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Enterprise Application Documentation

COIT13235 Enterprise Software Development

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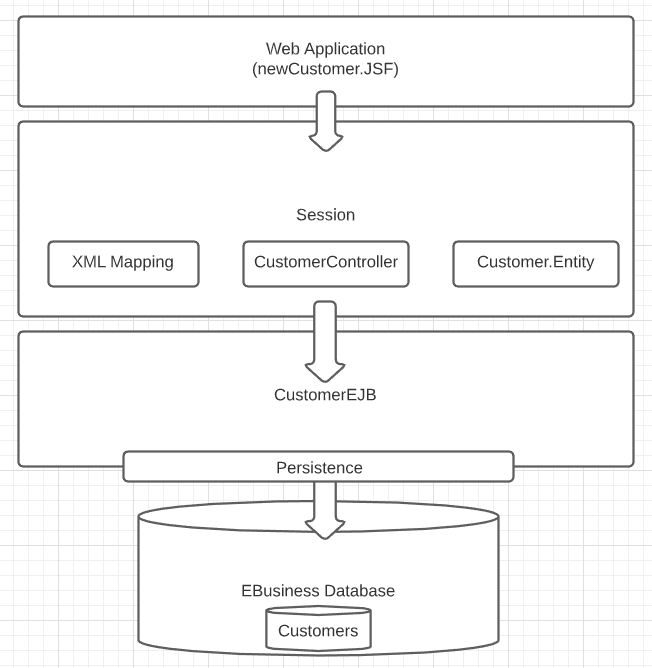
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# Enterprise Architecture

## Enterprise Architecture Diagram

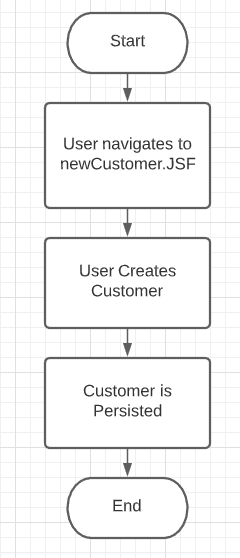
This diagram shows a basic outline of the application diagram. Users interact directly with JSF webpage which contains a session which while active holds the XML mapping, managed beans, and relevant entities. The session then interacts with the Enterprise Java Beans, the EJBS handle all database transactions, both retrieval and persistence.

## Customer Architecture Example



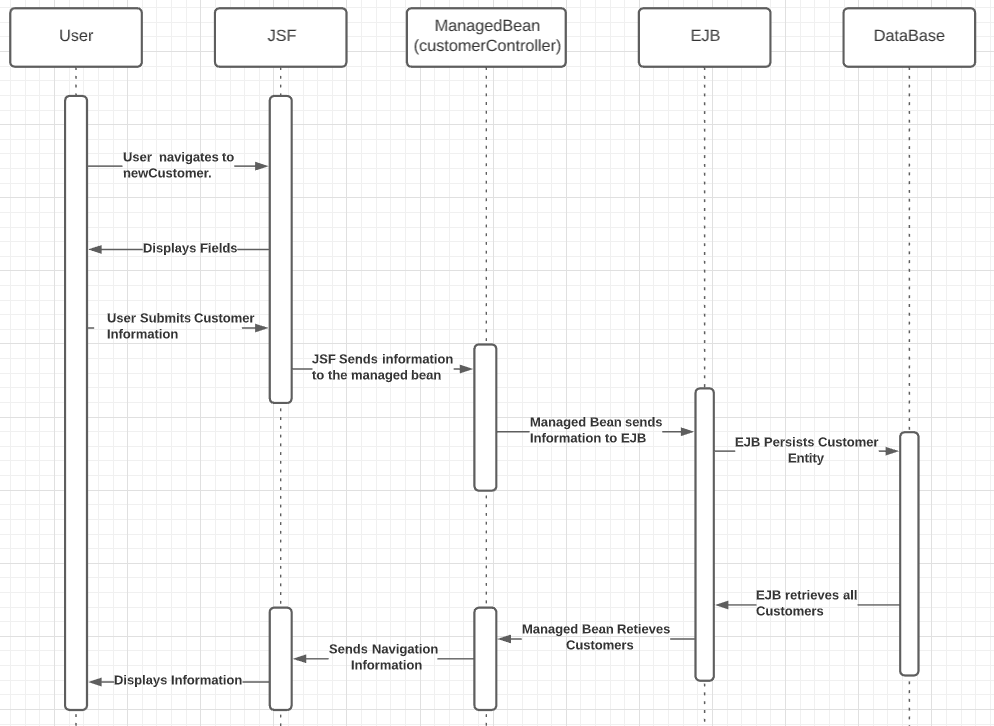
The above diagram shows an example of the architecture in use with users interacting with the newCustomer JSF page which connects to the customerController managed bean. This bean then interacts with the CustomerEJB to persist the customer entity to the database.

