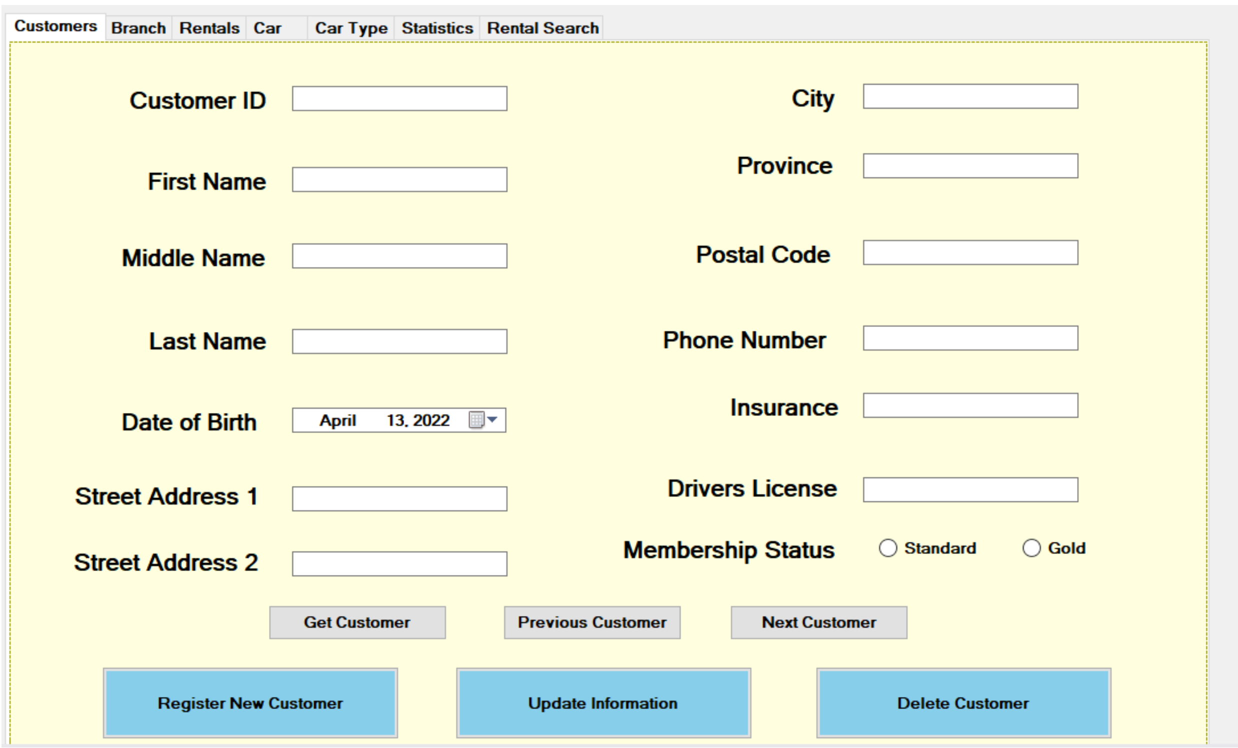
Database Usage Guide

Group 2 Members: Vlad(25%), Balkirat(25%), Adam(25%), Romel(25%)

The app is made to be used by a car rental agency in order to allow agents to process rental reservations. The app contains 7 tabs. The usage of each screen is as follows:

Customers



- This tab is where customer information is entered/updated/deleted. There are 14 fields which retain information about the customer.
- The only field that is **required** is the "Customer ID" field in order to perform actions by the buttons which are located at the bottom of this screen.
- This Tab contains 6 buttons:

1. Register New Customer
    - This button adds a customer into the system
    - In order to register a new customer, a **valid "Customer ID" must be entered**
        - A valid Customer ID consists of an entry of numbers
    - The date of birth and Customer ID will always be inserted into the database when a new customer is created
    - Any other fields may be left blank as needed
    - When all desired info is entered, press the button in order to add the customer into the system

2. Update Information
    - This button updates a customer’s information
    - In order to update a customer’s information a **valid “Customer ID” must be entered** in the “Customer ID” field.
        - Otherwise, an error will display requiring a valid Customer ID
    - The agent may manually enter the customer’s information OR use the Get Customer button. (More information on this button is described below)
    - Once the customers information has been updated/changed as desired, press the button and the customers info will be updated in the system

