ASP.NET WP

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About the Tutorial

This tutorial will give you a fair idea on how to get started with ASP.NET Web pages. Microsoft ASP.NET Web Pages is a free Web development technology that is designed to deliver the world's best experience for Web developers who are building websites for the Internet.

After completing this tutorial, you will have a better understanding of what is ASP.NET Web Pages, why you need it, and of course, you will also learn how to add ASP.NET Web Pages to your project.

Audience

This tutorial will be extremely useful for budding Programmers, Web Developers who aspire to build websites for the internet and also to learn the nuances of ASP.NET and implement it in practice.

It is especially going to help professionals who are mainly responsible for taking care of the framework that can be used to build ASP.NET content quickly and easily.

Prerequisites

In this tutorial, we are assuming that you are interested in learning basic programming. ASP.NET Web Pages use C# and Visual Basic programming languages and in this tutorial we will use C# as a programming language.

If you don't have any background in programming, don’t worry you just have to have an interest in it. If you have ever written any JavaScript in a web page before then it is more than enough to understand this tutorial.

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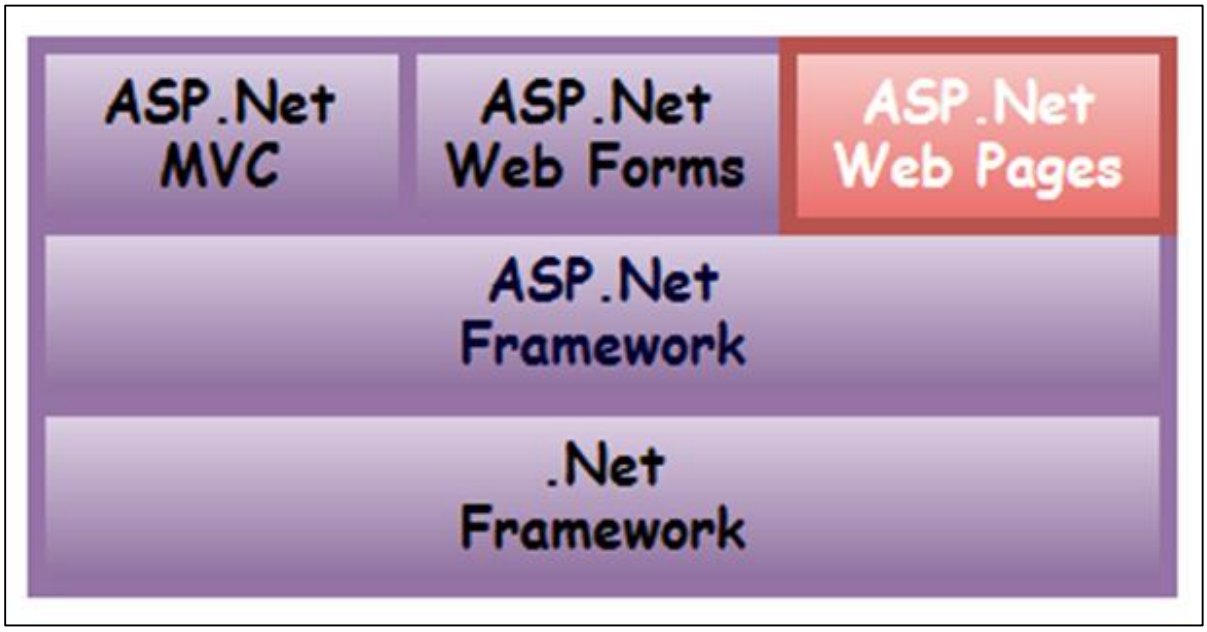
1. ASP.NET WP – OVERVIEW

This tutorial will give you a fair idea of how to get started with ASP.NET Web Pages. Microsoft ASP.NET Web Pages is a free Web development technology that is designed to deliver the world's best experience for Web Developers who are making websites for the Internet. The main goal is that after completing this tutorial, you will have a better understanding of what ASP.NET Web Pages is, why we need them and of course how to add ASP.NET Web Pages to your project.

What is ASP.NET Web Pages?

ASP.NET Web Pages is a simplified framework that we can use to build ASP.NET content quickly and easily. It is one of the three programming models for creating ASP.NET web sites and web applications. The other two programming models are **Web Forms and MVC**.



- ASP.NET Web Pages is a framework that you can use to **create dynamic web pages.**

- A simple HTML web page is static and its content is determined by the fixed HTML markup that's in the page, while with dynamic pages you can create the page content on the fly by using code.

- It provides an easy way to combine **HTML, CSS, JavaScript and server code**.

With dynamic pages you can do many things like –

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- Ask a user for making an input by using a form and then change what the page displays or how it looks.
- Take the information from a user, save it in a database, and then list it later.
- Send an email from your site.
- Interact with other services on the web.

The ASP.NET Web Pages support the ability to run websites side by side. This lets you to continue to run your older ASP.NET Web Pages applications, build new ASP.NET Web Pages applications, and run all of them on the same computer.

What Should You Know?

- In this tutorial, we are assuming that you are interested in learning basic programming.
- The ASP.NET Web Pages use C# and Visual Basic programming languages. In this tutorial, we will use C# as a programming language.
- No prior experience in programming required.
- If you have ever written any JavaScript in a web page before then it is more than enough to understand this tutorial.

What Do You Need?

To start the ASP.NET Web Pages development, you will need the following:

- A computer/laptop that is running Windows 10, Windows 8, Windows 7, Windows Server 2008, or Windows Server 2012.
- A live internet connection.
- Administrator privileges which is required just for the installation.

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2. ASP.NET WP – ENVIRONMENT SETUP

You can start ASP.NET Web Pages development using any one of the following tools:

- WebMatrix
- Visual Studio

WebMatrix

WebMatrix is a free, lightweight, easy to install and easy to use set of web development tools that provides the easiest way to build websites. It is a tool that integrates a web page editor, a database utility, a web server for testing pages, and features for publishing your website to the Internet.

- It includes **IIS Express** which is a development web server, ASP.NET and SQL Server Compact, which is an embedded database.

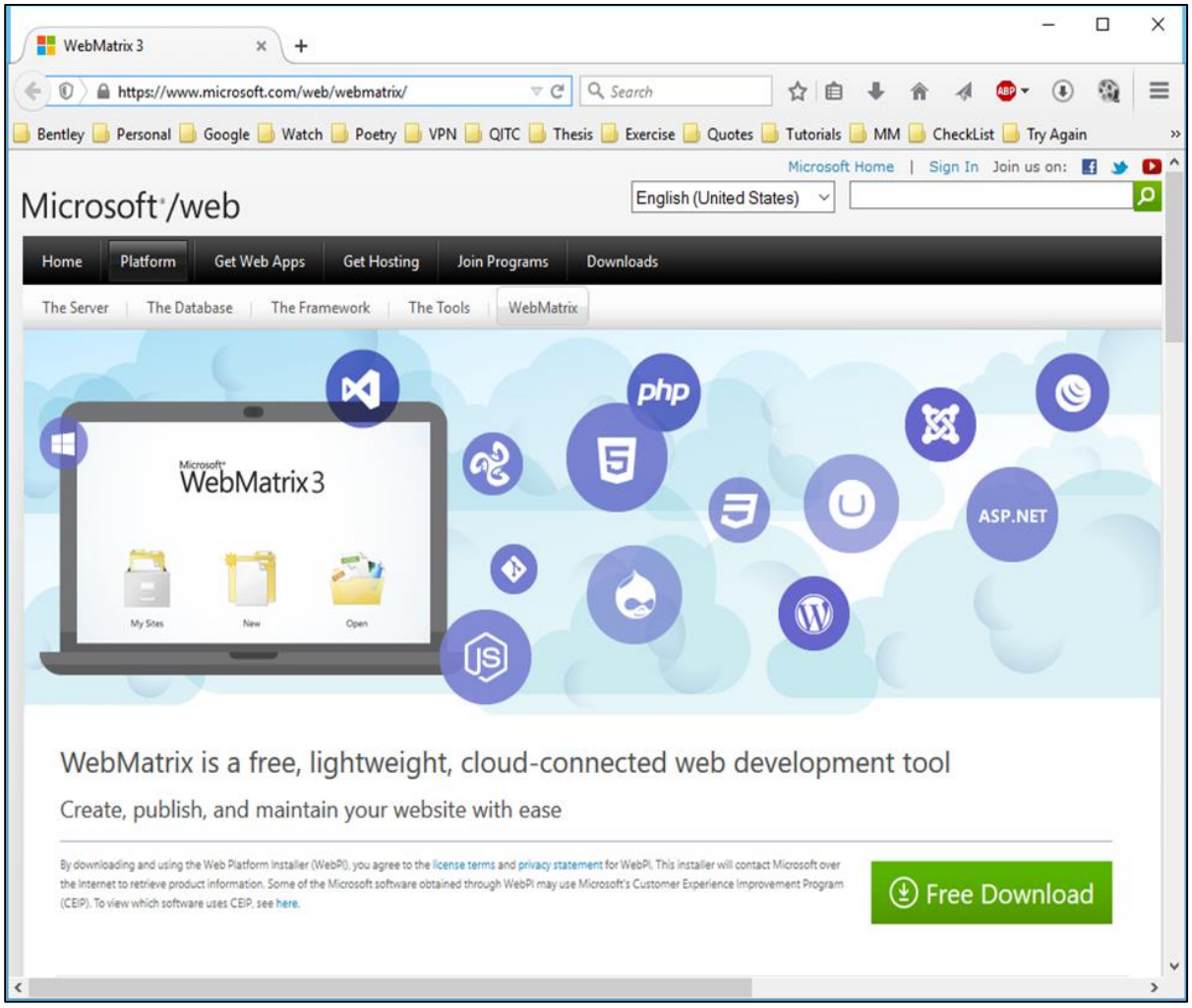
- The web pages that you create using WebMatrix can be dynamic.