## Customer Persistence Workflow



This diagram shows a basic workflow of a how a customer entity is persisted

## System Sequence Diagram



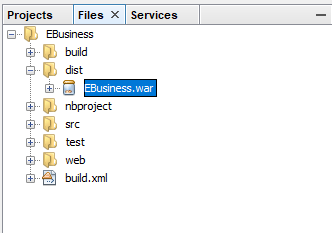
This system sequence diagram shows an example use case of how a user would persist a customer entity using the application and how each architecture layer interacts with each other.

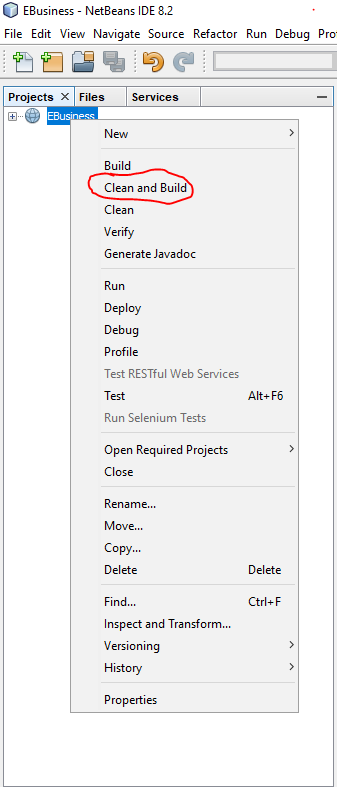
# User Manual

These Guides assume users already have the existing software installed/setup.

* NetBeans.8 or higher
* JDK
* Derby
* Glassfish 4 or higher

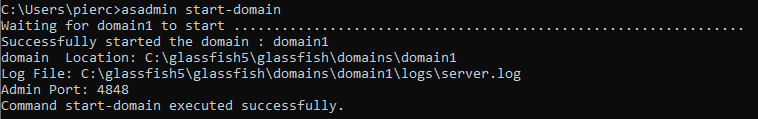
## Compiling

The software can be compiled by simply clicking build and clean on the project after opening the project in NetBeans. Doing this will generate the .war file. The .war file can be found through the navigation as is shown below.

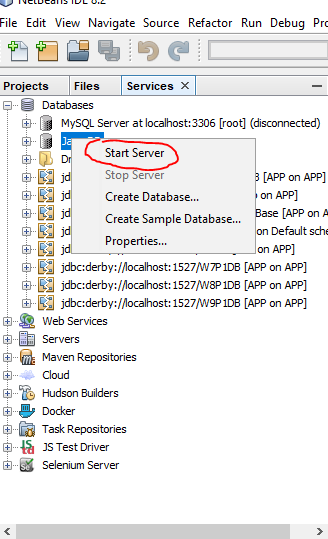


## Deploying

In order to deploy the application users must first start by starting the glassfish server. This is done by typing the command “asadmin start-domain” in cmd.



The JavaDB server must also be started. This can be done by navigating to the services tab right clicking JavaDB and selecting start server.



Once both the glassfish and JavaDB servers are running, users must create a JDBC connection pool and a JDBC resource

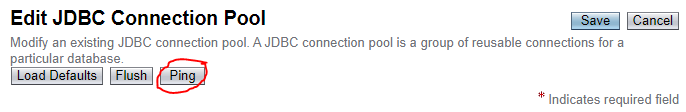
These can be done respecting by using the commands.

