UAH Fit Vault

Maintainer’s Guide

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# Preparing for Maintenance

## Development Environment Overview

The UAH Fit Vault project was developed on a Windows (Windows 7 and Windows 10) environment with the Microsoft Visual Studio Enterprise 2015 development environment. Microsoft Visual Studio Enterprise 2015 supported Visual C# 2015 and Microsoft .NET framework. Microsoft Visual Studio Enterprise 2015 may be acquired for free through the UAH OnTheHub portal. For a maintainer unfamiliar with C# and ASP.net, tutsplus.com offers video tutorials on the subject and offers a 10 day free trial (as of 17 April 2016).

## Microsoft Visual Studio Product Info

The following is a complete dump of the Microsoft Visual Studio Enterprise 2015 versions used during development from the “About” (in Visual Studio, this is located by clicking “Help” on the top menu bar and then selecting “About Microsoft Visual Studio”) page.

|  |
| --- |
| Microsoft Visual Studio Enterprise 2015  Version 14.0.24720.00 Update 1  Microsoft .NET Framework  Version 4.6.01055  Installed Version: Enterprise  Architecture and Modeling Tools 00322-90054-81060-AA367  Microsoft Architecture and Modeling Tools    UML® and Unified Modeling Language™ are trademarks or registered trademarks of the Object Management Group, Inc. in the United States and other countries.  Visual Basic 2015 00322-90054-81060-AA367  Microsoft Visual Basic 2015  Visual C# 2015 00322-90054-81060-AA367  Microsoft Visual C# 2015  Visual C++ 2015 00322-90054-81060-AA367  Microsoft Visual C++ 2015  Application Insights Tools for Visual Studio Package 1.0  Application Insights Tools for Visual Studio  ASP.NET and Web Tools 2015.1 (Beta8) 14.1.11106.0  ASP.NET and Web Tools 2015.1 (Beta8)  ASP.NET Web Frameworks and Tools 2012.2 4.1.41102.0  For additional information, visit http://go.microsoft.com/fwlink/?LinkID=309563  ASP.NET Web Frameworks and Tools 2013 5.2.30624.0  For additional information, visit http://www.asp.net/  Common Azure Tools 1.5  Provides common services for use by Azure Mobile Services and Microsoft Azure Tools.  Microsoft Azure Mobile Services Tools 1.4  Microsoft Azure Mobile Services Tools  NuGet Package Manager 3.3.0  NuGet Package Manager in Visual Studio. For more information about NuGet, visit http://docs.nuget.org/.  PreEmptive Analytics Visualizer 1.2  Microsoft Visual Studio extension to visualize aggregated summaries from the PreEmptive Analytics product.  SQL Server Data Tools 14.0.50616.0  Microsoft SQL Server Data Tools  TypeScript 1.7.4.0  TypeScript for Microsoft Visual Studio |

# How to Make a Change

## Solution Architecture

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| The code for the UAH Fit Vault project consists of five subprojects.  **UAHFitVault:** This is the main project for the UAHFitVault solution. This contains all of the models, views and controllers. It also contains Visual Studio project information.  **UAHFitVault.DataAccess:** This is the project for supporting interactions with the database.  **UAHFitVault.Database:** This project specifies the database.  **UAHFitVault.LogicLayer:** This project contains functional information for supporting solution-wide behavior (i.e. enums).  **UAHFitVault.LogicLayer.Tests:** This project supports unit and white-box testing. |  |

## Changing the Look of a Page

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| To change how a page is displayed, the view for the page must be updated. Views in the UAH Fit Vault project all have the file extension .cshtml. Most of the time, in order to find the view for the specific page in the VS project, use the same folder structure as the view in the web browser (i.e. the view for %WEB\_URL%/Physician/Index would be found in the file UAHFitVault -> Views -> Physician -> Index.cshtml ). The .cshtml is a C#/html hybrid file type. Some external Javascript libraries are referenced in the view files. It is important to note that some views are nested inside of other views, so if a problem is encountered when updating a view, it may be wise to check the parent view to see what is going on. An example of parent views may be found in the Views/Shared folder of the solution.  The views of a page often reference specific code models. Code models are written in C#. Models for this project may be found in the  UAHFitVault->Models folder. | *View for Physician/Index* |

## Changing the Behavior of a Page

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| To change what happens when the user access a specific page, the controller must be updated. Controllers are located in the UAHFitVault -> Controllers folder in the Solution Explorer. Controllers are written in C# and have a .cs file extensions. Each controller corresponds to a view with the same name (i.e. PhysicianController.cs handles all of the functionality when a user browses to the address %URL\_HOME%/Physician/Index). To change the /Physician/Index behavior, the maintainer would open the UAHFitVault -> Controllers -> PhysicianController.cs file and edit the **Index()** function. Some functions are duplicated, because they handle HttpGet and HttpPost requests, so it is important to edit the correct one. The corresponding view (would be the same as the Physician/Index view in the previous section) for this function will be displayed after the **return View()** statement. | *Physician Controller, Index() Function* |

## Updating Styling on the Views

The UAHFitVault project was styled around the Materialize (materializecss.com) cascading style sheets (CSS) and javascript library. Several examples of how to use the css styling properties and a full documentation of the Materialize library may be found on the Materialize website.