- To program dynamic Web pages, you can use ASP.NET with the **Razor syntax** and with the C# or Visual Basic programming languages.

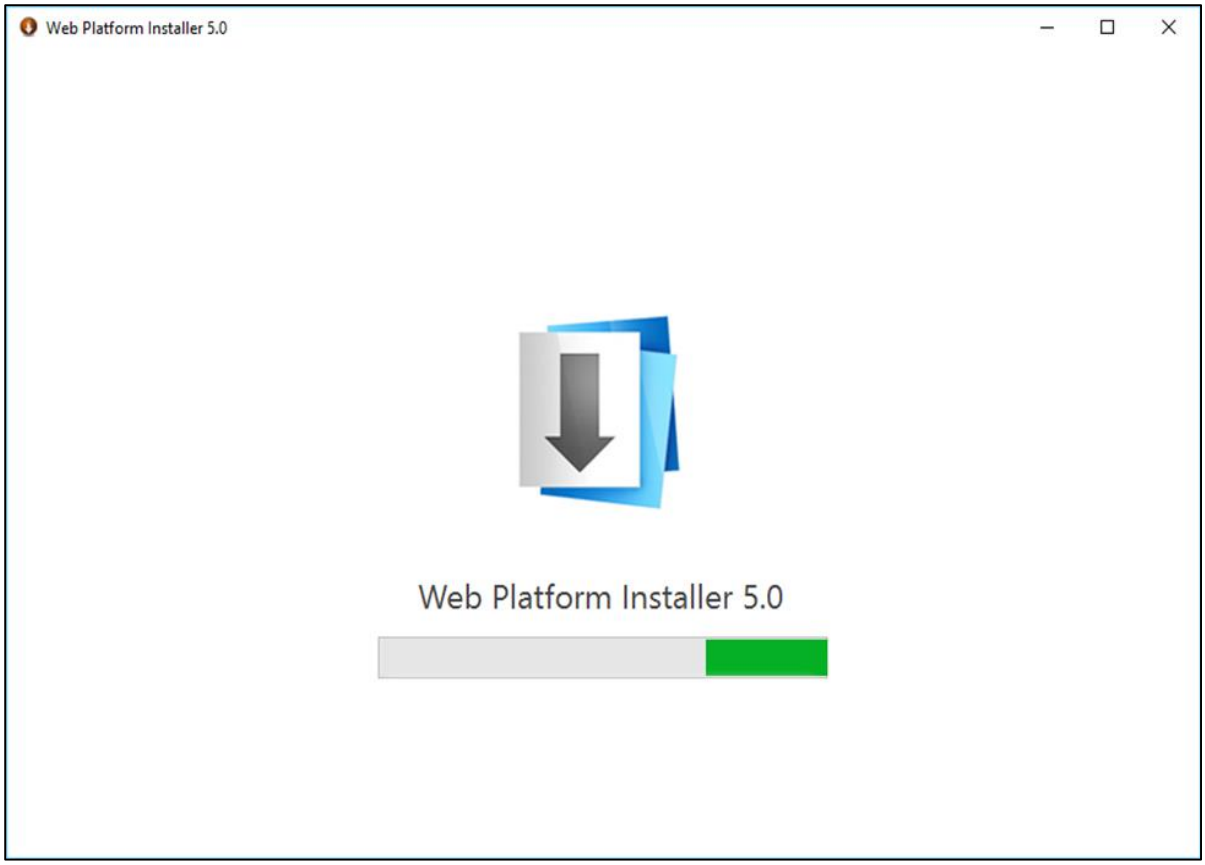
- If you already have programming tools that you like, you can try the WebMatrix tools or you can use your own tools to create websites that use ASP.NET such as Visual Studio.

WebMatrix Installation

You can install the WebMatrix from the following link – https://www.microsoft.com/web/webmatrix/



Download the WebMatrix and double click on the **WebMatrixWeb.exe** and it will start the Microsoft Web Platform Installer.



The Web Platform Installer appears, and now it is ready to install WebMatrix.

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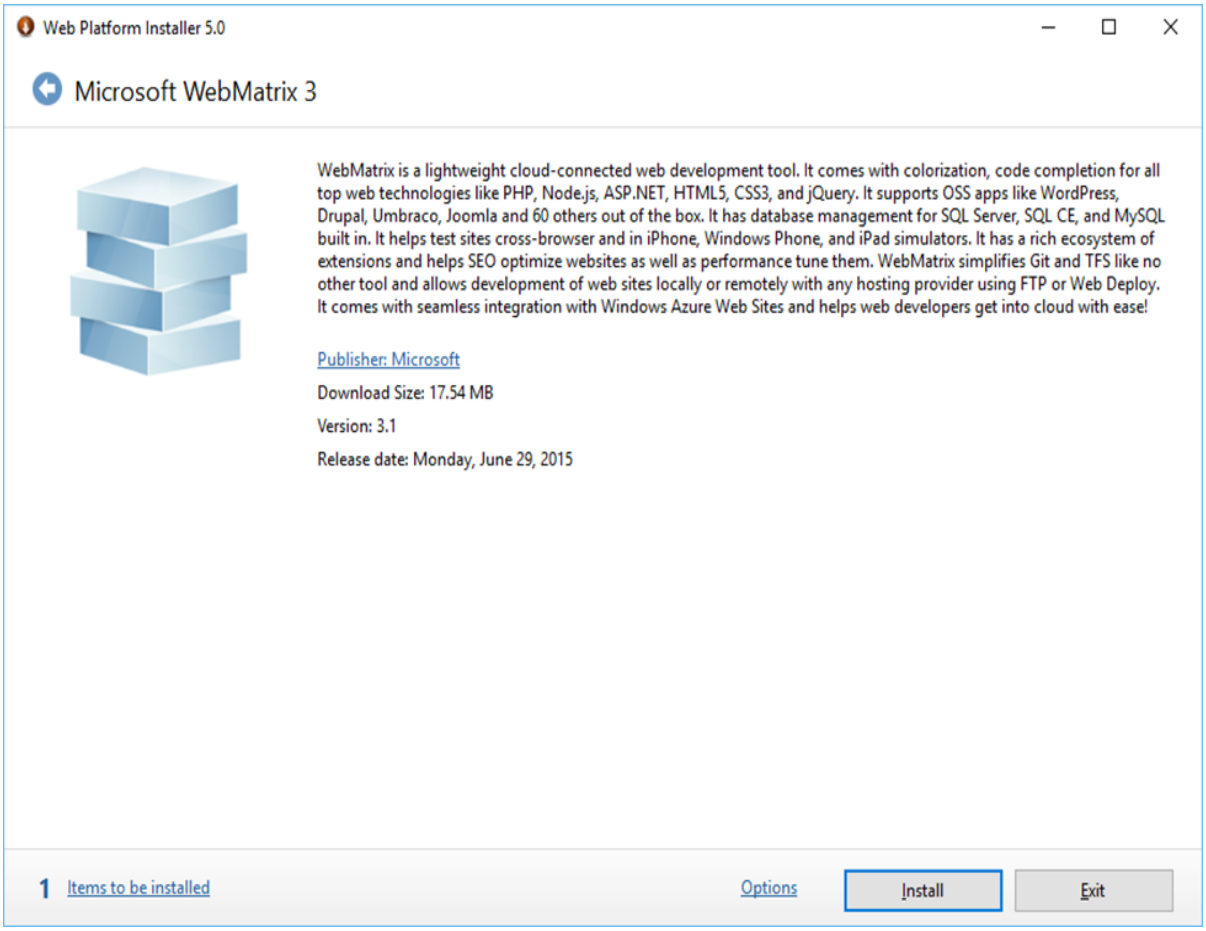

Click Install button to start the WebMatrix installation.

