



#### PLATFORM FOR DEVELOPING AND SHARING FREE SOFTWARE TO COLLECT DATA ONLINE



## Integration of the Survey™ Project Surveyform in a MVC webapplication

Survey™ Project Developers Documentation

Author: W3DevPro™

Version: 1.0 Date: 2017-09-27





### Content

Introduction	
Flowchart	4
1. Downloading & Installing Survey Project	5
2. Creating or Opening an MVC webapplication	
3. Integration of the Surveyform	7
Add a Webpage	7
Copying Code	8
Select a Survey(ID)	9
Adding a Menulink	
Copying Files & Directories	
Copying and Referencing DLL's	12
Edit the Web.config file	
Build the MVC Solution	
Start the MVC application	
Further Reading & Links	





#### Introduction

This guide applies to the Survey™ Project v. 2.5 webapplication.

Survey™ Project is a free, open source webapplication to create, publish and administer surveys and webforms in an easy-to-use way without any restrictions or limitations on useage or features.

This guide is written for *developers* who are looking to integrate the SP™ surveyform into a MVC webapplication.

The instructions are based on the integration of the 'surveyform' of the SP™ webapplication into a default MVC webapplication as created through MS Visual Studio Community 2017.

The SP™ 2.5 webapplication is not designed to be used on mobile devices or tablets/ lpads: surveys and webforms can best be created on a PC or laptop. To answer and submit a survey other devices (mobile, tablet, pc etc) are supported as well.

#### Requirements

- 1- Windows OS, .NET 4.5, IIS webserver 7.5, Mssql Database 2012 or 2014, SMTP account
- 2- ASP Full Trust Level required in case of third party hosting
- 3- Administrator privilages needed
- 4- Installation package or sources of Survey™ Project (v. 2.5) from Github.com
- 5- Visual Studio Community 2017 or any IDE to develop MVC and Webform based webapplications
- 6- Acces to an existing MVC webapplication solution and sources or option to create a new one.

#### How to read and use this Guide

The quickest way to get started is to **follow the actions** in the order as described in this guide.

- o Actions are written in the texboxes with a BLUE lining.
- o Screenprints from SP™ v.2.5 are added to illustrate the intended action and result.
- o Numbered **yellow** stars are added and referenced in the **Action** text to direct to the correct location.
- o Notes indicating additional advise or warnings are written in separate (pastel) textboxes
- o General information and comments are written as regular text in black.

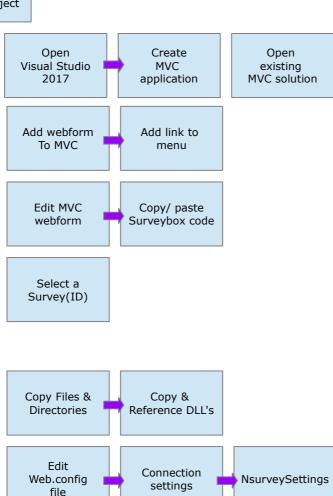




#### **FLOWCHART**

- 1. Downloading & Installing Survey™ Project
- 2. Create a new MVC webapplication or open an existing MVC solution
- 3. Add webform file and link to menu
- 4. Edit the MVC Webform
- 5. Select a Survey(ID)
- 6. Copy files & directories
- 7. Copy and Reference DLL's
- 8. Edit the Web.config file
- 9. Build the Solution and start application.

Download & Install Survey Project



Start MVC app

(re)buildMVC

application





#### 1. Downloading & Installing Survey™ Project

#### o Dependencies

To be able to create a 'working' surveyform in a MVC webapplication a (separate) installation of the SP™ webapplication is required.

The SP™ webapplication will be used to:

- create and administer the surveys that will be exposed through the surveyform in the MVC application
- save the results (responses) from answering the survey through the MVC application

Additionally the SP™ installation files will in part be copied accross into the MVC application to make the surveyform work correctly.

The surveyform in the MVC application will be used to publish and present the survey's question and answers to the respondents/ visitors of the MVC site.

