

# .NET Quality Engineering Challenge



## Introduction

The Empathica .NET Quality Engineering Challenge is intended to gauge how quickly candidates can learn relevant technical skills. You will **not** be evaluated purely on successful completion of all challenges, but instead will primarily be evaluated on how quickly you were able to learn and understand new technologies.

These challenges are progressively more difficult and touch on many of the core technical tools and concepts required for building a modern web application. For some candidates without existing knowledge of web applications and databases these challenges may be very difficult.

Upon completion of the challenge you will be asked to bring in your work, demonstrate the challenges you were able to successfully complete, explain the technologies and how they work, and discuss any difficulties you encountered that prevented completion of the challenges.

## Challenge 1: Basic tools

Install Visual Studio 2010 (you may use a trial version from <http://www.microsoft.com/visualstudio/en-ca/download> or your own copy if you have one).

## Challenge 2: Music store sample application

Download the music store sample application from <http://mvcmusicstore.codeplex.com/>

Extract and build the music store sample application.

## Challenge 3: Music store sample application introduction

The music store sample application is a useful introduction to MVC and Entity Framework technologies, but sadly was developed without any unit tests. You may use NUnit or MSTest for unit tests.

Add a new test project to mvcmusicstore.

Add some tests to validate the HtmlHelpers class.

## Challenge 4: Verify new shopping cart behaviour

Add some tests to verify GetCartId from the ShoppingCart model.

## Challenge 5: Verify store details behaviour

Add some tests to verify the Details method in the StoreController.

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## **Challenge 6: Verify detailed shopping cart behaviour**

Add some tests to verify AddToCart, RemoveFromCart, and CartSummary

## **Challenge 7: Web integration test - log on/log off**

Add some tests to verify AddToCart, RemoveFromCart, and CartSummary.

You may use any web integration framework you wish, including MSTest, Selenium, WATIN, etc.

## **Challenge 8: Web integration test – shopping cart behavior**

Add some tests to verify detailed shopping cart behavior.