**CHRC developer test.**

**Please note this test is done without using your smart phone or doing searches over the internet. Violation to these rules will immediately terminate the interview process.**

**ASP.Net MVC Section**

1, What are main functionalities of the Model, View and Controllers in ASP.Net MVC

2, What are Master Pages in asp.net (webform) and what is the functionally equivalent page/view in MVC?

3, Explain how authorization is implemented in MVC and what are the steps required to implement it.

For example if I want to protect a controller method from being accessed by an unauthorized user, how?

**C# .net Section**

4, What are html Helpers in ASP.Net MVC? List 3 examples.

5, how to you do custom validations in MVC? (i.e if the Age TextBox is less than 18, do not submit the form and display an error msg beside the textbox)

6, What does @RenderSection(“xxxx”) do? How do you make it optional?

7, write up the html helper class (in MVC) which create a form and post to Create Action of the Account Controller, it should pass in the Account ID as the form parameter (within the same html helper class)

8, what is the declaration [ValidateAntiForgeryToken]? Why do we use it?

9, Write up a Action Filter to cache a page for 50 seconds and the cached pages differ by the parameter PatientID.

10, If a Controller Method can ONLY be accessed by the POST method, what declaration do you use at the controller level?**CSS Section**

1, How do you center a container using css?

2, What are the differences between a span tag and a div tag (by default)?

3, What is the css syntax for creating a class to underline text?

4, In css how do you style a table such that table cell borders are collapsed into a single border

5, Set the top margin of a table to 20 pixel, right margin to 10, bottom margin to 15, left margin to 5 all in **ONE single css style property.**

6, If I want to display a table with a particular color for odd number of rows and another color for even number of rows, how do I do that?

**Javascript/Jquery Section**

<div id=”block”>this is some text</div>

1, Write the jquery statement to hide the container

2, when someone clicks on the container, initiate a hello world pop up.

3, when someone mouseover the container, change the color of the text to red.

4, Making an ajax call to serialize the form data of form id=”frmSubmit” (action=”/Home/Index”).

When the form is submitted successfully, display the phrase “Form is submitted, Thank you for your input” in the div tag “divResponse”.

**General Troubleshooting Section**

If a production website is down, how would you troubleshoot the root cause of the issue?

Please write down the steps you would take to identify the possible root cause of the problem.

**WebService Section**

**What is Restful webservice?**

**How is it differ from SOAP-based webservice?**

**Why use Restful webservice over SOAP-based webservice?**

**What are the corresponding http verb for the following operations?**

**Retrieve**

**Creation**

**Update**

**Delete**

**What class does a WebAPI Controller inherits from (by default)?**

**Database Section**

1, Design a database schema for a library storing information such as books, author, publisher and the relationships among tables. Please indicates where you would set referential constraints.

**Database Section**

2, What is an identity column?

3, In the store procedure below, accomplish the following in ONE single update sql statement

A, update the age of the person name “Stephen” to the @Age variable

B, if @Age is null, do not Change the value of the Age column

Hints:

**All personal information is stored in a table named “Person” and the age is stored in the “Age” column.**

CREATE PROCEDURE [dbo].[spUpdatePatient]

@Age int

AS

BEGIN

SET NOCOUNT ON;

//Write your sql statement here!!!

END

4, Write a single outerjoin query (using transact sq) displaying all employees and his departments, if the employee does not have a department assigned, display the phrase “No Department Assigned”.

Schema:

**Employees Table:**

EmployeeID

FirstName

LastName

DepartmentID

**Department Table**

DepartmentID

DepartmentName