#### **Actions**

1. Download and install the release package for SP™ (latest version).

**Note**: The latest release package of SP<sup>™</sup> can be downloaded from the development site at Github.com. Source files are available from the same site.

Instruction on the installation of Survey™ Project can be found in the [Installation Guide.pdf] which is available for download from Github or the Community site [menu: Support/ Helpfiles/ Guides & Manuals].

#### Actions

2. Log in to the SP™ webapplication and create a survey.

**Note**: Instruction on how to create a survey can be found in the [ How to Create & Publish a Survey Quickstart Guide.pdf] which is available for download from Github or the Community site [menu: Support/ Helpfiles/ Guides & Manuals].





#### 2 Creating or opening an MVC webapplication

o Independent of whether the surveyform will be part of an existing MVC webapplication or a newly created application the following action should be taken.

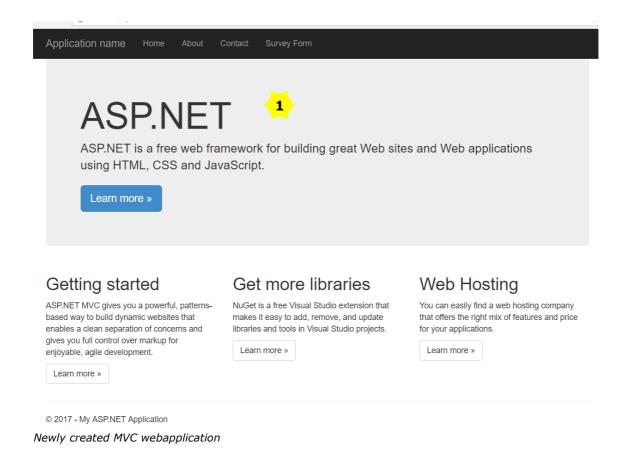
In both scenarios (new v. existing) the MVC solution and webapplication must be fully installed (active and running on IIS).

#### **Actions**

3. Start Visual Studio to open an existing MVC application or create a new application [1].

**Note**: Instruction on how to create a new MVC (5) webapplication can be found at: https://docs.microsoft.com/en-us/aspnet/mvc/overview/getting-started/introduction/getting-started

o In case of an existing MVC webapplication start MS Visual Studio Community 2017 (or any other IDE) as an administrator and open the solution file (.sln)







#### 3. Integration of the Surveyform

o Once the SP™ and MVC webapplication are both running correctly (IIS) and can be opened and viewed in a browser the integration of the Surveyform and SP™ files into the MVC application can start.

**Note**: Compilation and (re)building of the MVC solution should be executed <u>only after the final</u> <u>step</u> of this chapter (web.config adjustment). In between builds will lead to errors.

#### Add a Webpage

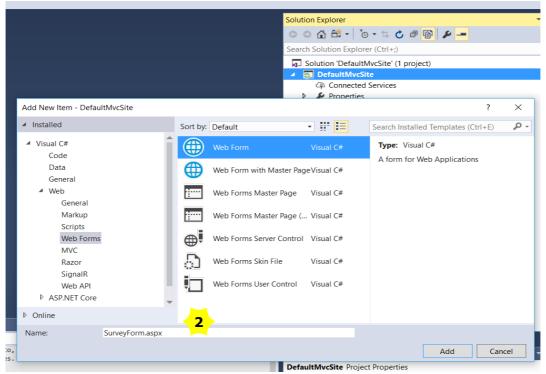
Options to integrate the surveyform into the MVC application are twofold:

- copy the existing surveymobile.aspx page into the MVC application
- create a new .aspx page in MVC and add the surveyform webcontrol

This instruction will describe the second option: create a new page.

#### **Actions**

4. Add a New Item: Webform to the MVC project root directory e.g. SurveyForm.aspx [2]



Adding the WebForm to MVC

Note: The new webform .aspx file should not be added to the Views directory. Instead of adding





it to the root a separate (new) directory can be created to add the webform .aspx file.

#### Copying Code

o The next step will be to copy the relevant code to the surveyform.aspx webpage. The "source" for this will be the surveymobile.aspx webpage (root directory) of the SP™ installation.