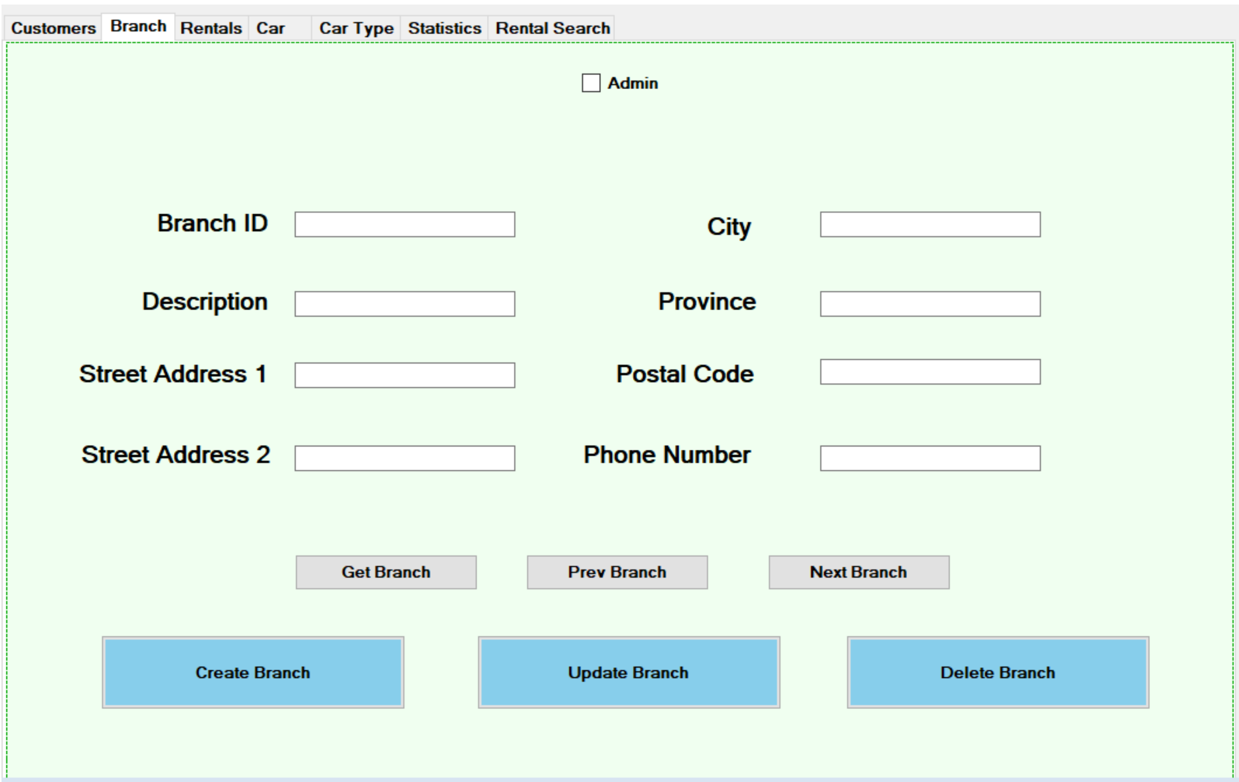
3. Delete Customer
    - This button deletes a customer and their information from the system
    - In order to delete a customer from the system a **valid “Customer ID” must be entered** in the “Customer ID” field.
        - Otherwise, an error will display requiring a valid Customer ID
    - Once a valid Customer ID is entered, press the button to delete the customer, another window will open to ensure that you want to delete the customer from the system.
    - In addition to confirmation, a second warning will be displayed, which will warn the user that all the transactions done by that customer will also be deleted and if the user still wants to proceed.
    - Once clicked yes, the system will check if the customer has any ongoing or any future rentals, and if found any the customer will not be deleted with an error message that some ongoing rentals transactions are found for this customer.
    - Once all the transactions for this customer have been finished, only then the user can delete the customer.

4. Get Customer
    - This button will automatically fill out all the fields based on an **existing Customer ID**
    - A valid Customer ID must be entered in the “Customer ID” field for the information to be automatically filled out
    - Once a valid Customer ID is entered and accepted when the button is pressed, all information stored from the system pertaining to the given Customer ID will fill all respective fields.