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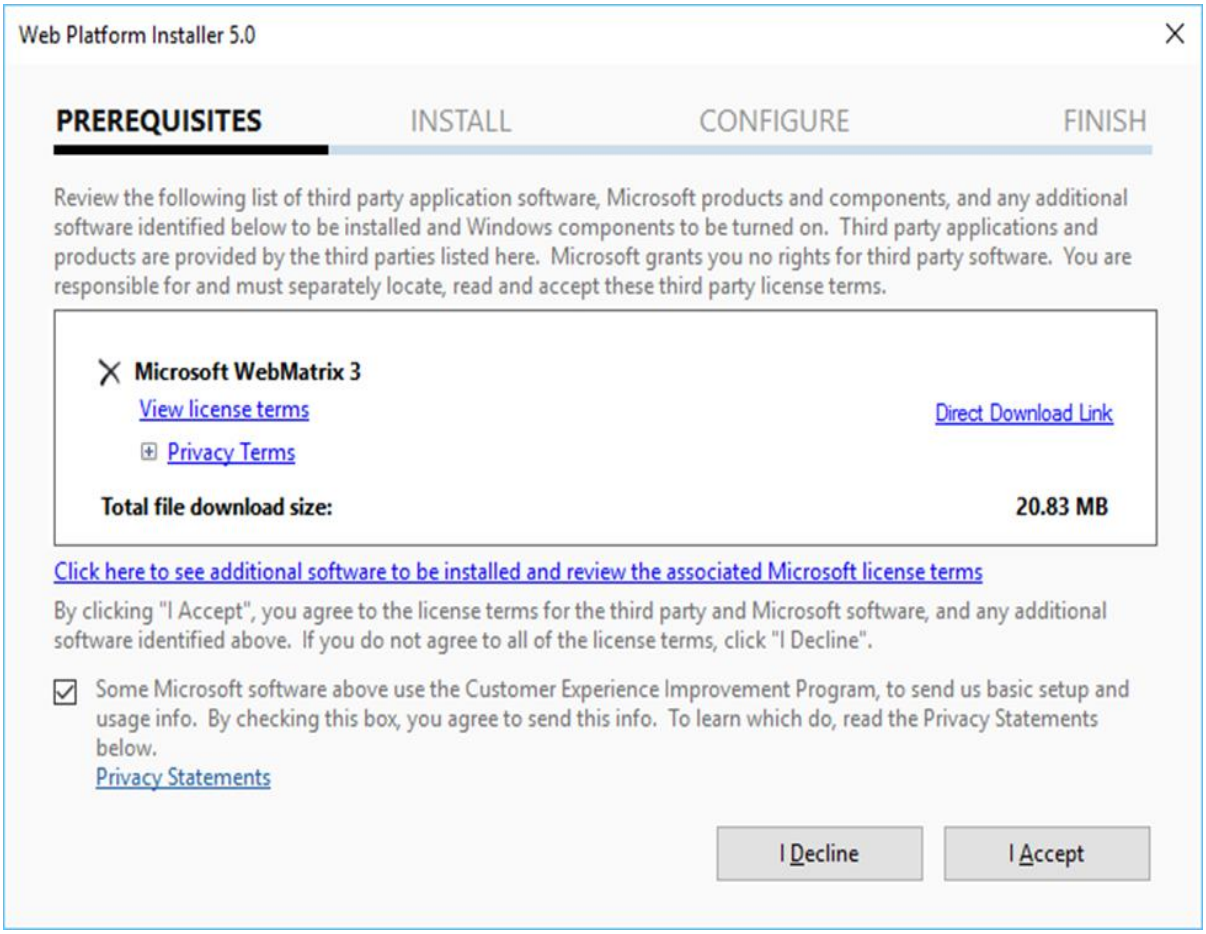
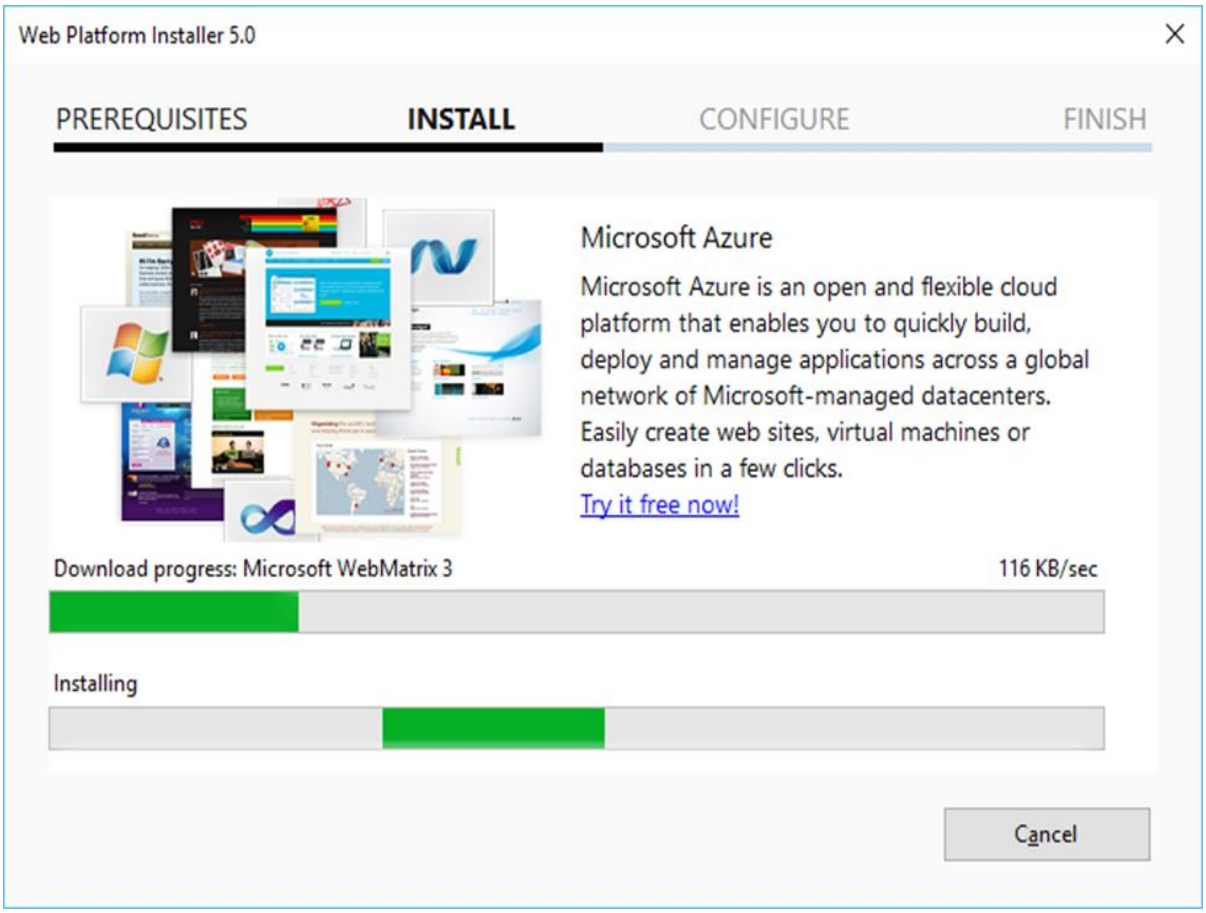
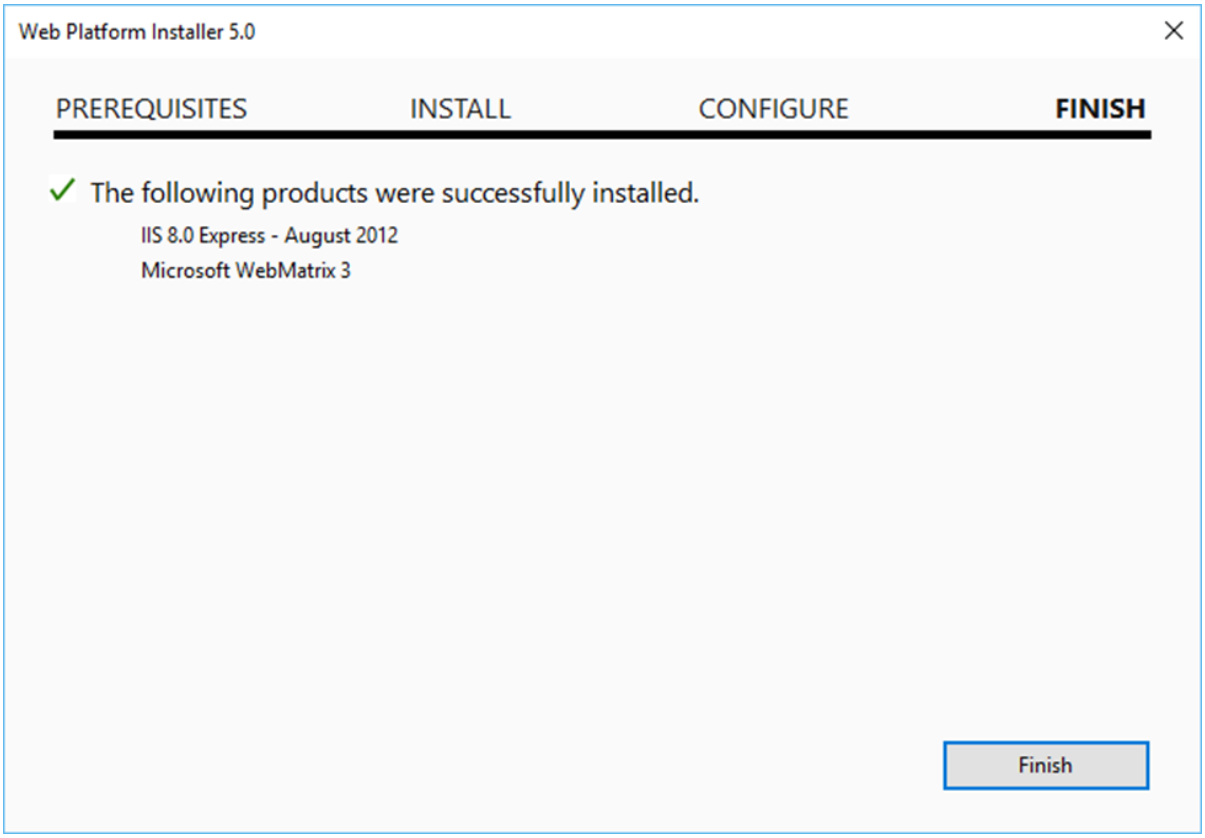


Click I Accept to continue the installation.