#### **Actions**

5. Go to the SP™ webfiles directory and open the surveymobile.aspx file in an (text) editor to copy code.

**Note**: There is a 'minimum' number of lines that has to be copied/ pasted into the MVC surveyform file to make it work (mandatory code).

Other parts are optional and (mostly) used for layout and design purposes. They may be left out or replaced/edited depending on what styling is needed.

The <iframe> code can be added to maintain a browser session 'active' on the webserver as long as a surveyform is openend in a webbrowser by a repondent to answer and submit the survey.

o In certain situations when there is not enough traffic to a site and the repondent pauzes or takes a long time (e.g. > 20 min.) before submitting the surveyform the application pool on the webserver may go idle and time-out.

The browser session including all answers saved in viewstate may then get lost and no results are saved on submitting the survey.

#### **Actions**

- 6. Select the appropriate lines from the SP™ surveymobile.aspx file (see below Example)
- 7. Copy and past the (mandatory + optional) lines from the SP™ file into the MVC .aspx file and Save





```
<main id="SurveyBoxDiv" class="container panel panel-default">
<vts:SurveyBox ID="SurveyControl" Surveyid="XX" CssClass="surveybox" EnableValidation="true"</pre>
runat="server" >
<QuestionStyle CssClass="questionStyle"></QuestionStyle>
<QuestionValidationMessageStyle CssClass="gvmStyle" ></QuestionValidationMessageStyle>
<QuestionValidationMarkStyle CssClass="icon-warning-sign" ></QuestionValidationMarkStyle>
<ConfirmationMessageStyle CssClass="cmStyle" ></ConfirmationMessageStyle>
<SectionOptionStyle CssClass="soStyle"></SectionOptionStyle>
<ButtonStyle CssClass="btn btn-primary btn-xs bw"></ButtonStyle>
<AnswerStyle CssClass="answerStyle"></AnswerStyle>
<MatrixStyle CssClass="matrixStyle" ></MatrixStyle>
<MatrixHeaderStyle CssClass="mhStyle"></MatrixHeaderStyle>
<MatrixItemStyle CssClass="miStyle" ></MatrixItemStyle>
<MatrixAlternatingItemStyle CssClass="maiStyle"></MatrixAlternatingItemStyle>
<SectionGridAnswersItemStyle CssClass="sgiStyle" ></SectionGridAnswersItemStyle>
<SectionGridAnswersAlternatingItemStyle CssClass="sgaaisStyle" ></SectionGridAnswersAlternatingItemStyle>
<SectionGridAnswersStyle CssClass="sgaStyle" ></SectionGridAnswersStyle>
<SectionGridAnswersHeaderStyle CssClass="sgahStyle"></SectionGridAnswersHeaderStyle>
<FootStyle CssClass="footStyle" ></FootStyle>
</vts:SurveyBox>
.....
         </main>
   </form>
            </section>
    <!-- Bootstrap JS 3.3.7 - package -->
    <script src="NSurveyForm/Scripts/bootstrap.min.js"></script>
```

#### Select a Survey(ID)

o The *SurveyID* parameter (XX) of the SurveyBox webcontrol is used to determine what survey is presented on the MVC webpage. The *SureyID* can be found on the surveylist page of the  $SP^{TM}$  application.



SurveyList including SurveyID's

#### **Actions**

- 8. Log in to the SP™ application to find the ID of the survey to be shown in MVC from the Surveylist [3]
- 9. Add the ID number to the SurveyID parameter in the MVC surveyform.aspx file and Save.