* asadmin create-jdbc-connection-pool --datasourceclassname=org.apache.derby.jdbc.ClientDataSource --restype=javax.sql.DataSource --property portNumber=1527:password=APP:user=APP:serverName=localhost:databaseName=EBusinessDB:connectionAttributes=;create\=true EBusinessPool
* asadmin create-jdbc-resource --connectionpoolid EBusinessPool jdbc/EBusinessDS

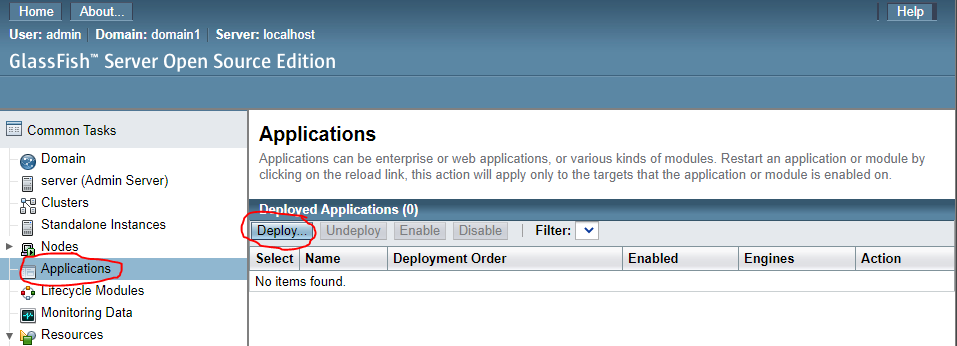
Users can test the connection pool by either pinging the pool using the command “asadmin ping-connection-pool EBusinessPool” or by viewing and pinging the pool within the glassfish interface.

The glassfish interface can be reached by using the URL “<http://localhost:4848/common/index.jsf>”

Users can then find the JDBC pool and resource by navigating; Resources -> JDBC and then selecting either the pool or resource tab to view their respective contents. Users can ping the connection pool by selecting ping after opening the EBusiness connection pool. Ensure that the JavaDB server has been started.

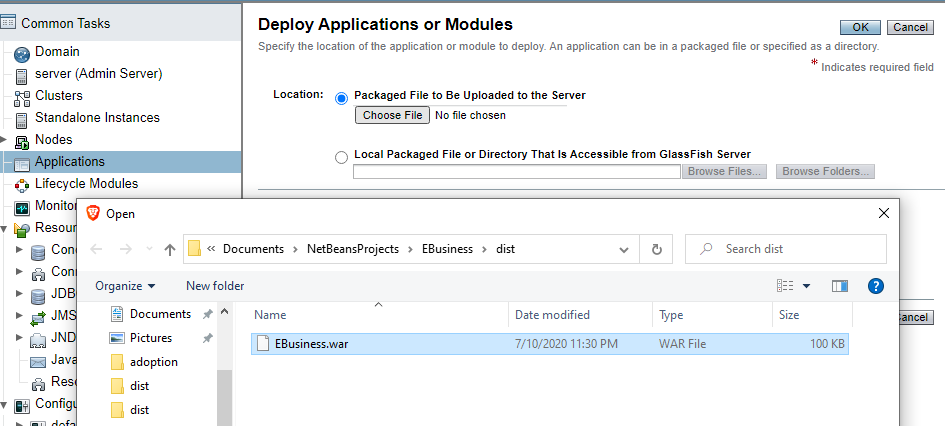


Users can now deploy the application by selecting the “Applications” in the navigation menu.

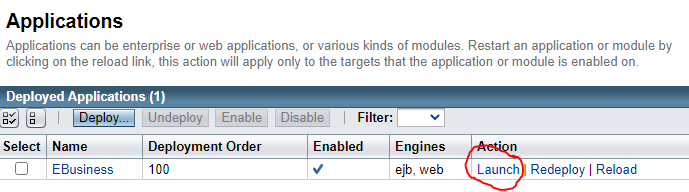


The next step is to click deploy.

