

# Cass Information Systems Developer Challenge

## Overview

You will be creating a small application which will retrieve and display data from both a SQL Server database and an external API.

For the database, all necessary DDL and DML are included with these instructions. A database diagram of the resulting database is included with these instructions.

For the API you will be using the Quotable API. The Quotable API and instructions are available at <https://api.quotable.io>

Your application must include a front-end for presentation and a back-end service which contains all business logic.

## Database

Database DDL and DML for creating and populating the database have been included with these instructions. A diagram of the resulting database is provided later in this document. It is recommended to use SQL Server Express in your local development environment for this.

## Application Guidelines

The front-end code can be simple, feel free to use any front-end frameworks you are familiar. Front-end code can be a static web application or ASP.NET, that choice is left up to you.

The back-end service should be implemented in C# and should contain all business logic and communication with both the database and external API. All preparation of data for display should be implemented in this back-end service.

Application must provide the following functionality:

1. Retrieve a random quote from the Quotable API. And display the quote along with the author's name.
2. Using the Quotable API, retrieve 30 quotes authored by Albert Einstein and display them to the user. The quotes should be grouped by length into three categories: Short (<10 words), Medium (11 – 20 words) and Long (>20 words).
3. Retrieve and display a list of all Shippers in the database. Application should display only the shipper\_name values to the user.
4. Write a stored procedure, **Shipper\_Shipment\_Details**, that takes a parameter **@shipper\_id** and returns a list of all Shipments in the system along with the details for both the Shipper and Carrier. The list of output fields should include: shipment\_id, shipper\_name, carrier\_name, shipment\_description, shipment\_weight and shipment\_rate\_description. Include the DDL for this procedure with your submission.
5. When a user clicks on the Shipper name which was displayed in step 3, execute the stored procedure you created in step 4 and display the data within the application. Display the data to the user in a tabular format sorted by shipper\_name ascending.

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## Database Schema