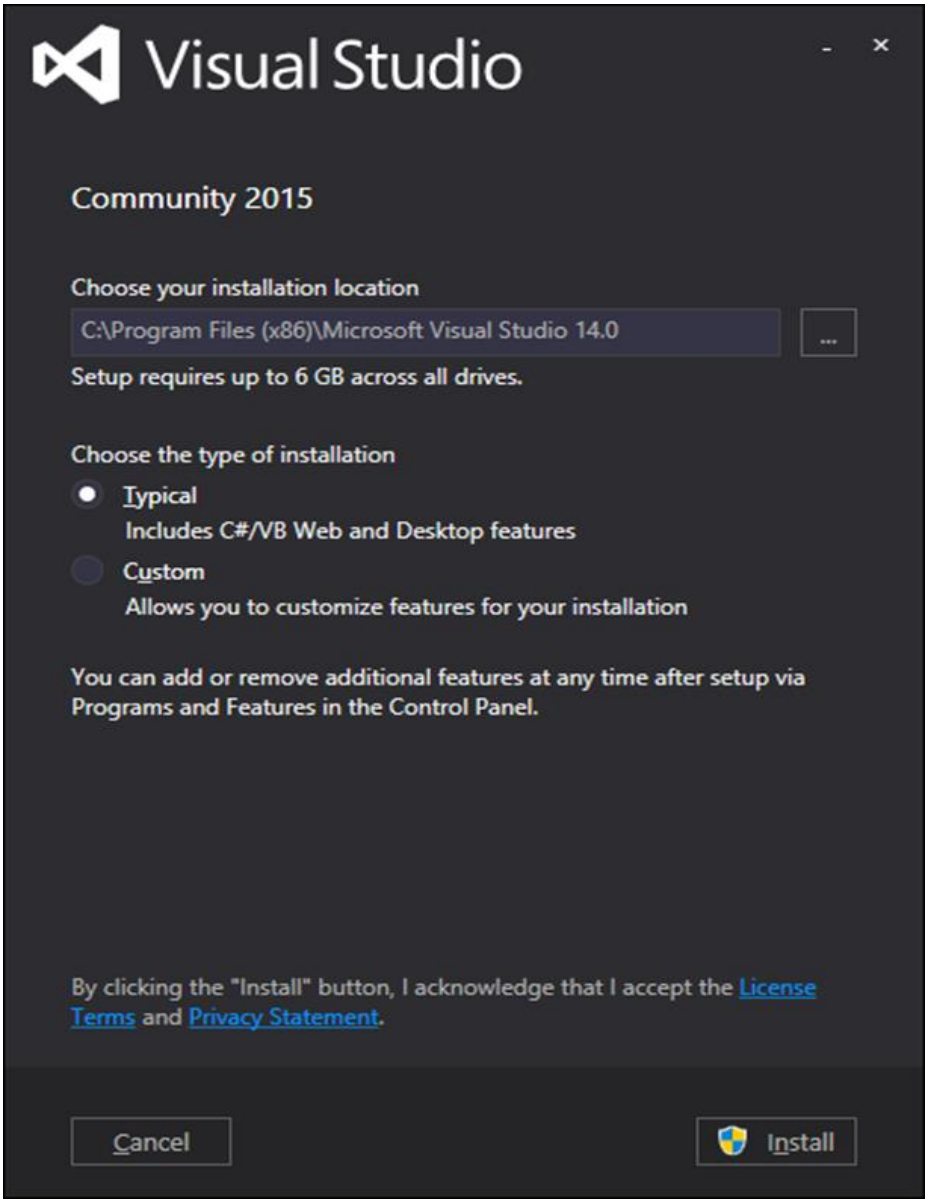
Once the installation is completed, you will see the following message.



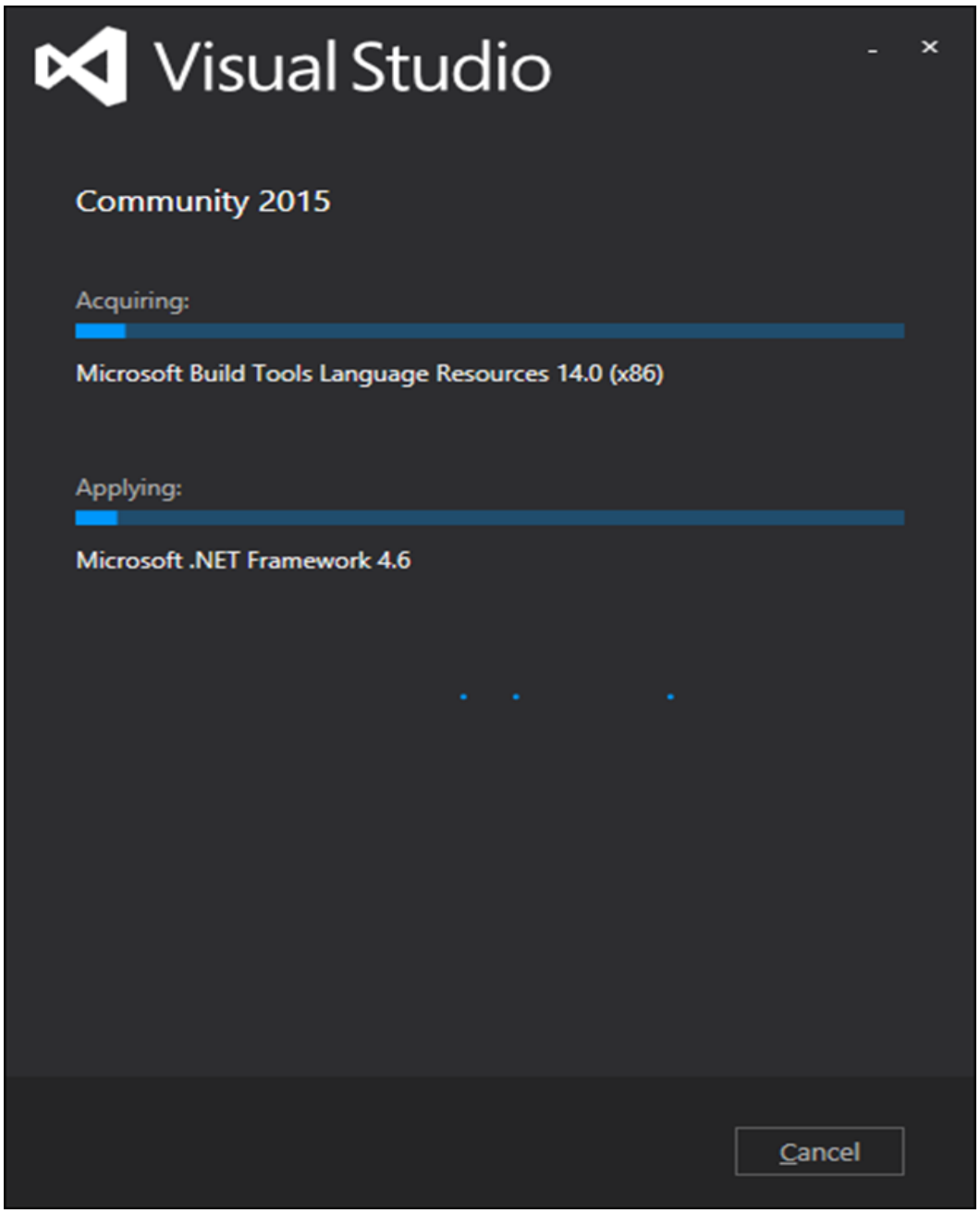
Visual Studio Installation

Microsoft provides a free version of Visual Studio that also contains SQL Server and it can be downloaded from https://www.visualstudio.com/en-us/downloads/download-visual-studio-vs.aspx.

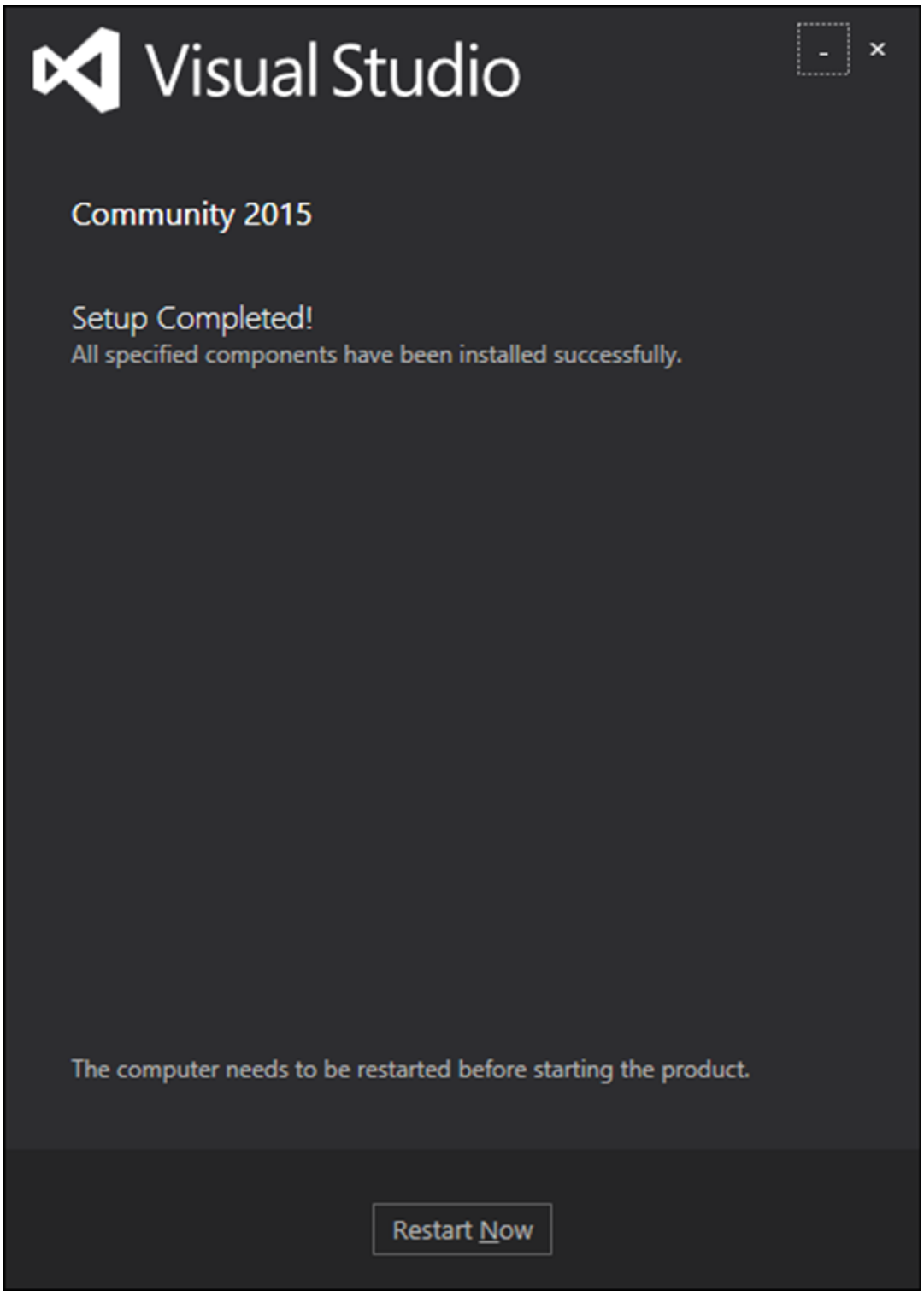
1. Once downloading is completed, run the installer. It will display the following dialog.



