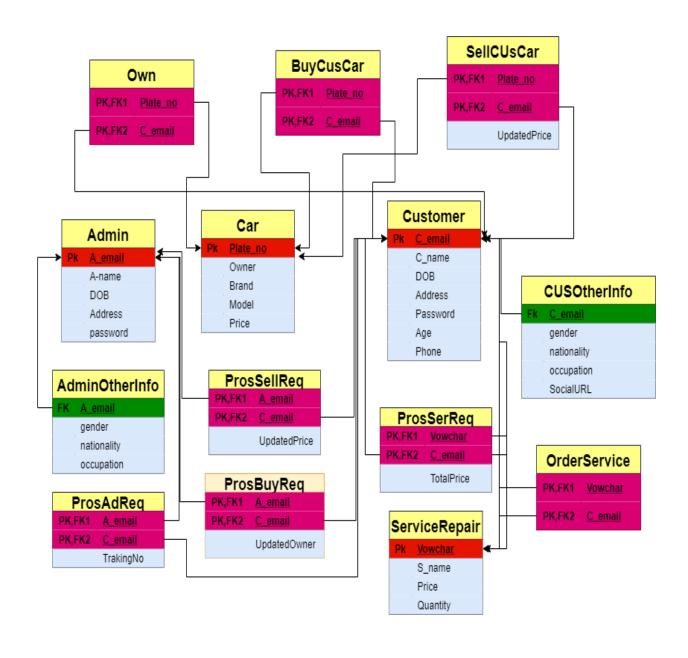
2. Tools

- a) JAVA
- b) JAVA-Swing
- c) MySQL
- d) Netbeans IDE
- e) XAMPP

3. ER diagram



4. Schema diagram

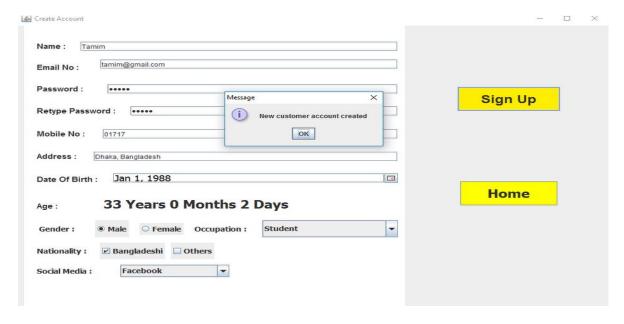


5. Features along with database change

This is the home page of our entire project.



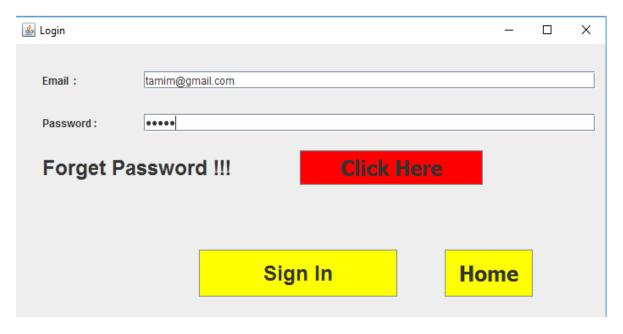
Here a new customer account is created. The customer has to provide all the necessary information(name, email, password, retype password, mobile no, address, date of birth, gender, occupation, nationality, social media). If the password and retype password match, then after clicking the "Sign Up" button a popup message will be displayed showing "New customer account created". At the same time age(derived attribute) is also calculated from date of birth.



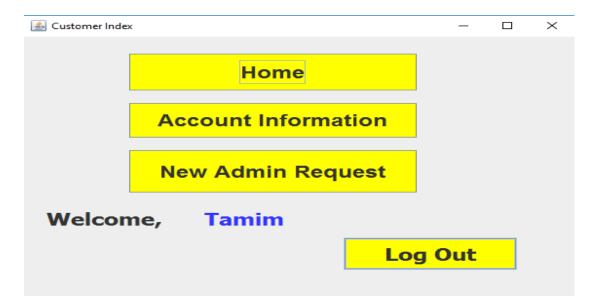
In the database a new record/tuple is inserted in the "customer" table showing all the details of the newly added customer "Tamim".



Customer "Tamim" login into the system by typing his email and password and clicking the "Sign In" button. If he types incorrectly then a pop-up message will be showed "wrong password or email".

