**Product Backlog - Car Rental Project**

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| **#** | **Story** | **Story Points** | **Priority** |
| **1** | As a **customer**, I want to be able to **filter all of the available cars** so I **can choose the most appropriate car for me.**  Form on the home page containing all of the car specifications as fields is required. This enables the user to search all available cars that fit their specifications.  For this to work, the form on the home page that filters the results needs to be correctly connected to the database and filter in the appropriate search queries. With this, the appropriate data will be returned to the user. | **4** | **M** |
| **2** | As a **customer**, I want to be able to **register an account through the service** so I **can make rentals on cars that I search for.**  For this to be implemented, a ‘Create Account’ button must be implemented with the functionality of a Sign Up page.  If the user decides to create an account, they will get redirected to a page that includes a form with mandatory fields for the user to fill out. These include: name, phone, address, birthday, occupation, gender, username and password.  Standard protocols will be implemented to the form, including the password being masked with the ‘•’ character, account duplication being monitored (if the user tries to sign up with a username that is already taken, they will get rejected) and ensuring all fields are filled out.  If all of the protocols are met, the form takes all of the data and sends it into the ‘Users’ table contained in the database. The user gets redirected to the home page, in which they are greeted with a pop up box saying ‘Account creation was successful. You may now Log In with your account’. | **16** | **M** |
| **3** | As a **registered customer**, I want to be able to **log in to my account** so I **can access my account specific features.**  For this to function correctly, the ‘Create Account’ features needs to be fully implemented and functional. This is due to the user needing to create an account before they can log in to it.  Once they navigate to the Log In button, they are greeted with another form in which they must provide a username and a password.  Similarly to the ‘Create Account’ page, there will be standard protocols around it including ensuring the user inputs a valid username and the correct password. If not, the fields will contain a message either above or below them indicating what they did wrong.  If they log in successfully, the user continues back to the home page with the top right saying ‘Welcome, [user’s name]’ and a log out button next to it. They also have the option to search with the location (postcode) that they provided. | **8** | **M** |
| **4** | As a **logged in customer**, I want to be able to **search with my location when looking for a car** so I **can find the closest car to me.**  For this to function correctly, the ‘Create Account’ features needs to be fully implemented and functional. In addition to this, the user needs to be able to log into a session successfully with the database having access to all of their information. Only then will searching with location work.  Once the user is logged into their account session, they can have the option to check a ‘location enabled’ radio button.  If they search having this checked, the database will take the postcode from the address provided by the user and compare it with all of the different stores postcodes. A calculation will then be done which takes the different postcodes from each store address and returns a distance away from the user’s address on each car. | **8** | **M** |
| **5** | As a **customer**, I want to be able to **search for a vehicle within a given timeframe** so I **can ensure my car will be available at a desirable date.**  This story will be functional when the database connects correctly to the session.  A simple check of booked times on each rental is what’s required in this situation. When a user puts in a start and an end date, a calculation will be done to gather all of the dates in between the start and finish date. Those dates will then be compared to existing orders to ensure that the car they want to rent is indeed available. | **4** | **M** |
| **6** | As a **customer**, I want to be able to **see all of the specifications of a car** so I **can choose the best fit car for me.**  For this to function correctly, the home page form needs to be fully implemented where the user can generate a list of cars and select one from that list.  This function may be as simple as having a button under each car listed with basic descriptions saying ‘View details’. Once they do this, they will be redirected to a specific page dedicated to the chosen car, in which all of the specifications of the car will be listed. This includes the make name, model, series, series year, price (new), engine size, fuel system, tank capacity, power, seating capacity, standard transmission, body type, drive type (4WD, AWD, etc.), wheelbase and available stores.  There will also be a status on each car, showing the customer whether the car is even available at all. If it is, the stores that house it will be listed.  Going into the detailed page would require each row of the initial results table to include the Car ID (not visually shown), which is then carried into the next page to load the car specifications. | **8** | **M** |
| **7** | As a **customer**, I want to be able to **see the most rented cars of all time and this month** so I **can get an idea of what I may want to rent.**  This specification will only require the database to be linked properly to the web solution for it to function. Sitting under the search form on the home page, it will encourage users who are just simply exploring cars to view what has been popular in the past.  For this specification to work, a count showing the number of times each car was rented is required. This would be done by taking the Car ID and counting the number of times that it is printed in the database as an order.  That data is then ordered into descending order, having the largest number being the one that shows as number one in the trending area. | **4** | **S** |
| **8** | As an **administrator**, I want to be able to **log into the website** so I can **access the companies data analysis interface.**  This function is simple when it comes to logging in as an administrator, however it gets more complex when being able to access the companies data analysis interface. This is not accessible by an ordinary customer, therefore requires some permissions to be incorporated including hidden elements unless the viewer is an admin.  To do this, there would be a check by the browser to check who is logged into the session. If it is an administrator, they will see the option to visit the data analysis interface. If they aren’t they won’t see the option at all. | **8** | **M** |
| **9** | As a **logged in administrator**, I want to be able to **see car specifications** so I can **gather information on them when required.**  For this to function correctly, the home page form needs to be fully implemented where the user can generate a list of cars and select one from that list.  The description on how this would come around to show is covered in Story #6.  The difference between a logged in administrator and a normal customer is the fact that the administrator can see more information about the current rental at hand. Meaning, under all of the car information, the administrator would be able to see the rental start date and end date along with the customer’s username and ID. | **4** | **M** |
| **10** | As a **logged in administrator**, I want to be able to **see a list of available data analysis options for the car rental data** so I can **easily decide which option I need.**  The functionality for this story essentially extends off of Story #8. Required features for this to work would be  having a session checker (checking whether a customer is viewing or a logged in administrator is viewing).  When a logged in administrator clicks on the ‘Data Analysis’ button, they will get redirected to another page. On this page, they will have a range of data analysis options to choose from at their own will. | **4** | **M** |
| **11** | As an **administrator**, I want to be able to **access built in analytics** so I can **improve management services or customer service.**  The functionality for this story essentially extends off of Story #10. A session checker needs to be fully implemented, and the page containing the data analysis options needs to be implemented.  This user story essentially covers all of the different analytical options that are available to the administrator. This may include the most trending car over a given year, presented in a bar graph. It may also include the most fuel economic car of a given year. Regardless, two main steps must be undertaken for this story to be completed. Extracting certain data from the database using specific MySQL tables, and presenting all of the data in a graph within the browser.  Taking specific data from the table is the easier part, as it is just selecting the specific elements within a given row and comparing it to other elements. As an example, returning the most trending car in a year would be taking the count of rentals along with the car’s ID. With that data, put the results in descending order so the highest number is first on the list (being the most rented).  After that, the data of all of the cars might be put into a graph and from there the administrator could see what cars are selling the most and what cars are selling the least. | **16** | **M** |
| **12** | As a **customer**, I want to **view the partnerships of the company** to see **if they’re associated with brands I support.**  **o    Partner companies displayed**  **o    Links to partner companies** | **TBD** | **C** |
| **13** | As a **customer**, I want to be able to **contact the company** so I can **Express concerns and resolve conflicts.**  **o Button to click for "Contact us” section**  **o Button to click on number/ email** | **TBD** | **C** |
| **14** | As a **Customer,** I would like to **see company deals** so I can **get the best pricing for my rental.**   * **Deal can be listed directly next to a car that is opened up via the search page** * **Deal promotion page that can be found in the navigation bar** | **TBD** | **W** |