5. Previous/Next Customer
    - These buttons cycle through the list of existing customers in the system until the end/beginning
    - The Customer ID field must be filled out and **must be an existing Customer ID** to use these buttons
    - Once the Customer ID is valid, press the desired button
    - The resulting information that will be displayed will be the next/previous customers information

- A message will appear if the user is at the beginning/end of the list of customers

Branch



- This tab is where branch info is filled out and entered/updated/deleted.
- Branch ID must be filled to perform the button actions which are located at the bottom of the screen.
- All other fields may be left blank as desired.
- This tab contains 6 buttons:

1. Create Branch
    - This button adds a branch into the system
    - A **valid Branch ID** must be entered to enter a new branch into the system
    - Any other fields may be left blank as needed
    - When all desired info is entered, press the button to add the new branch into the system

2. Update Branch
    - This button updates branch info
    - A **valid and existing Branch ID** must be entered in the “Branch ID” field to update this branch’ info.

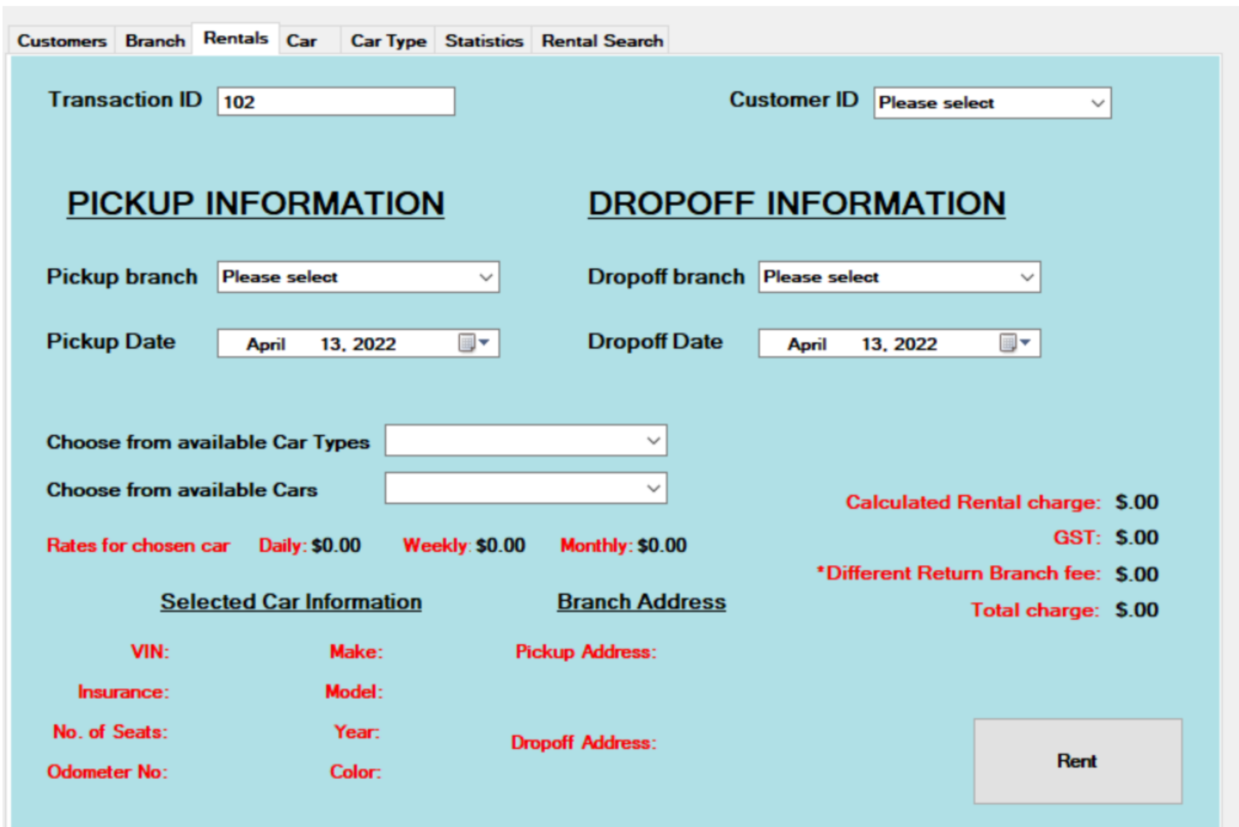
- The rest of the branch's info may either be manually filled out OR it may automatically be filled out using the Get Branch button. (More info on this button below)
- Once all desired information is updated, press the button and the updates will be reflected in the system