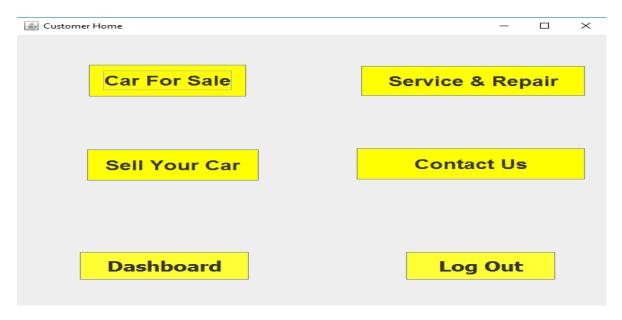


After successfully signing up, Tamim's dashboard opens and there we can see some other options.

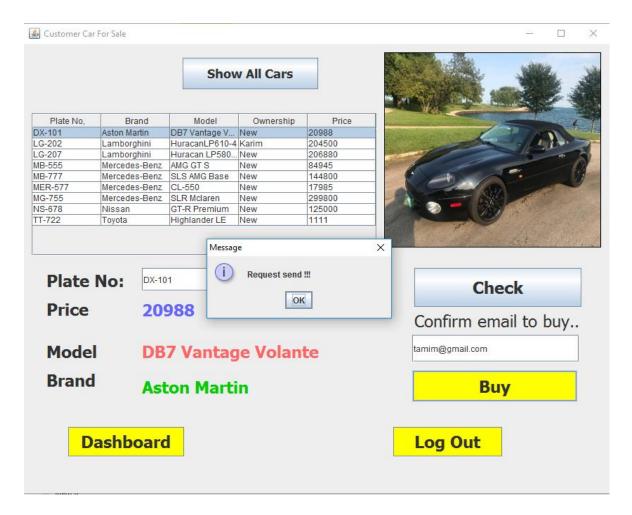


If Tamim clicks the "Home" button in his dashboard then the following page will be opened. Here we can see four options.

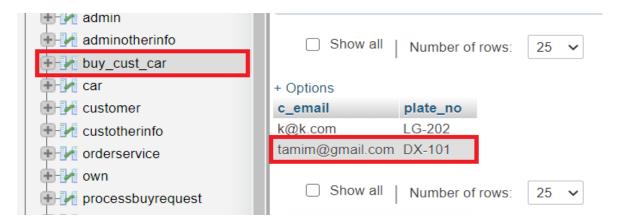
- (1) Tamin can request to buy a car(Car For Sale).
- (2) Tamim can sell his car or cars(if he has multiple cars).(Sell Your Car).
- (3) Tamim can buy various services. (Services and Repair).
- (4) Contact Us.(for contacting with the admins).



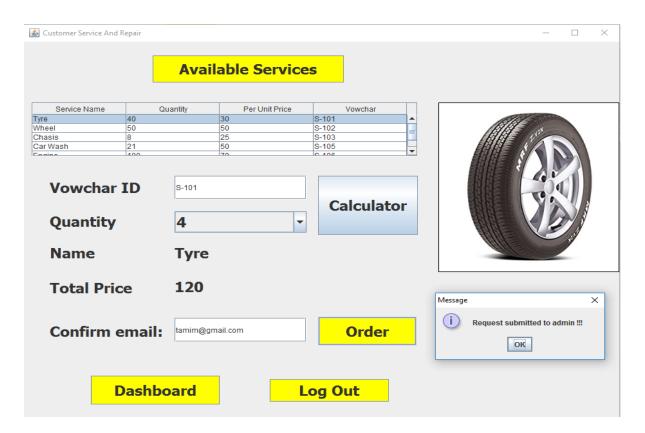
After clicking the "Car For Sale" button the following page is opened. Here, if Tamim clicks "Show All Cars" button then the list of all cars will be showed in the table. If Tamim chooses a particular car and clicks the "Check" button, then all information of cars(Plate_no, Brand, Model and Car Image) will be showed. Then if Tamim clicks the "Buy" button after confirming his email, then a request will be sent to the admin (we can see that in the popup message dialogue).



In the "buy_cust_car" table a new tuple or record is inserted where the c_email denoting the customer email who has sent the request to buy the car and the requested car plate_no.