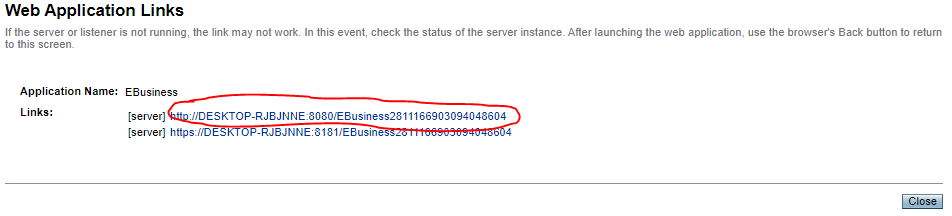
On the deploying screen click Choose file and navigate to where the previously created .war file was created after cleaning and building the project. Select the project and then click ok to deploy for success.



Now the application has been deployed, select launch on the applications page to launch the web application.

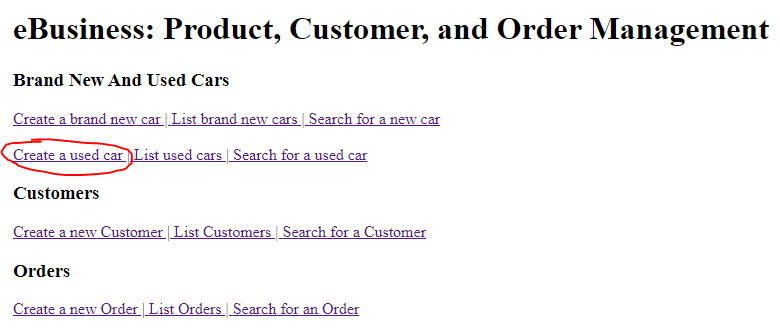


Now select the above link to load the index page of the application ready for user use.

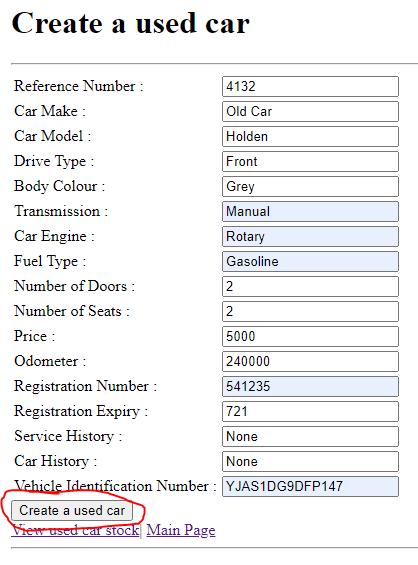


## Persist a used Car

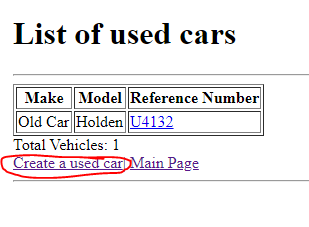
To persist a used car, start by clicking create a used car to navigate to the new used car screen.



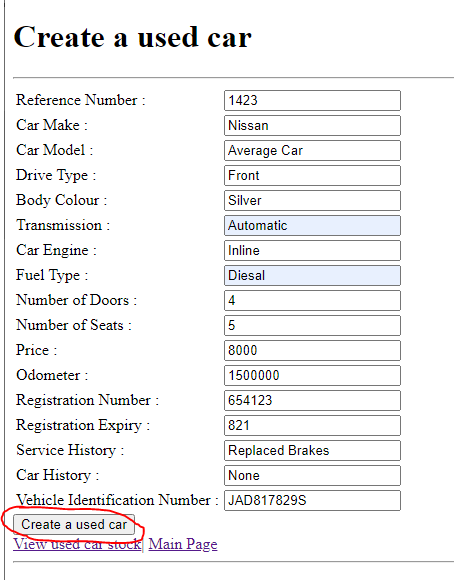
After filling in all the fields click submit to persist the used car to the database.



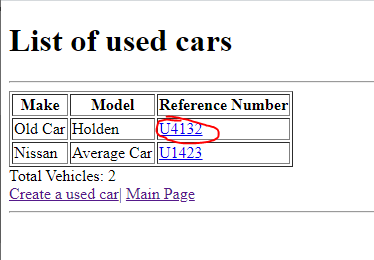
To create another used car click the “create a used car link” or return to the main page and repeat the previous steps.