3. Delete Branch
   - This button deletes a branch and all its information from the system
     - A branch cannot be deleted if a Car is located at that branch, user have to change the location of the cars in order to delete the branch.
     - A branch can also not be deleted if there is any ongoing or future transaction related to that branch.
   - A **valid and existing Branch ID** must be entered in the "Branch ID" field to delete this branch from the system
   - Once the desired branch ID is entered, press the button and another window will open to ensure that the user wants to delete the branch from the system. Next a warning will be shown that all the past transactions will be deleted and if user still want to proceed.
   - If clicked yes the branch will be deleted including all the past transactions related to that branch.

4. Get Branch
   - This button will fill out all fields based on an **existing Branch ID**
   - A **valid and existing Branch ID**, once entered, all info pertaining to that branch ID will automatically fill out all fields that is stored in the system once the button is pressed.

5. Prev/Next Branch
   - These buttons cycle through the list of existing branches in the system until the end/beginning
   - The Branch ID field must be filled out and **must be an existing Branch ID** to use these buttons
   - Once the given branch ID is valid, press the desired button
   - The resulting information displayed will be the next/previous branches information all filled out in each field as stored in the system
   - A message will appear once the user reaches the beginning/end of the list of branches

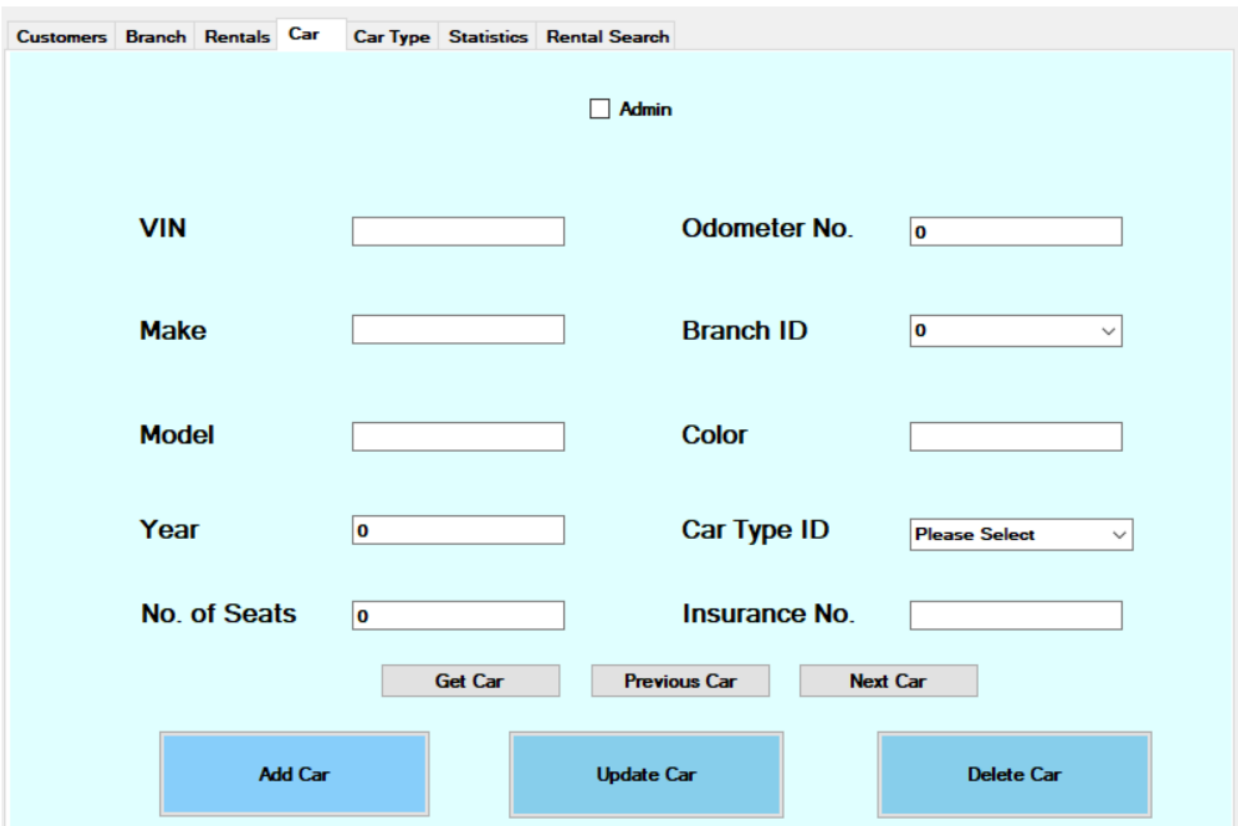
Rentals



- This tab is where a customer's transaction information is performed.
- The Customer ID pulls from the list of existing customers in the system
- The Pickup/Dropoff branch pulls from the list of existing branches
- The desired Pickup/Dropoff is also entered here.
- Only the Car Types available at the selected pick up branch are shown.