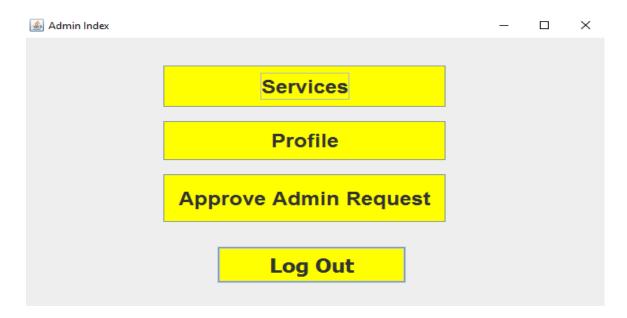
The following page shows the customer service and repair page where the customer can buy various parts of the car according to his demand. If the customer clicks the "Order" button after confirming his email, then his/her request will be sent to the admin. (We can see that in the popup message).



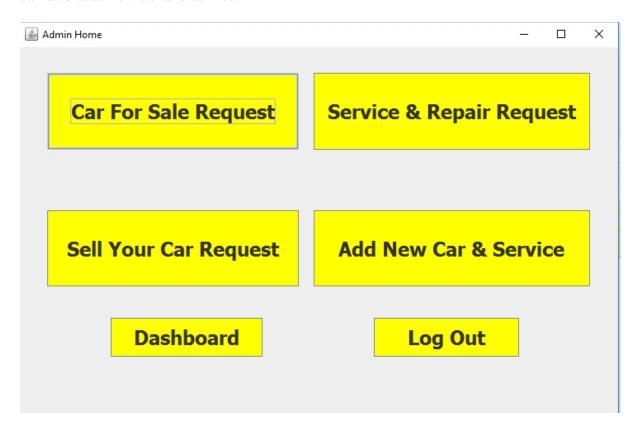
In the "orderservice" table new tuple or record is inserted where "c_email" denotes the customer email who requested the particular service. "Voucher" is the voucher ID of the service item. "quantityAsk" denotes how much the customer requested, "totalCost" is self-explanatory.



after login as an Admin the following admin dashboard page will be opened.

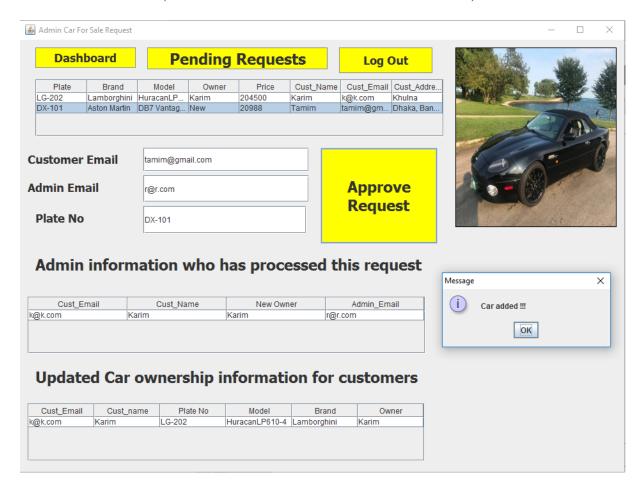


after clicking the "Services" button the following page will be opened. Here we can see an admin can process BuyCarRequest, SaleCarRequest, Service and Repair request and admin can also adds new car and service.

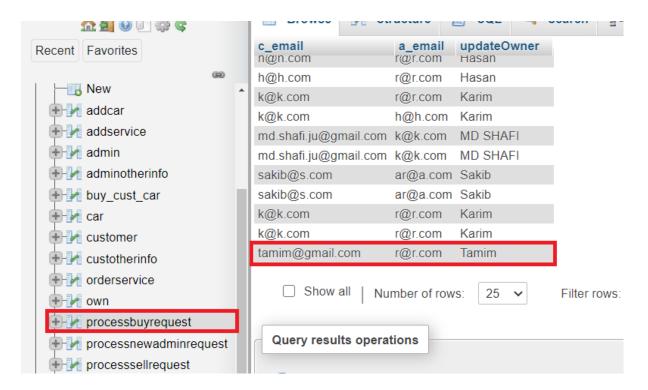


After clicking the "Car For Sale Request" button the following page will be opened. Here by ensuring the customer email, admin email and plate_no and by clicking the "Approve