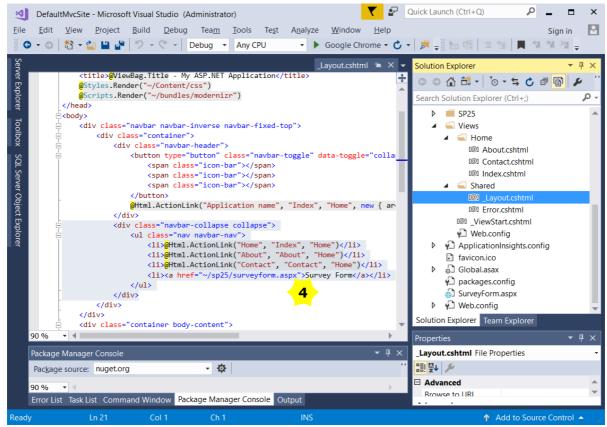


#### Adding a Menulink

o To make the surveyform webpage accesible through the default menu of the MVC site a link can be added to the *Views/Shared/\_Layout.cshtml* page.

#### **Actions**

- 10. Open the \_Layout.cshtml page from the Views/Shared/ directory to edit.
- 11. Add a direct link [4] to the MVC surveyform.aspx file and Save (see below Example).



Adding menulink to \_Layout.cshtml

#### Copying Files & Directories

o A number of files and directories have to be copied accross from  $SP^{TM}$  into the MVC site to make the surveys work correctly.

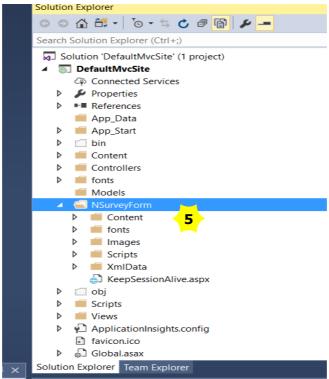




**Note**: It is advised to create a separate (recognizable) (sub)directory in the MVC application where all  $SP^{TM}$  files and directories will be copied into e.g. '*NsurveyForm*'.

It is possible to make use of other already existing MVC directories that are named similarly (e.g. 'Content' or 'fonts') to add the SP files but this may be confusing.

The path to a specific directory and SP™ files will be set in the 'NsurveySettings' section of the web.config file (see 'Edit the Web.config file').



New (N)SurveyForm Subdirectory

#### **Actions**

- 12. Create a new (sub)directory [5] in the MVC application to add all SP™ files and directories
- 13. Open the webfiles directories of the SP™ installation in an Explorer window.
- 14. Copy/paste all relevant SP™ files and directories into the new MVC directory follow below **Example**.

# \* Relevant SP Directories Content (all) - css files fonts (all) - font files Images (all) - images files Scripts - js files XMLdata - xml files





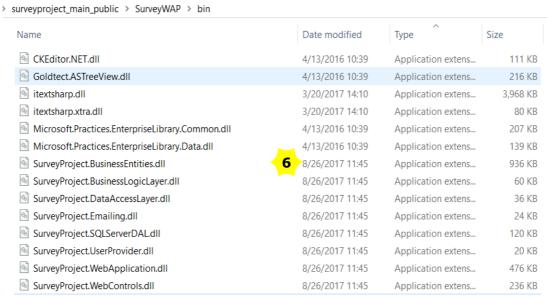
```
* NEW MVC Directories:

NsurveyForm

/Content/ .... (all minified)
/ surveyform/..
/UserCSS/...
/Themes/....
/Images (all)
/fonts (all)
/fonts (all)
/scripts/ .... .js (minified all)
/ckeditor (all) (incl. filemanager / userimg)
/javascript/google/...
/XmlData/ ... .xml (all)
/address
/css
/languages (all)
```

#### Copying and Referencing DLL's

o All SP™ assembly files (DLL's) have to be copied from the 'bin' folder into the MVC's bin folder.



List of Survey Project DLL's

#### **Actions**

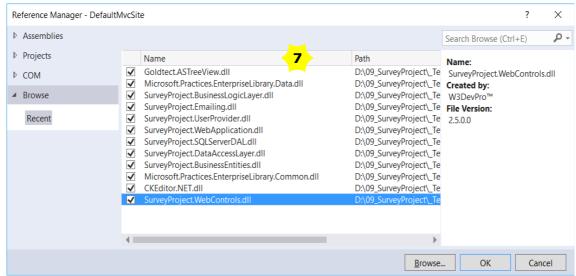
- 15. Open the 'bin' directory of the SP™ installation in an Explorer window to select all (14x) DLL files [6]
- 16. Copy/ paste all DLL files into the 'bin' directory of the MVC application
- o Next the DLL's can be referenced in the MVC project as part of the Solution.