- The available cars are based on the selected car Type, location of the pickup branch and the dates of pickup and dropoff. Only cars that are available in the selected branch between the selected time period will be shown in the dropdown list.
- A customer may drop-off their car to another branch as desired, however there is a fee applied if done. Gold Membership customers are exempted from the fee.

- At the bottom of the screen, Additional Information of the car selected is displayed along with the full address of Pickup and Dropoff location.
- Once all information is entered as desired press the Rent button to complete the transaction
- After the transaction is completed, the location of the car selected is changed to the dropoff location that the customer selected.
- After every transaction, the system checks if the customer has 3 transactions in the current year and awards them the gold membership.

Car



- This tab is where a Car is entered into the system
- A car **must have a VIN and belong to a Branch and have a Car Type ID**
- If Year, No. of Seats and Odometer No. is not entered, they will be entered into the system as 0.
- This tab contains 6 buttons:

1. Add Car
    - This button adds a Car into the system

- A **valid VIN, existing Branch ID and existing Car Type ID** must be entered to create and add a car into the system
- Any other field may be left blank if desired
- Once all desired fields have been filled out, press the button and the car will be entered into the system

2. <u>Update Car</u>
    - This button updates a Cars information based on an **existing VIN**
    - A **valid VIN, existing Branch ID and existing Car Type ID** must be entered to update a cars information
    - The information may either be filled out manually or automatically (using <u>Get Car</u> button, explained below) before updating its information
    - Once the information has been updated as desired, press the button and the cars info will be updated in the system