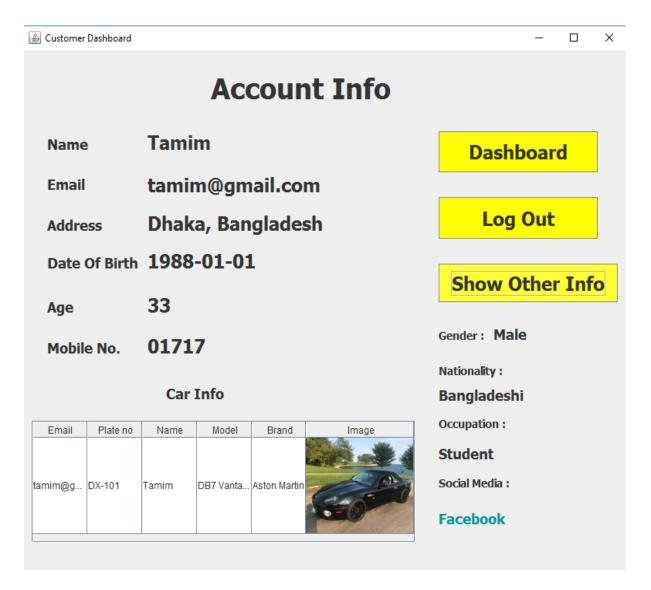
Request" button, the admin has processed the particular car. A popup message will be showed "Car Added".(That is car added to the owner named "Tamim").



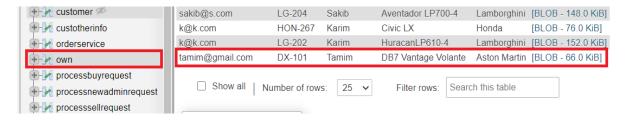
In the "processbuyrequest" table new tuple is inserted showing the c_email (who bought the car), a_email(who processed the buying activities) and updateOwner(showing the recent new owner of the car). In the "buy_cust_car" table, the record (in which the customer "Tamim" requested for buying) will be deleted because his request has already been processed. Also from the car table, the specific car (whose owner is now Tamim) record will be deleted.



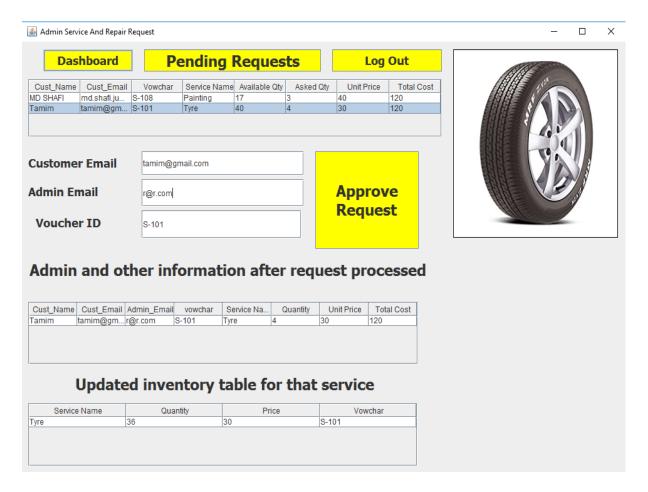
As Tamim bought the "Aston Martin" car recently, his account profile page also reflects the picture of his car along with his other information.



In the "own" table new records will be inserted with the information of the recent owner ("Tamim") and recent car info ("Aston Martin").



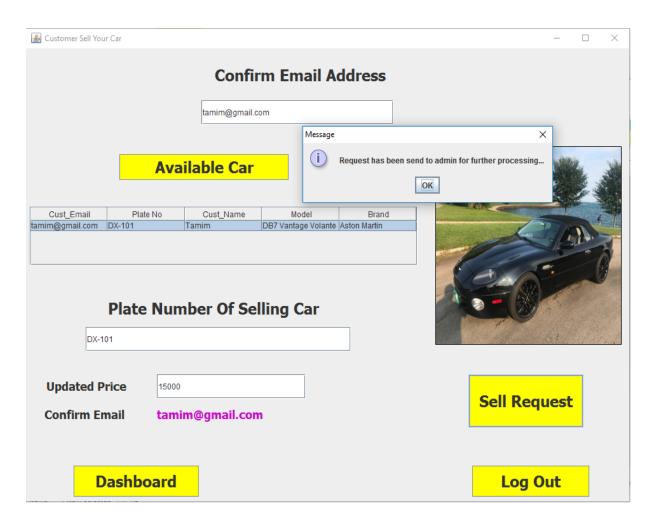
The following page is the service and repair request JFrame. Here after ensuring the customer email, admin email, voucher ID and clicking the "Approve Request" button the admin has processed the service request.