2. Click Install and it will start installation process.


Visual Studio
Community 2015
Acquiring:
Microsoft Build Tools Language Resources 14.0 (x86)
Applying:
Microsoft .NET Framework 4.6
Cancel

3. Once the installation process is completed successfully you will see the following dialog.



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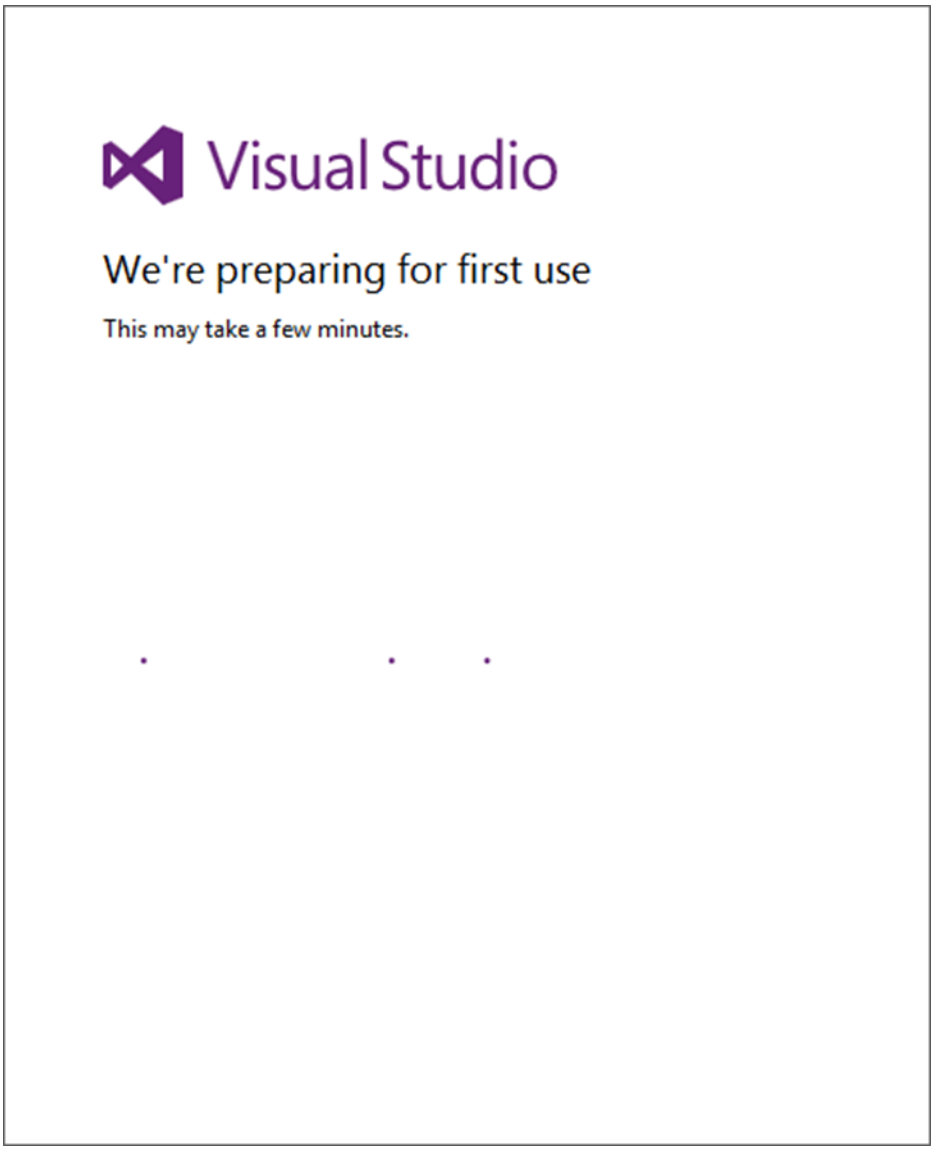
4. Close this dialog and restart your computer if required.

5. Now open Visual studio from the Start Menu, which will open a below dialog and it will take some time to open for the first time for preparation as shown in the following screenshot.



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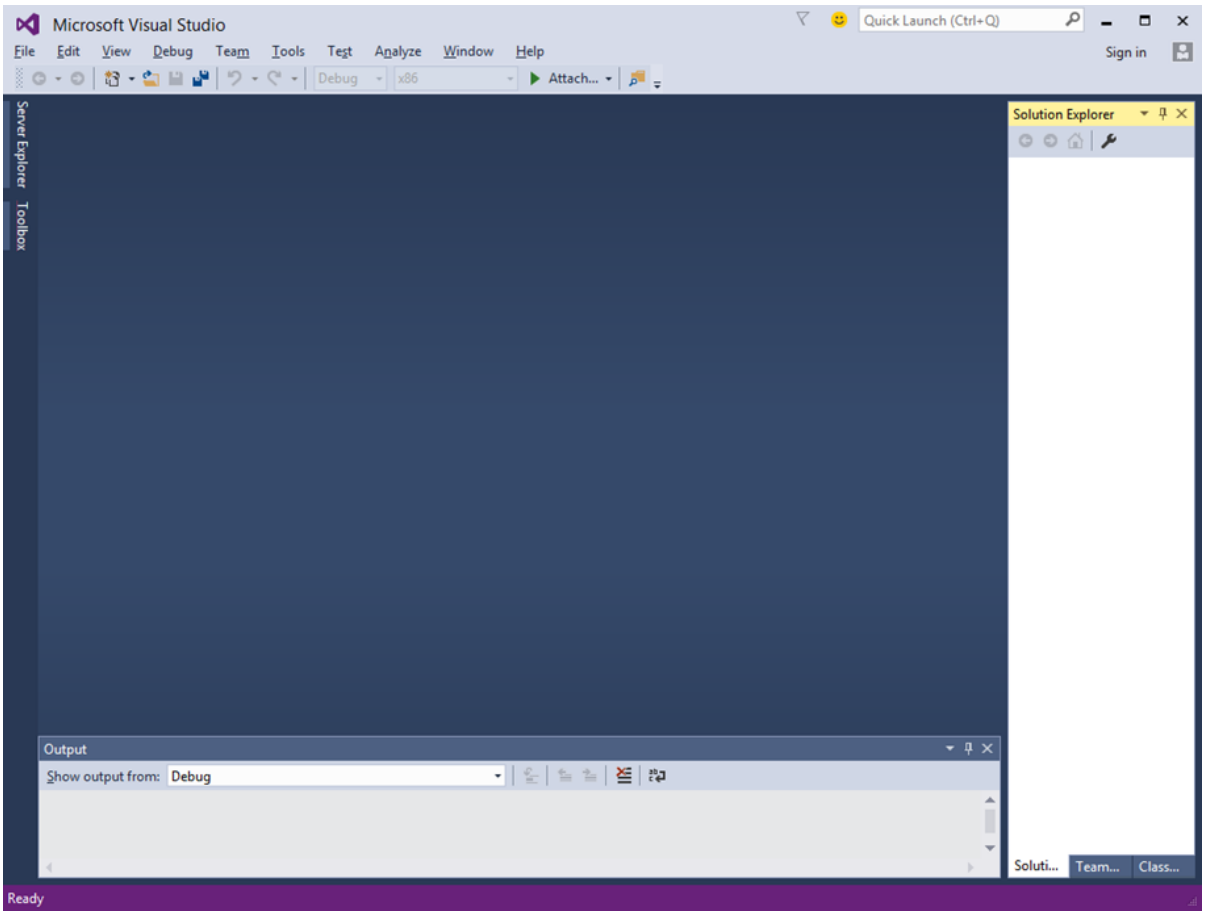
6. Once all this is done, you will see the main window of Visual studio.



You can now start ASP.NET Web Pages development.