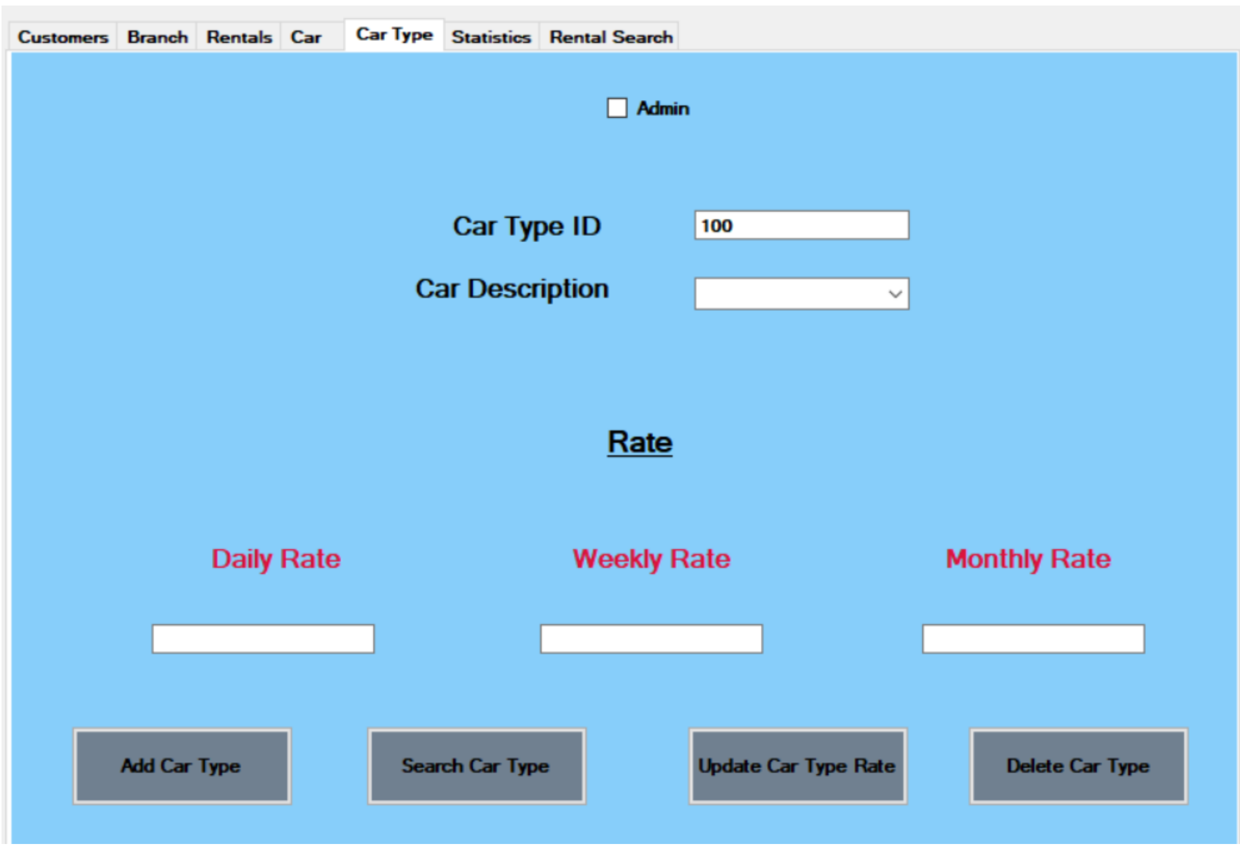
3. <u>Delete Car</u>
    - This button deletes an existing car from the system and branch (Will not be available at the branch ID it was once associated with)
        - A car that is involved in ongoing or any future rental transaction can not be deleted.
    - A **valid and existing VIN** must be entered to delete a car from the system
    - Once the desired VIN is entered, press the button and another window will open to ensure that the user wants to delete the car from the system.
    - Then a warning message will be displayed stating that all the past transactions related to that vehicle will be deleted, and if user still want to proceed.
    - Once clicked yes the car will be deleted including all the past transactions related to that car.

4. <u>Get Car</u>
    - This button automatically fills all fields based on an **existing VIN**
    - A **valid and existing VIN**, once entered, all info pertaining to that VIN will automatically fill out all fields that are stored in the system once the button is pressed.

5. <u>Previous/Next Car</u>
    - These buttons cycle through the list of existing cars in the system until the end/beginning
    - The VIN field must be filled out and **must exist in the system** to use these buttons
    - Once the given VIN is valid, press the desired button
    - The resulting information displayed will be the next/previous cars information all filled out in each field as stored in the system

- A message will appear once the user reaches the beginning/end of the list of cars