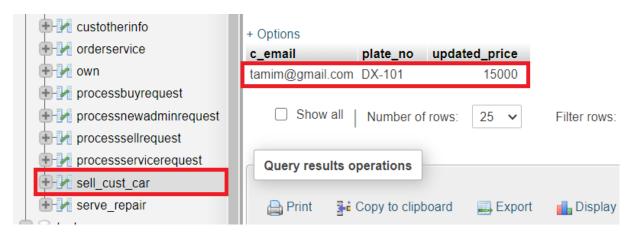
In the "processervicerequest" table showing the a_email(the admin who has processed the request), the other information of the service(voucher ID, price, quantity, total price) of the particular service item and also in the "serve_repair" table the quantity of the particular service item(Car Light) is updated(4 items will be deducted from the total for this particular service item).



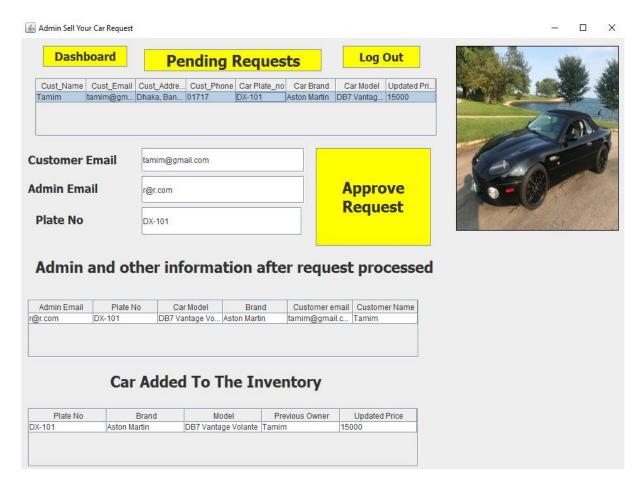
The following page is the page where a customer can sell his car. Tamim first confirms his email address and sets the updated price and then click the "Sell Request" button so request has been sent to the admin. (We can also see that in the popup message).



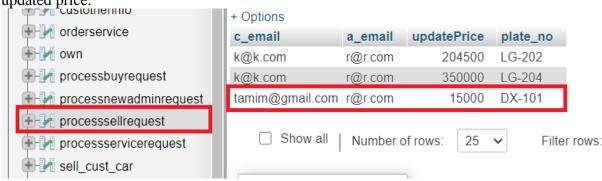
In the "sell_cust_car" table a new record/tuple is inserted with the c_email(the customer who wants to sell the car), car plate_no and the updated price(the price that the customer want in return for selling his car).



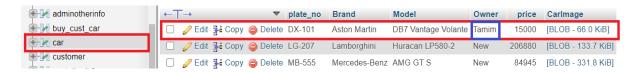
In the following figure admin can process the sale request (sent by the customer). After ensuring the customer and admin email and plate_no and by clicking the "Approve Request" button the admin has processed the sale request.



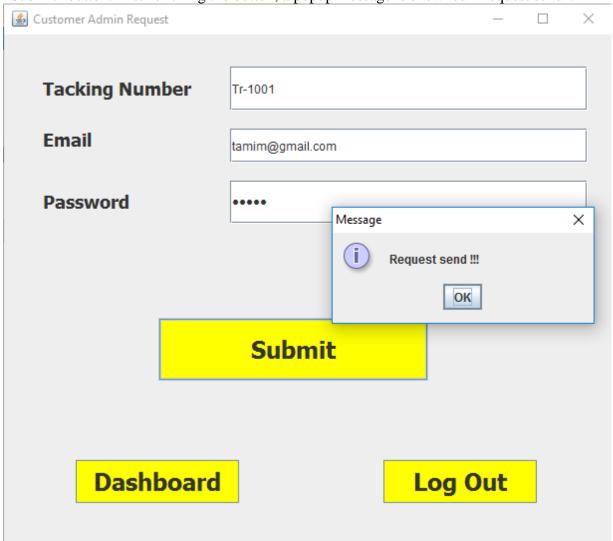
In the "processsellrequest" table a new record will be inserted showing the c_email(the customer who sells the car), a_email(the admin who processed the request), car_plate_no and updated price.