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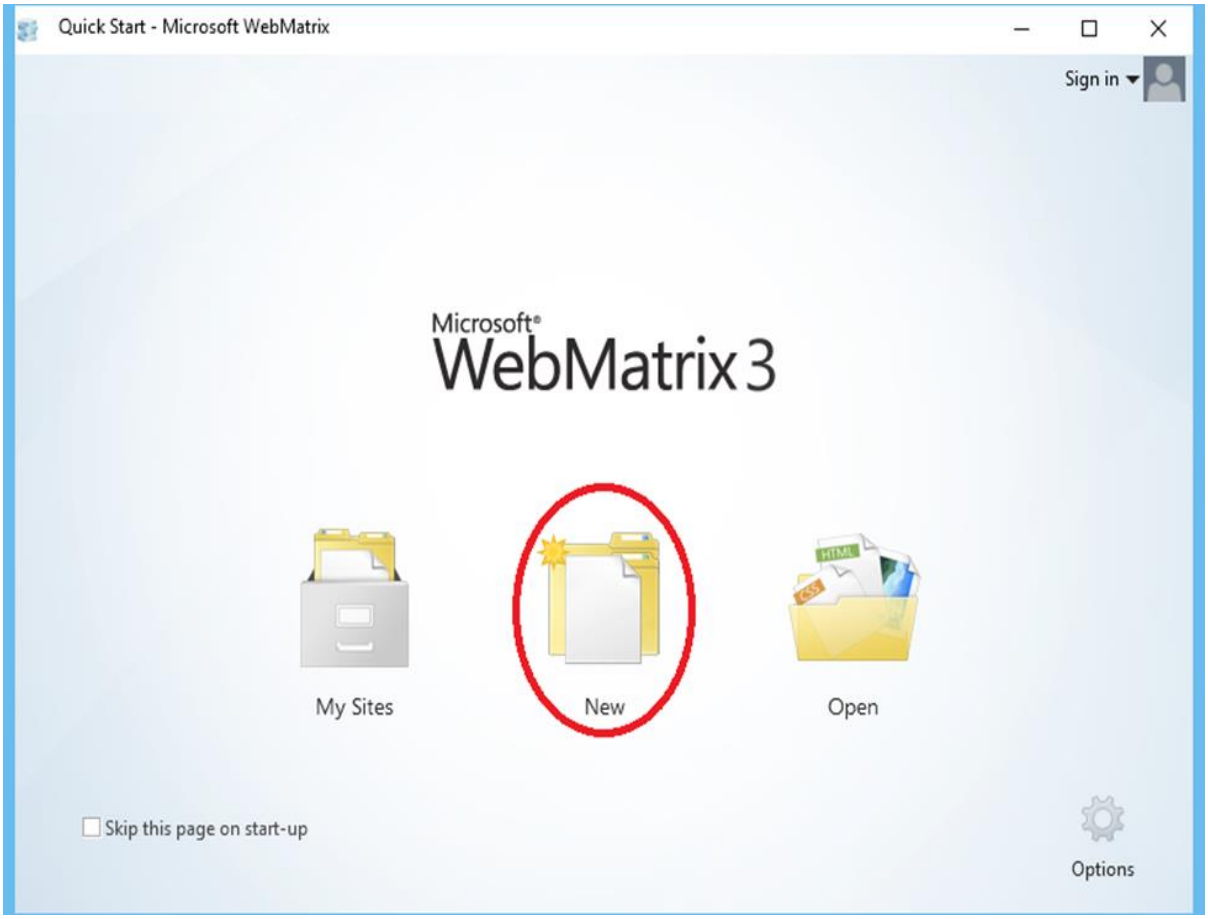
3. ASP.NET WP – GETTING STARTED

In this chapter, we will look at how to start a simple example using ASP.NET Web Pages. To begin with, we will create a new website and a simple web page.

How to Create a Blank Website?

To start with, launch Microsoft WebMatrix which we have installed in the previous chapter.



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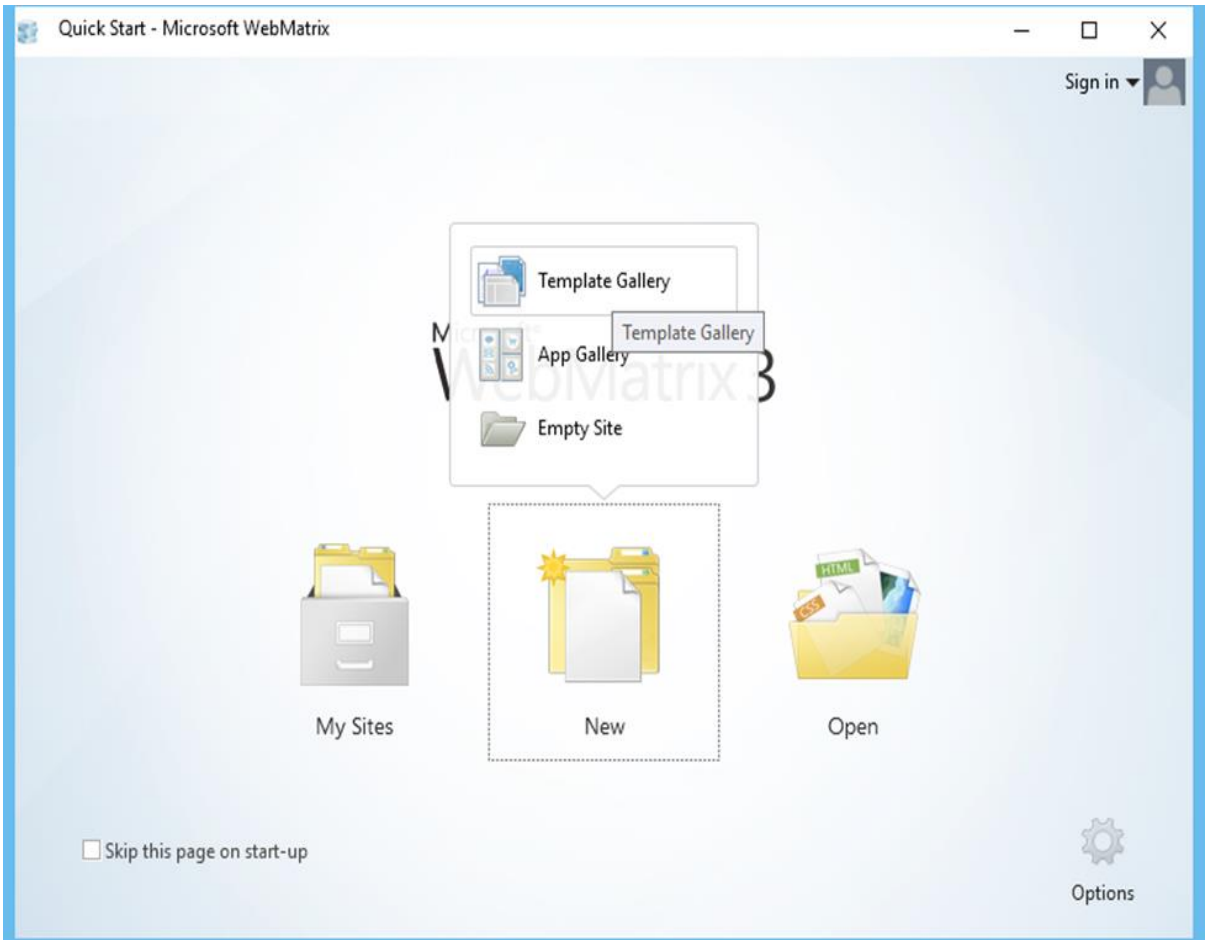
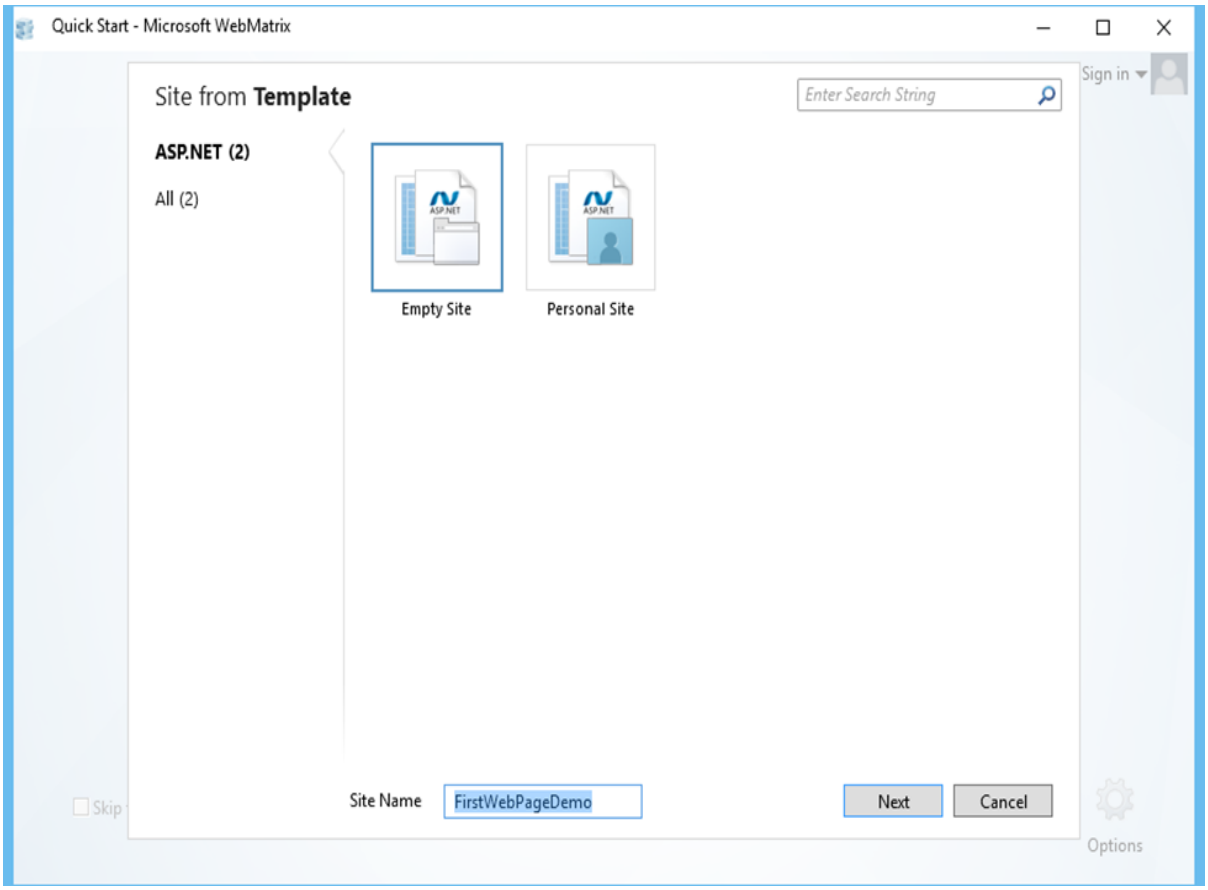
We will create a blank site and then and add a page. To start with, click New and it will display the built-in templates.