#### **Actions**

- 17. Right click the 'References' directory in Visual Studio and click 'Add Reference' to open the manager
- 18. Browse to the MVC bin directory to add all SP™ DLL's (14x) to the list in the reference manager
- 19. Select all DLL's on the screen [7] and click OK. Check if all are added correctly to the solution.







Select and add DLL's in Reference Manager

#### Edit the Web.config file

o The last step before (re)building the MVC solution is to edit and adjust the sites web.config file and copy/ paste relevant sections from the SP™ web.config file.

#### **Actions**

- 20. Open the web.config file of the MVC site in Visual Studio
- 21. Open the web.config file of the SP™ site in a text editor (e.g. Notepad)
- 22. Copy/ paste all revelant sections from the SP™ file into the MVC file follow the Example below.

```
Example
1, Add to the <configSections>
    <section name="dataConfiguration"</pre>
type="Microsoft.Practices.EnterpriseLibrary.Data.Configuration.DatabaseSettings,
Microsoft.Practices.EnterpriseLibrary.Data, Version=6.0.0.0, Culture=neutral "requirePermission="true" />
  <section name="enterpriseLibrary.ConfigurationSource"</pre>
type="Microsoft.Practices.EnterpriseLibrary.Common.Configuration.ConfigurationSourceSection,
Microsoft.Practices.EnterpriseLibrary.Common, Version=6.0.0.0, Culture=neutral,
PublicKeyToken=31bf3856ad364e35" requirePermission="true" />
    <section name="nSurveySettings" type="System.Configuration.AppSettingsSection" allowLocation="true"</pre>
allowDefinition="Everywhere" allowExeDefinition="MachineToApplication" overrideModeDefault="Allow" restartOnExternalChanges="true" requirePermission="true" />
2. Add right after the ConfigSection
  <enterpriseLibrary.ConfigurationSource selectedSource="System Configuration Source">
      <add name="System Configuration Source"</pre>
type="Microsoft.Practices.EnterpriseLibrary.Common.Configuration.SystemConfigurationSource,
Microsoft.Practices.EnterpriseLibrary.Common, Version=6.0.0.0, Culture=neutral,
```





```
PublicKeyToken=31bf3856ad364e35" requirePermission="true" />
    </sources>
  </enterpriseLibrary.ConfigurationSource>
3. Add to the ConnectionString section
  <connectionStrings>
     <clear />
     <add name="LocalSqlServer" connectionString="data source=.\SQLEXPRESS;Integrated</pre>
Security=SSPI;AttachDBFilename=|DataDirectory|aspnetdb.mdf;User Instance=true
providerName="System.Data.SqlClient" />
<add name="SurveyProjectDevConnectionString" connectionString="Data Source=[dbPRODservername];Initial
Catalog=[dbname];Persist Security Info=True;User ID=[dbuser];Password=[dbpassword]"</pre>
providerName="System.Data.SqlClient" />
<add name="SurveyProjectTestConnectionString" connectionString="Data Source=[dbPRODservername];Initial
Catalog=[dbname];Persist Security Info=True;User ID=[dbuser];Password=[dbpassword]"</pre>
providerName="System.Data.SqlClient" />
<add name="SurveyProjectProdConnectionString" connectionString="Data Source=[dbPRODservername];Initial
Catalog=[dbname];Persist Security Info=True;User ID=[dbuser];Password=[dbpassword]"</pre>
providerName="System.Data.SqlClient" />
  </connectionStrings>
  <!-- Survey Project database connection: to select connectionsetting options see connectionStrings-->
<dataConfiguration defaultDatabase="SurveyProjectProdConnectionString" />
Notes
- only one connectionstring is actually used (Dev, Test or Prod)
- the dataconfiguration defaultdatabase determines the connectionstring to be used (eq. Prod)
3. Add to the SystemWeb section, right after HttpModules
     <!-- culture/ uiculture: if set to "auto" will pick up culture/ language of preferred browser settings. To explicitely pick a culture/ language, replace auto with "en-US" or "nl-NL" for example. -->
resourceProviderFactoryType="" enableBestFitResponseEncoding="false" />
Notes
- if these lines are not added the Multi Language functions of SP will not work correctly
4. Add before the system.webserver endtag
     <staticContent>
       <remove fileExtension=".otf" />
<remove fileExtension=".svg" />
<remove fileExtension=".woff2" />
      <!-- In case IIS already has this mime type -->
<mimeMap fileExtension=".otf" mimeType=" application/font-sfnt" />
<mimeMap fileExtension=".svg" mimeType="image/svg+xml" />
```