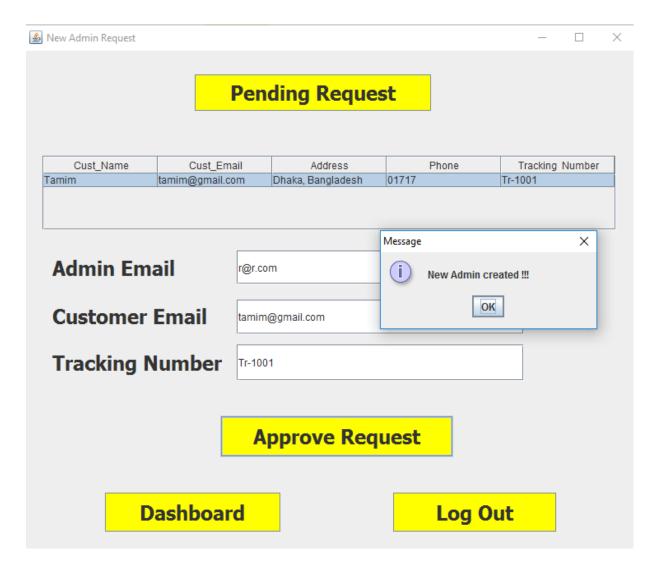
In the "car" table a new car is added and this newly added car is a used car whose previous owner was "Tamim" (shown in blue color).



A customer can also request to be an admin by setting a tracking number and clicking the "Submit" button. After clicking the button, a popup message is showned "Request send".



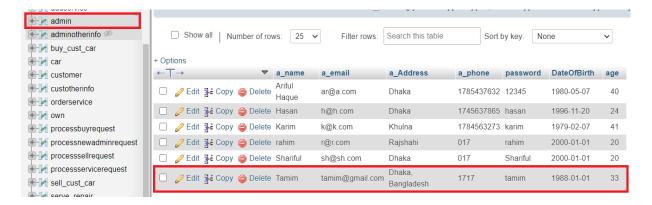
In the following page where admin can process new admin request by ensuring the admin email, customer email and tracking number and clicking the "Approve Request" button, the request will be processed and a new admin will be created (Popup message also shows that).



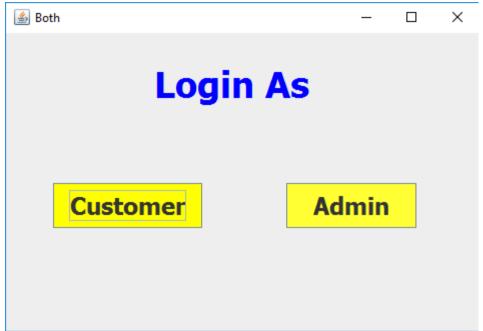
In the "processnewadminrequest" table a new record is inserted showing the c_email(the customer who wants to be an admin), a_email(the admin who processed the request) and tracking number of the newly added admin.



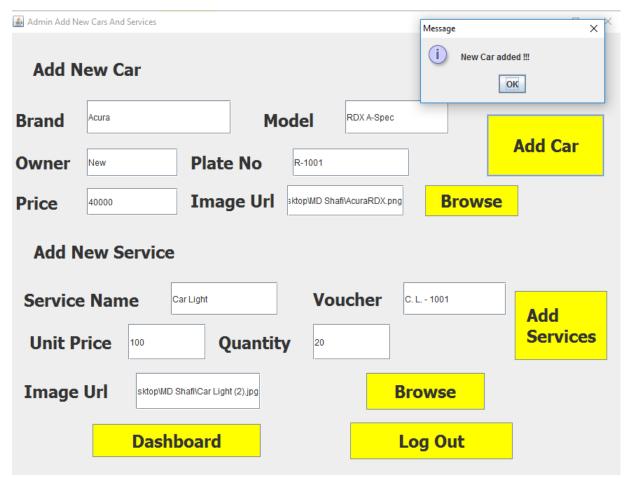
In the "admin" table and "adminotherinfo" table the newly created admin's information will be inserted.



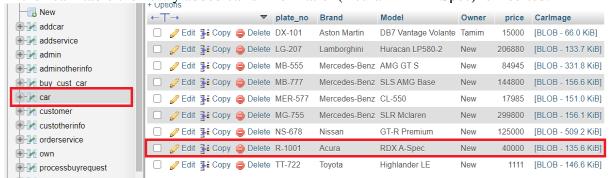
Now if Tamim log into the system the following page will be opened because Tamim is both now a customer and an admin.