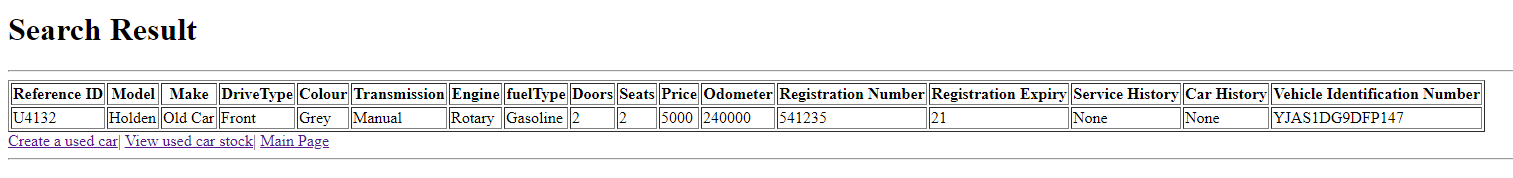


Click create a used car after filling in all the fields again.



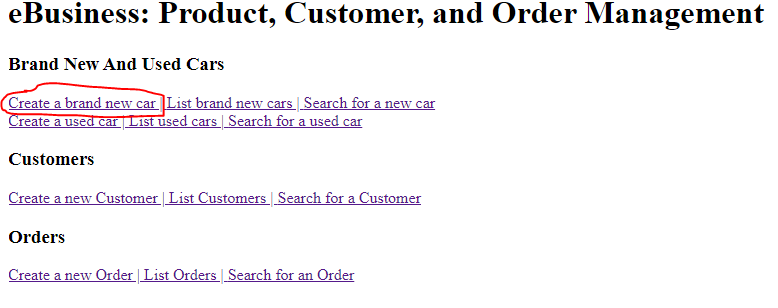
Clicking on the reference number will navigate users to the respective car details.



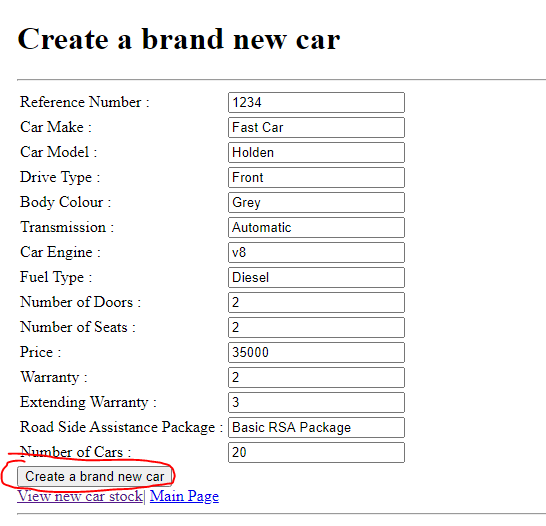


## Persist a brand-new Car

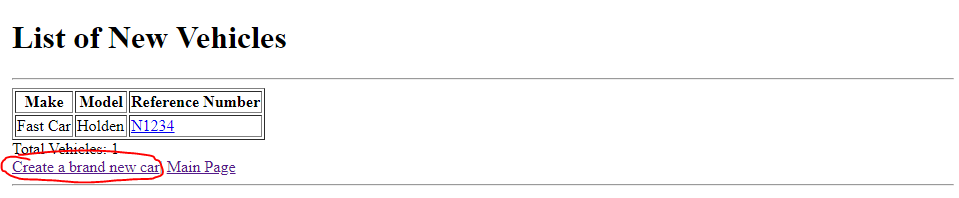
To persist a brand-new car, users must first navigate to the new brand-new car screen.



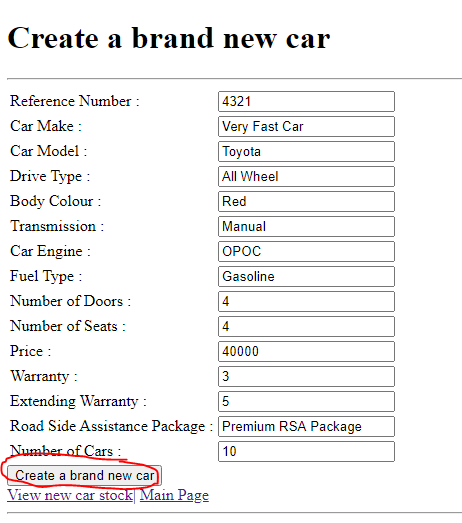
On this screen users must fill in all of the fields before clicking create a brand new car. Note that the reference number has a N created in front of the string.