#### Notes

- Lines needed to avoid a browser errors on the use of .woff2 font files

<mimeMap fileExtension=".woff2" mimeType="font/woff2" />

5. Add to the end of the file just before the </configuration> closing tag:

</staticContent>





```
<nSurveySettings file="">
    <clear />
    <!-- Nsurvey General directories -->
    <add key="NSurveyImagesPath" value="~/NSurveyForm/Images/" />
<add key="NSurveyXmlDataPath" value="~/NSurveyForm/XmlData/" />
    <add key="NSurveyLanguagesPath" value="~/NSurveyForm/XmlData/Languages/" />
    <add key="NSurveyHelpfilesPath" value="~/NSurveyForm/XmlData/Helpfiles/" />
    <add key="NSurveyCssXmlPath" value="~/NSurveyForm/XmlData/Css/" />
    <add key="NSurveyScriptFilesPath" value="~/NSurveyForm/Scripts/" />
<add key="NSurveyContentFilesPath" value="~/NSurveyForm/Content/" />
    <!-- NSurvey Form directories:-->
    <add key="NSurveyFormAddressPath" value="~/NSurveyForm/XmlData/Address/" />
<add key="NSurveyFormCSSFilesPath" value="~/NSurveyForm/Content/surveyForm/" />
    <!-- Nsurvey General Settings -->
<add key="NSurveySMTPServer" value="[yourmailserver" />
    <add key="NSurveySMTPServerPort" value="25" />
    <add key="NSurveySMTPServerAuthUserName" value="[username]" />
    <add key="NSurveySMTPServerAuthPassword" value="[password]"</pre>
    <add key="NSurveySMTPServerEnableSs1" value="false" />
    <add key="EmailingProviderAssembly" value="SurveyProject.Emailing" />
    <add key="EmailingProviderClass" value="Votations.NSurvey.Emailing.SystemWebEmailing" />
  <add key="UserProviderAssembly" value="SurveyProject.UserProvider" />
    <add key="UserProviderClass" value="Votations.NSurvey.UserProvider.FormUserProvider" />
   <add key="FormUserProviderSingleMode" value="false" />
    <add key="SqlBasedAnswerTypesAllowed" value="true"</pre>
    <add key="WebDAL" value="SurveyProject.SQLServerDAL"</pre>
    <add key="UploadedFileDeleteTimeOut" value="24" />
    <add key="SessionUploadedFileDeleteTimeOut" value="330" />
 </nSurveySettings>
Notes
- Main section to determine the SP™ related directory and file paths in the MVC application:
* Images
             : point to MVC directory where all SP images are copied to
* XML
              : point to MVC directory where all SP XML files are copied to
* Languages : XML Subdirectory
* Helpfiles
             : XML Subdirectory (not used on MVC – do not leave out)
* CSSXML
             : XML Subdirectory
* Scripts
              : point to MVC directory where all SP Scrips (javascript/ jquery) are copied to
* Content
              : points to MVC directory where all SP Content (css etc.) is copied to
* Address
              : XML subdirectory
* CSS
              : Content Subdirectory with surveyform CSS files
- The SMPT accountdetails can be different from the original SP™ web.config SMTP settings. It is advised to keep them
```

#### **Build the MVC Solution**

synchronized and equal to avoid errors.

o When all changes have been made to the MVC application and are saved correctly the final step it to (re)build the solutions before opening the MVC application and surveyform in the webbrowser.