This is the page (following figure) where admin can add new car and new service item. After providing the various information of the new car and service item and also their images (by the "Browse" button we can choose the image path) and clicking the "Add Car" and "Add Service" button new car and new service will be added to the inventory.



In the "car" table the newly added car's information(Acura RDX A-Spec) is inserted.

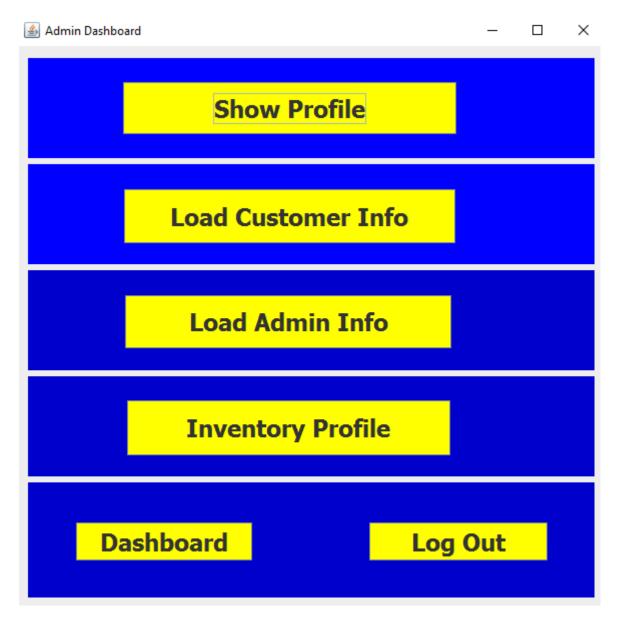


In the "serve_repair" table the newly added service item (car light) information will be inserted.

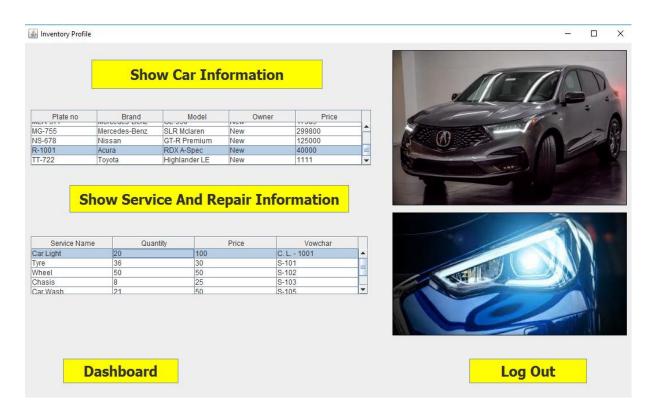


This is the admin dashboard page.

- (1) "Show Profile" button: shows admin profile information
- (2) "Load Customer Info" button: shows the list of all customers.
- (3) "Load Admin Info" button: shows the list of all admins.
- (4) "Inventory Profile" button: shows all car's and services' information with their images.



The following page is the "Inventory Profile" page. Here the highlighted rows in both the tables shows the newly added car(Acura RDX A-Spec) and service (car light) image and info as well as other car's (unhighlighted) info. If we click any of the row in both the tables, the respective Car and Service item's image will be shown in the respective JLabel.

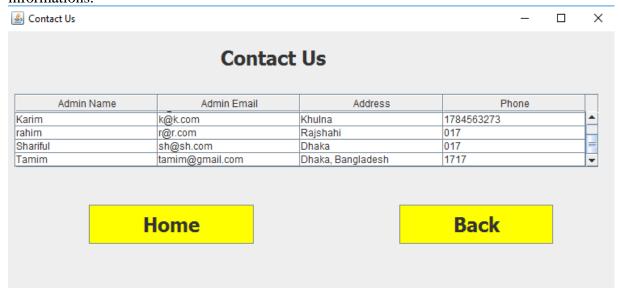


If for some reason, a customer forgets his password or email, he can click the "Click Here" button. After clicking the button, a new JFrame named "Contact Us" will be opened.



In the "Contact Us" page, all the admin's phone numbers and other informations are provided (although password is not provided for privacy and security measures). Here customers who

forget their password or email can contact with any of these admins to retrieve his/her account informations.



6.Conclusion

We have learned many new techniques, methods and strategies by doing this project ("Car Sales And Management System"). Thank you madam for allowing us (MUHAMMAD GOLAM ROHMAN SHAFI, MD. RAIHAN KARIM PRIYO, MD. AMINUL ISLAM RAFI) to do this wonderful informative and interesting project.