

Software Development Test

Informative

This will test your knowledge across Web Apps, Web API's, Class Libraries, and Relational Database design. Create a repository on GitHub and load your projects there.

Once everything is committed, notify us and send a link to the GitHub project. Please give access to our Senior Software Developer Adriaan Du Plessis. His email is adriaan@newsclip.co.za.

Task to Complete

Volkswagen is opening a new branch in Roodepoort and wants to open with a new stock taking web-based system. You will be required to create a web app with a screen to list all of the makes and models of the vehicles listed on their stock sheet.

They should be able to see the number of cars for a specific make and model as well as update the stock when one is sold. This web app should be user friendly & responsive and make use of accordions (in WPF this is Expanders). For a selected make and model you should be able to see a list of features as well as the price for the vehicle.

Your interface should allow users to create/update/delete stock items as well as show an overview of all items.

You should pre-populate some of the stock data by means of a stored procedure. You can use the following link as a source for your pre-populated data: <https://www.vw.co.za/en/models-and-configurator.html>

You do not need to write a crawler to get the data, you can enter the data manually in your stored procedure.

Your Web App has to be mobile friendly as the sales person would use this app on both his computer at work and on his mobile at home. (This is not an application that should be installed. Remember that this is a web page)

You will find the tasks to complete on the next page.

To complete the task at hand you will need the following.

- Web App
 - Layout page with the skeleton of all other pages.
 - Page to display list of items from database.
 - Modify Page to Create/Update/Delete an item.
 - Style sheet with styling.
 - Javascript file with JQuery AJAX calls to access Controllers.
- Web API
 - Controller/s with relevant CRUD endpoints for all AJAX calls from Web App.
 - The database connection string should be changeable for us to deploy the database project and point to the correct connection.
- Class Library Project
 - Interfaces and Classes of database objects.
 - Repositories for data communication (ADO).
- SQL Database Project (Visual Studio)
 - Use Stored Procedures for all data integration and communication.
 - Do not forget to use Primary and Foreign Keys on your tables.

You will be assessed on your coding standards as well as the styling of the Web App. Make use of what you have learned and remember to use Google.