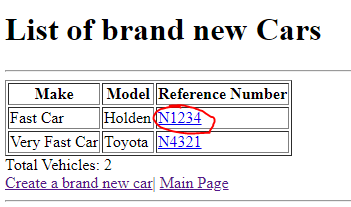
Users can now see the vehicle persisted and retrieved from the database. To create another brand new car select the link “create a brand new car” or return to the Main page and repeat the above process.

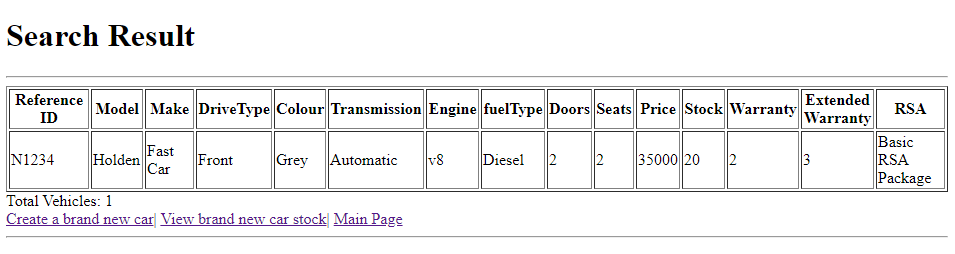


This is another example of persisting a brand new car.



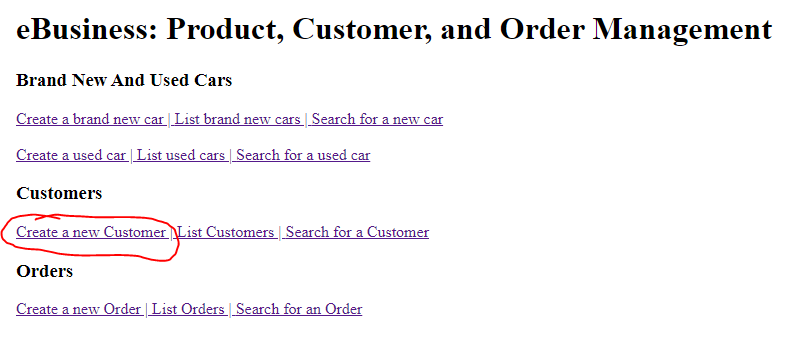
Clicking the reference number of the listed car will navigate users to a details screen that will show all of the car’s details.



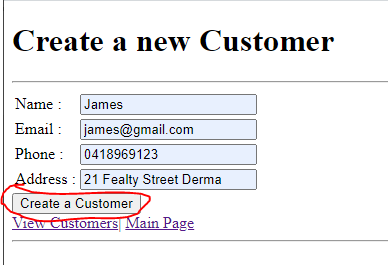


## Persist Customers

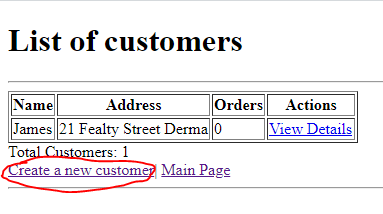
To persist a customer, start by clicking “create a new customer” to navigate to the customer creation page.



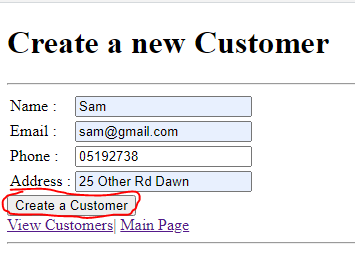
After filling in all the fields click “create customer” this will persist the customer and retrieve a list of existing customers.