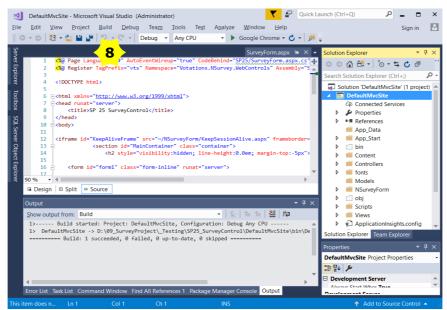
- Several keys are not used in the MVC application and apply to the SP™ admin tool. They cannot be left out.

#### **Actions**

- 23. Select and click 'Build' (or Rebuild) [8] from the menubar of Visual Studio to Build the application
- 24. Check the 'Output' screen for the correct results (in case of errors: fix and redo)







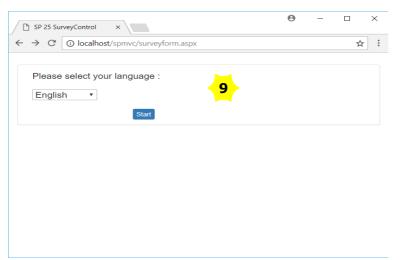
Building the MVC Application in Visual Studio

#### Start the MVC application

o The MVC webapplication can now be opened in a webbrowser (manually or from inside Visual Studio) to go to the surveyform and answer/ submit the survey presented on the screen.

#### **Actions**

- 20. Open a webbrowser and enter the url of the MVC website to start the application [9]
- 21. Click the Surveyform menu option to open the surveypage and answer/submit the survey.



MVC SurveyForm webpage showing multilanguage survey

**Note**: The survey results can be checked through the SP™ webapplication (reports).





#### **Further Reading & Links**

#### More on Webforms and MVC integration

https://www.packtpub.com/books/content/mixing-aspnet-webforms-and-aspnet-mvc/https://www.red-gate.com/simple-talk/dotnet/asp-net/mixing-web-forms-and-asp-net-mvc/

[Note: SP is in no way affiliated with these sites. More background info on MVC and Webforms can be found through searching the web (Google/ Bing).]

#### Available Help Sources

#### End User Information

The first integrated helpfiles were added to version 2.0 of the Survey™ Project webapplication:

- o An index of helpfiles is available at menu Help/ Helpfiles.
- o Tooltip helptexts can be found on several webpages of the SP tool.
- Some of these Helpfiles have been published on the Survey Wiki of the Community website also.
- Through the Articles Menu of the Survey™ Project Community site additional articles can be found based on specific Survey related issues and themes

http://www.surveyproject.org/Support/Helpfiles/Articles/tabid/194/Default.aspx

- At the Survey™ Project YouTube Channel subtitled movies can be found with basic instructions on several subjects: <a href="https://www.youtube.com/user/TheSurveyProject">https://www.youtube.com/user/TheSurveyProject</a>

#### **Developers Information**

- Technical information can be found at
- o the former Survey Sourcecode website at <a href="http://survey.codeplex.com">http://survey.codeplex.com</a>
- o the new site at https://www.github.com/surveyproject
- Visit the Forums section of the Community website to ask any questions <a href="http://www.surveyproject.org/Forums/tabid/107/Default.aspx">http://www.surveyproject.org/Forums/tabid/107/Default.aspx</a>

Contributions to the projects documentation and helpfiles are most welcome. If you have any experience in this field or if you feel like joining the team please let us know: <a href="mail@surveyproject.org">mail@surveyproject.org</a>

#### Survey™ Project

http://www.surveyproject.org/ - SP™ Community site & Forums

http://www.surveyproject.biz - SP™ Business Services

http://www.surveyproject.net/ - SP™ Test & Demo site

https://www.github.com/surveyproject/ - Downloads, Releases, Sources, Development

#### SurveyBox DNN® module

https://github.com/surveyproject/surveybox - Downloads, Releases, Sources, Development