Templates are pre-built files and pages for different types of websites. To see all of the templates that are available by default, select the Template Gallery option.



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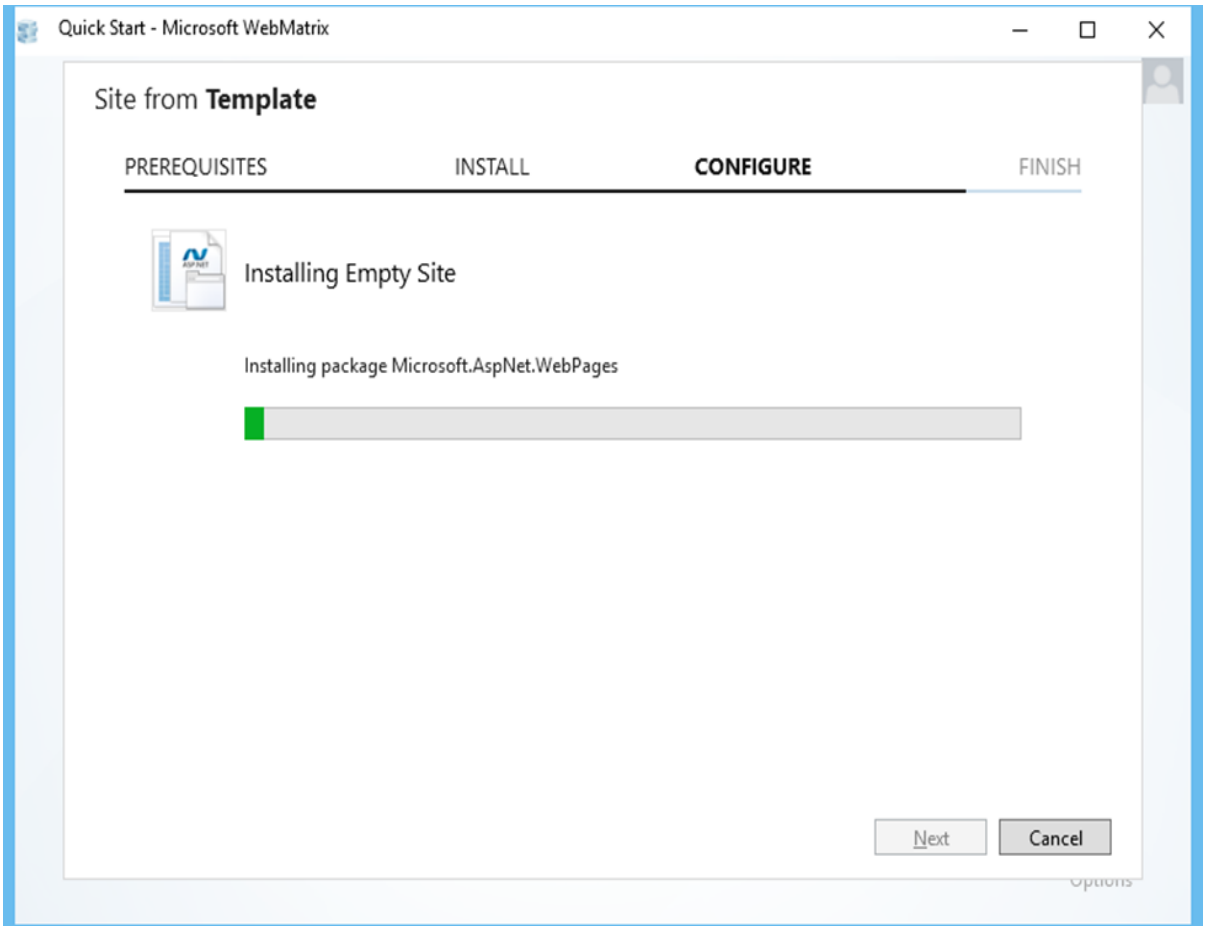
Select the Empty Site template and enter the Site Name. In this case, we have entered **FirstWebPageDemo** as the Site Name and then we have to click Next.



It will install the required packages. Once the installation is finished, WebMatrix creates and opens the site as shown in the following screenshot.

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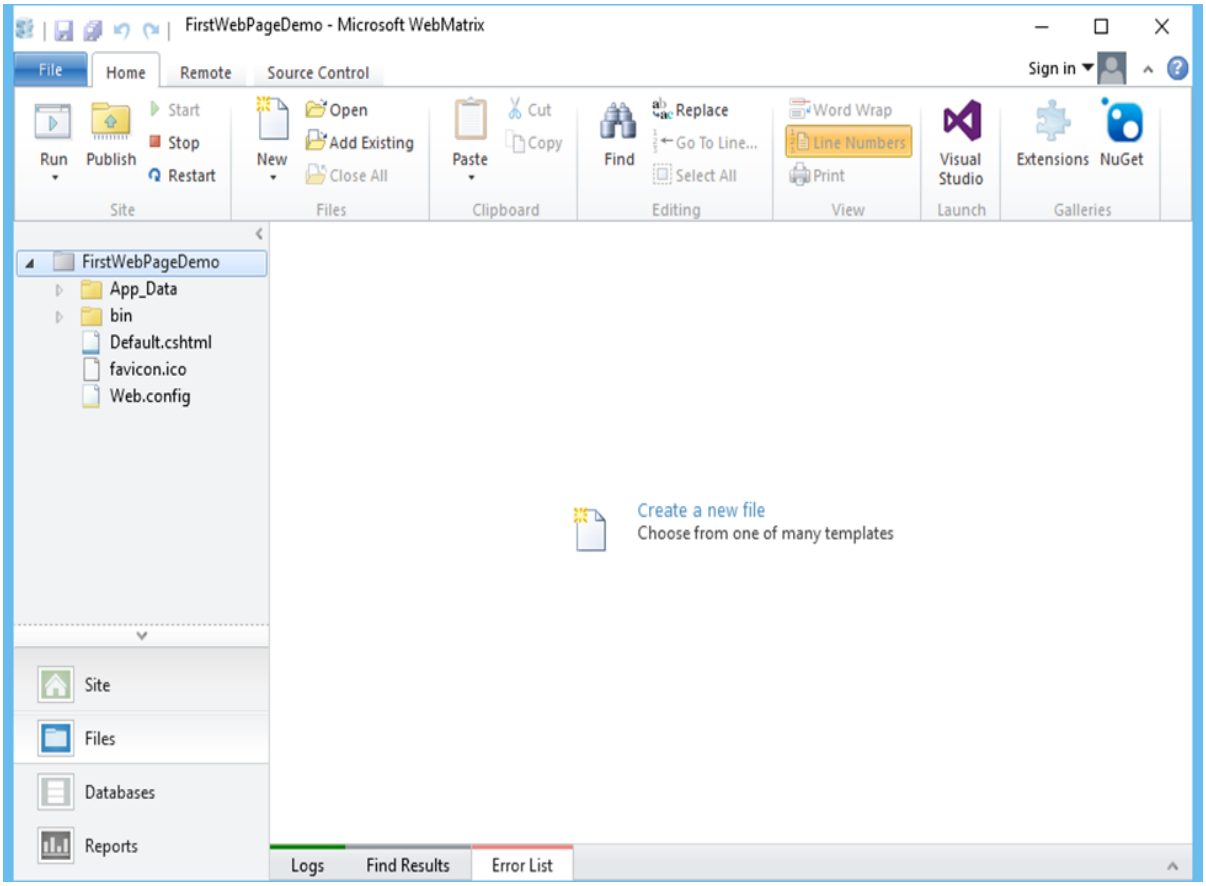