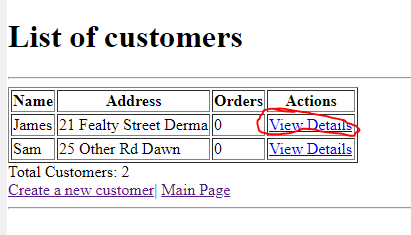
To create another customer either click “create a new customer” or repeat the previous steps.



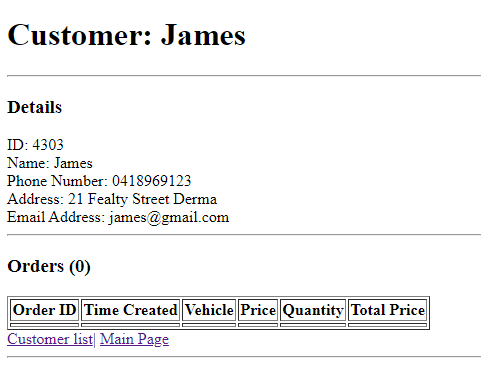
Click “create a customer after filling in the fields.



Users can click the “view details” link to see the respective customers details.

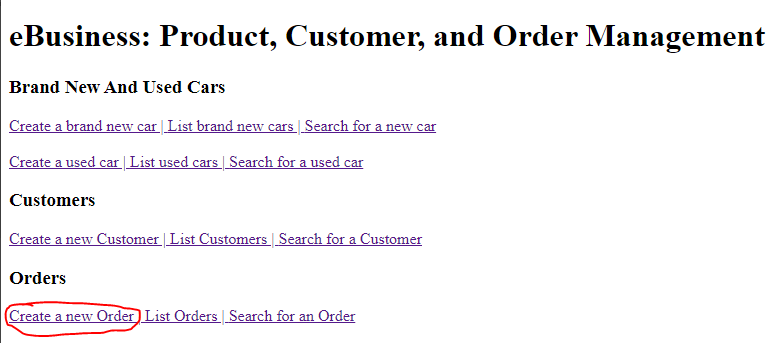


Note that the orders table will be updated to display existing orders with the customer.

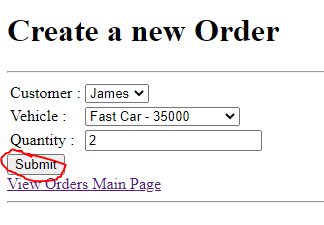


## Persist Orders

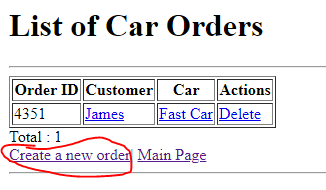
To create an order, start by clicking “Create a new Order” to navigate to the order creation page.



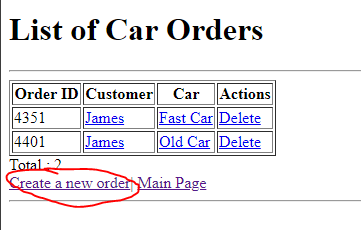
After selecting the customer and vehicle from the previously created customers and vehicles, choose the number of vehicles to be ordered within the quantity field. Once all fields are complete click “submit” to persist an order.

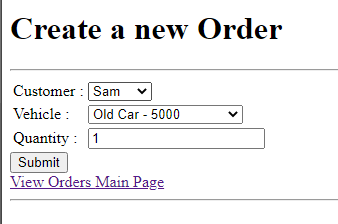


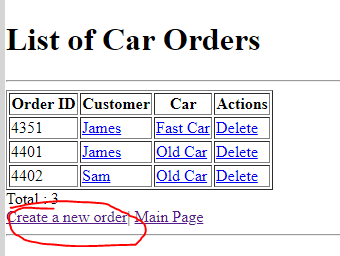
To create another order either click “create a new order” or perform the previous steps. The images below will show examples of how to persist another three different orders.

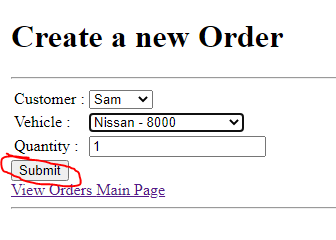












On the orders list screen users can select any of the links within either the customer or car column to navigate to its respective entity. Clicking the delete button within the Actions column with delete the order from the database.