<u>Car Type</u>



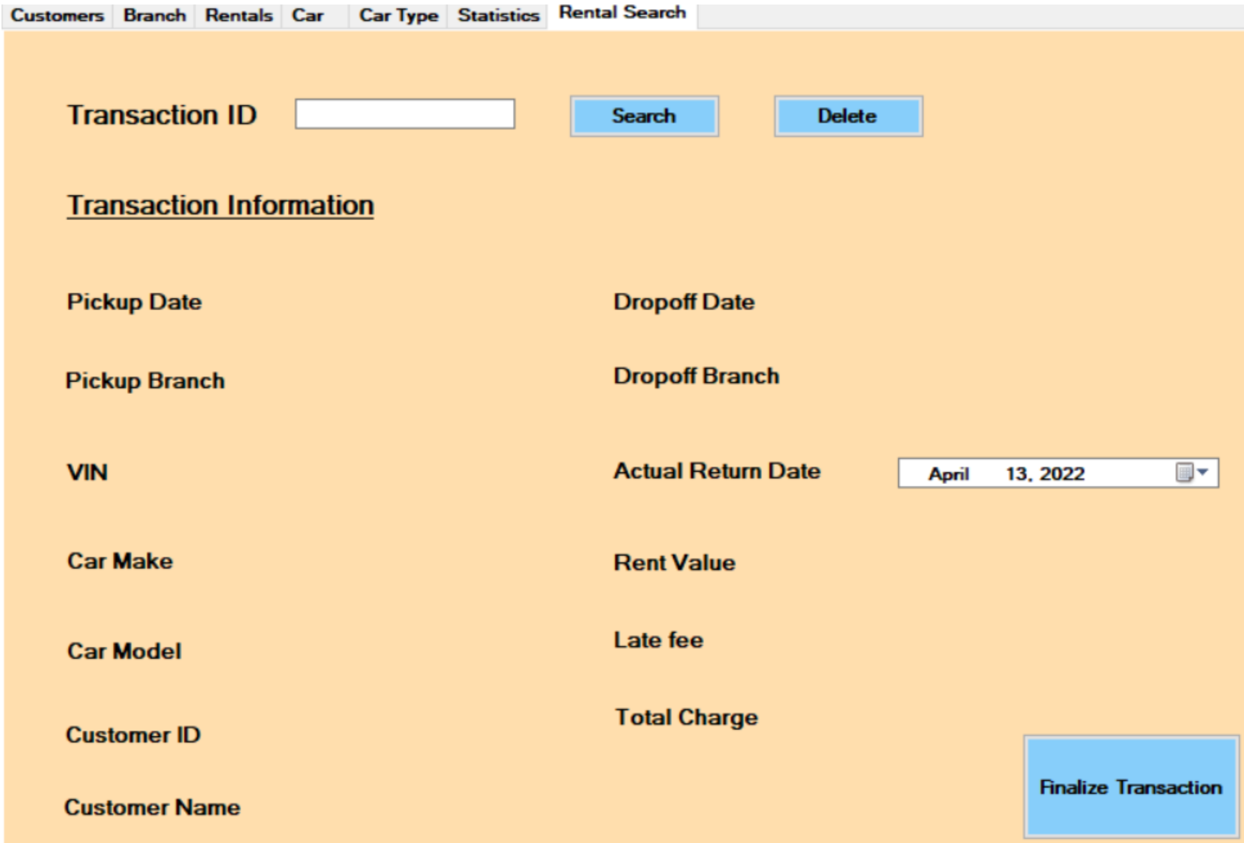
- This tab is where Car Type IDs are defined.
    - A description and daily/weekly/monthly rate is then associated with the Car Type ID
- The user may choose from the available Car descriptions to associate with the entered Car Type ID
- The user will also set the Daily/Weekly/Monthly rate for renting a car associated with the entered Car Type ID
- This tab contains 4 buttons:

1. <u>Add Car Type</u>
    - This button enters a new Car type into the system
    - Once a **valid Car Type ID** is entered and the desired information is filled out, press the button and the Car type will be added into the system

2. Update Car Type
    - This button updates an **existing Car Type**
    - A **valid and existing Car Type ID** must be entered to updates its information
    - Once the desired information has been updated, press the button and the Car Types information will be updated
3. Delete Car Type
    - This button deletes a Car Type from the system
        - *This cannot be done if an existing Car is associated with the Car Type ID being deleted
    - A **valid and existing Car Type ID** must be entered to delete its information from the system
    - The information may either be filled out manually or automatically (using Search Car Type button, explained below) before updating its information
    - Once the desired Car Type ID is entered, press the button and another window will open to ensure that the user wants to delete the Car Type ID from the system. The Car Type ID will then be deleted once completed.

