**SINGULAR SYSTEMS**

**PRACTICAL INTERVIEW**

**INSTRUCTIONS**

**The practical assessment aims to assess the following abilities:**

* **Planning skills**
* **Design skills**
* **Technical ability**

**What to submit:**

* **Cloud storage link to the zipped solution, e.g. Dropbox**

**Technologies to use:**

* **ASP.Net / MVC / ASP.Net Core**
* **C#**
* **HTML, CSS, JavaScript**
* **Any front end web technology of your choice – e.g. Vue, React, Knockout**
* **SQL Server / SQL Express / SQL Express LocalDB**
* **Bootstrap**

**Guidelines:**

* **Ensure that you are the creator of the project and that you did not use existing projects found online.**
* **This question does not aim to be over prescriptive - create a solution that you feel comfortable with to accurately portray your skillset.**
* **You may research and use technologies that you are not too familiar with.**
* **Business rule validation to be implemented where necessary.**
* **Use of object oriented concepts such as abstraction, encapsulation, etc will be rewarded.**

**The following are not requirements:**

* **Extensive Menus and Master Pages.**
* **Extensive, Normalised Data Structures.**

**Data Source Guidelines:**

* **Create your own database tables, relationships, stored procedures for CRUD operations, as well as any related queries.**

**SCENARIO:**

**You have been tasked to create an internally used product order application, which allows for staff members to record their own details, as well as select from a range of 10 Products that they can order.**

**TASK:**

**Write a web based application that**

1. **Records client details**
   1. **A Basic set of address fields are adequate, e.g.**
   * **Name,**
   * **Surname,**
   * **Address Type (Residential / Business),**
   * **Street Address,**
   * **Suburb,**
   * **City/Town,**
   * **Postal Code**

1. **Lists 10 Products that the user may order from**
   1. **Create a basic list of random products, e.g.**
   * **ProductID,**
   * **Title,**
   * **Description,**
   * **Price,**
   * **Image (Hotlink or physical image on disk)**
   1. **No CRUD operations required for the products page**
   2. **This purely facilitates the ability to create an order.**
   3. **You should be able to add an item to your basket from here.**
   4. **Record the order for the user in the database**

1. **Allows the client to remove products from their basket and show ordered quantities/costs for each product.**
   1. **On this page you can only remove items from your basket.**
   2. **Record the updated order for the user in the database**

**NOTES:**

**You may choose to create a page for each of the points, but you have the freedom to design according to your own preference.**

**No Login screens are required. If you do use a UserID, you may store the UserID wherever you feel comfortable – and even use it in the querystring.**