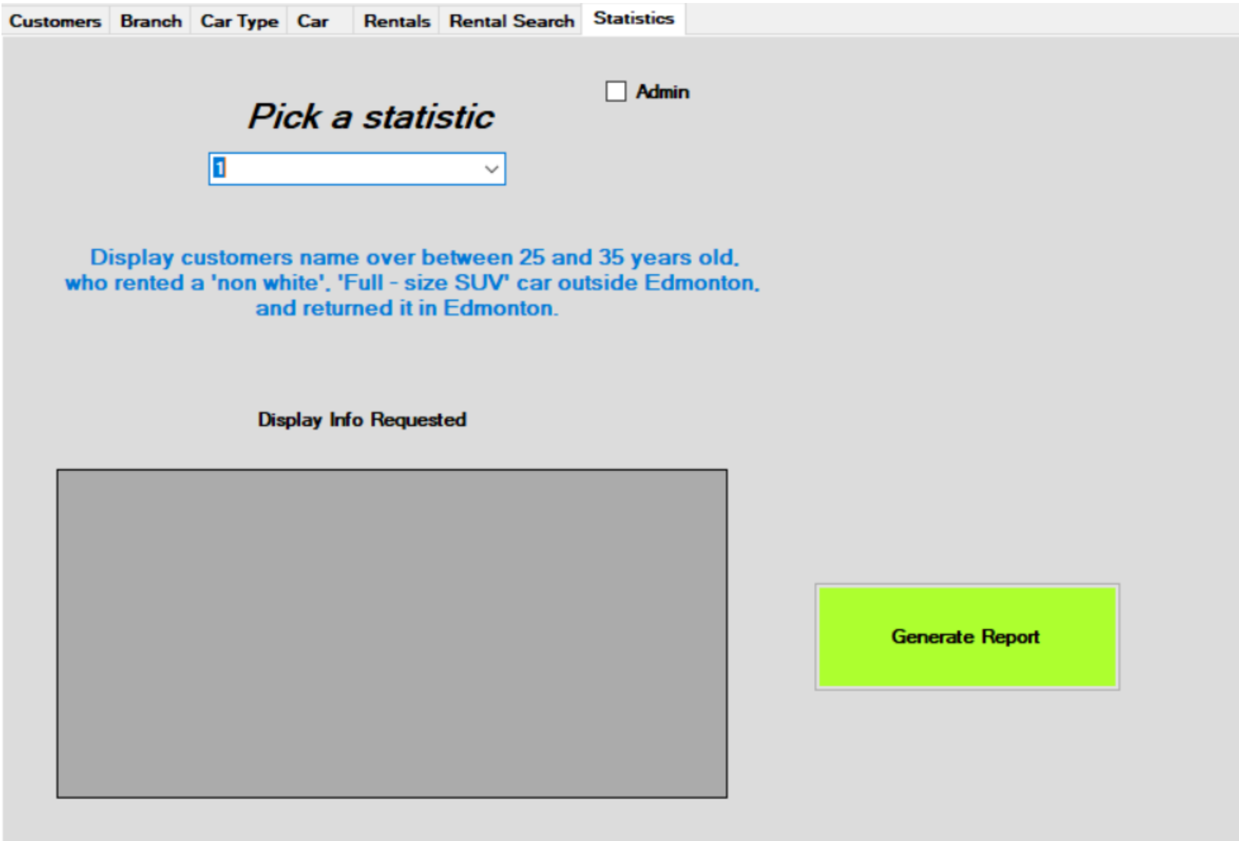
4. Search Car Type
    - This button automatically fills out all information based on an **existing Car Type ID**
    - A **valid and existing Car Type ID**, once entered, all info pertaining to that Car Type ID will automatically fill out all fields that are stored in the system once the button is pressed.

<u>Rental Search</u>



- This tab is where the user may search for or delete an existing rental transaction
- Given an **existing** transaction ID a user can find all the info of that particular transaction
- The transaction can also be finalized at this point
  - The total value can be updated if the customer has returned the vehicle later than when they initially rented the vehicle

Statistics



- This tab displays statistical information about specific things in the system
- Specifically, it runs complicated queries to display interesting information to the user
- The queries that can be run are as follows:

1. Query 1
    - display customers' names between 25 and 35 years old, who rented a "non white", "Full-size SUV" car outside Edmonton, and returned it in Edmonton.
2. Query 2
    - Display Total No. of days for which each car from each car Type has been rented for including the total revenue generated by that car.
3. Query 3
    - Display total spending of each customer from oldest to youngest.
4. Query 4
    - Display the most popular car type rented by people in month X.
        - Another dropdown box will appear, prompting the user to select a date range to choose how the query will run

5. <u>Query 5</u>
    - Display the name of all branches from where every car has been rented at least once.