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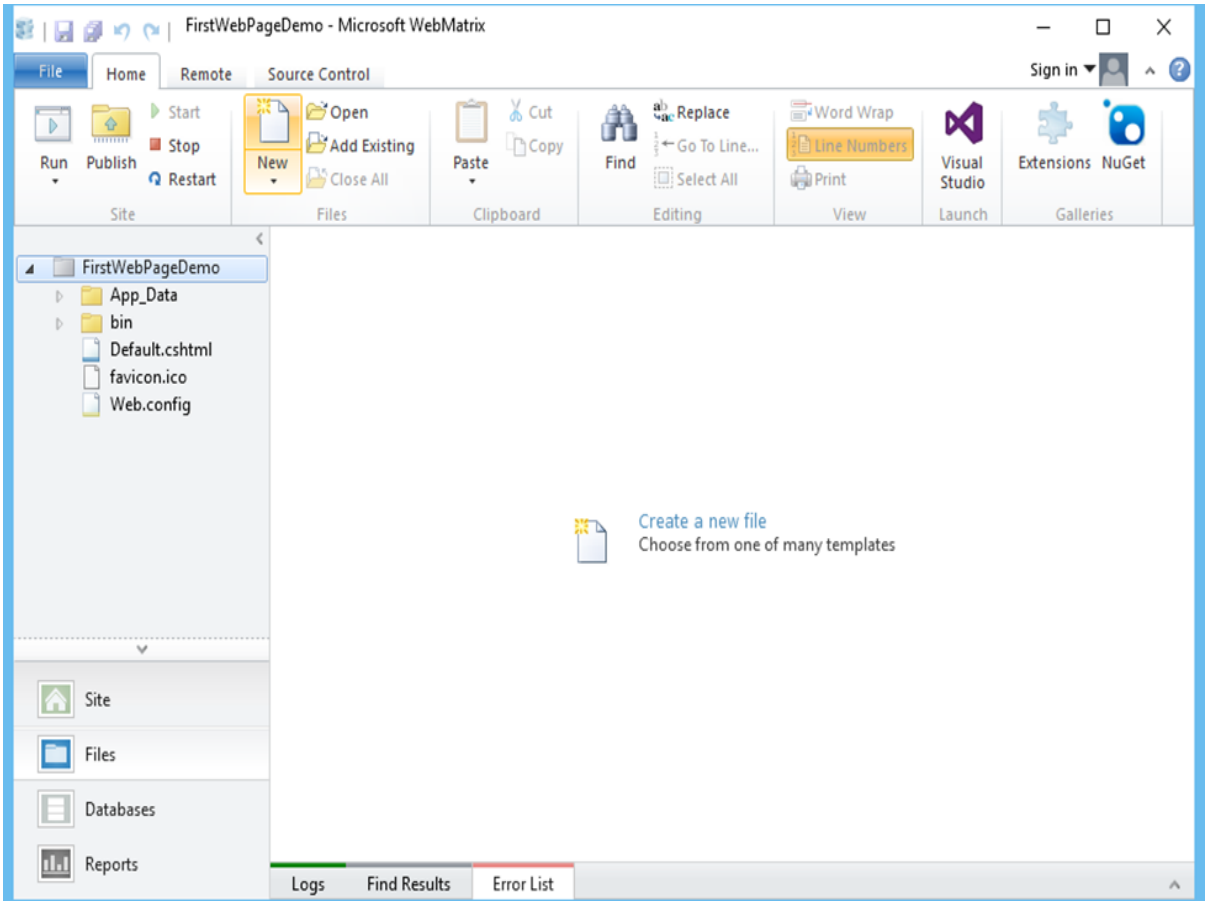
Create an ASP.NET Web Page

Now to understand and become familiar with WebMatrix and ASP.NET Web Pages, let's create a simple web page by clicking New in the Home tab.



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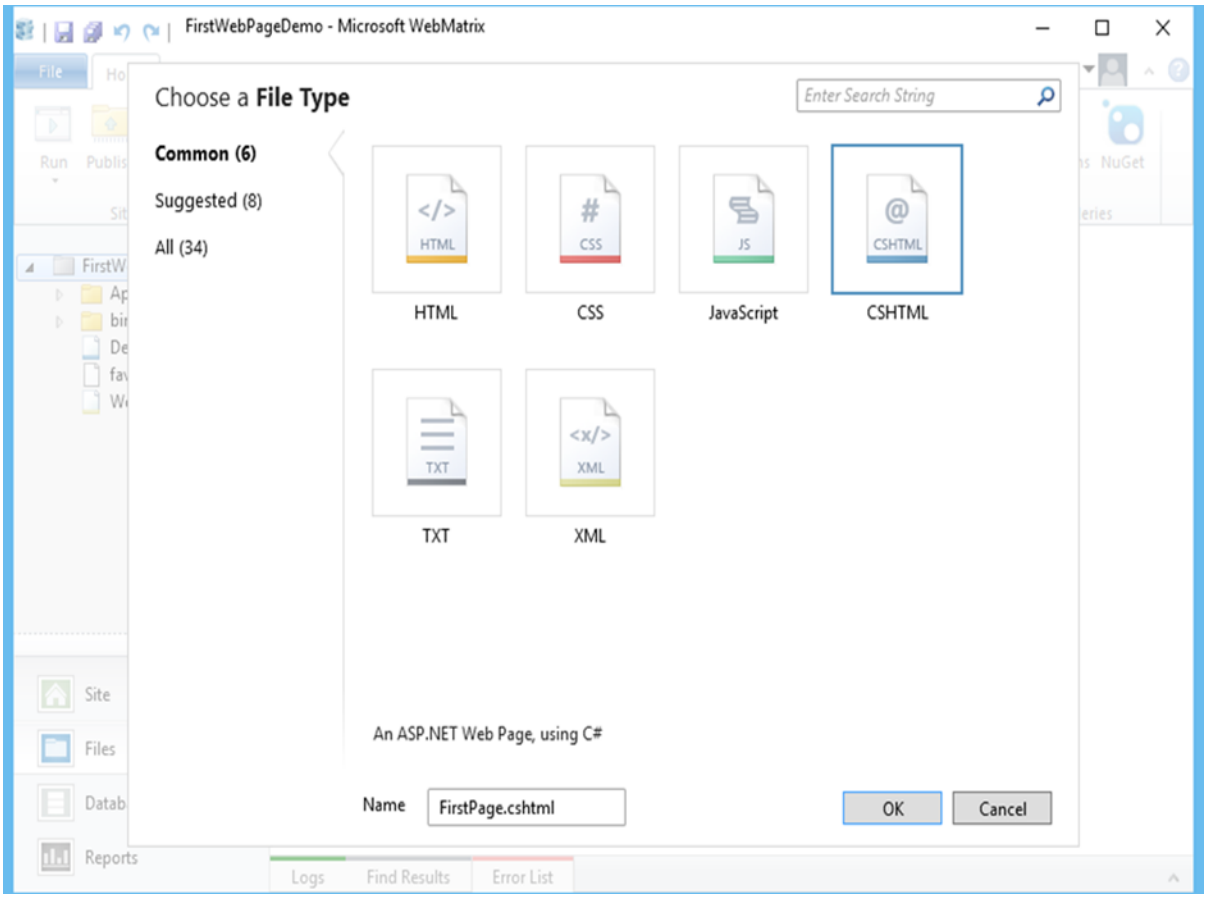
WebMatrix displays a list of file types as shown in the following screenshot.



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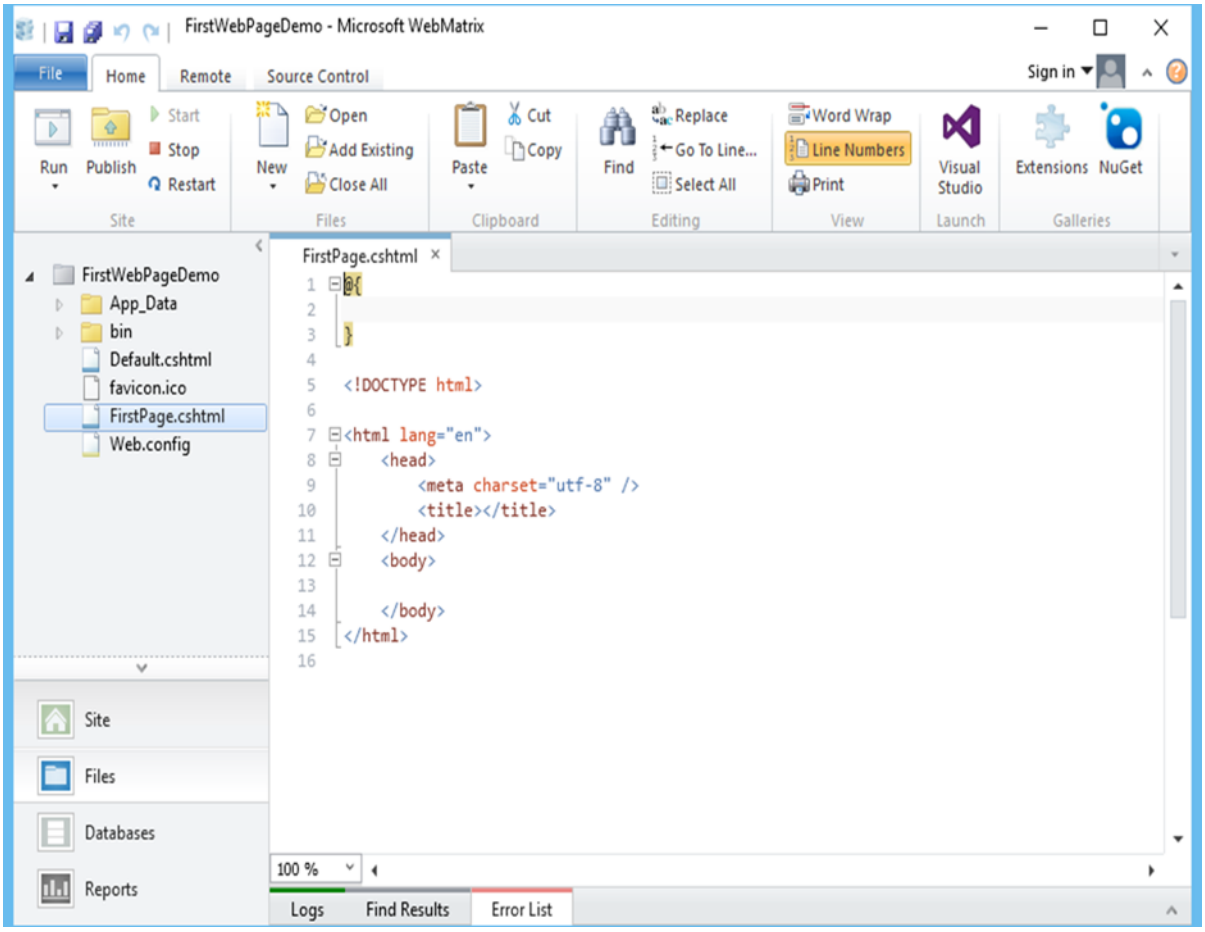
Select **CSHTML**, and in the Name box, enter **FirstPage.cshtml** and click Ok.



Now you can see that WebMatrix has created the page and opens it in the editor.

Let us first update the **FirstPage.cshtml** page as shown in the following program.

```
@{
```

```
}

<!DOCTYPE html>

<html lang="en">
    <head>
        <meta charset="utf-8" />
        <title>Welcome to ASP.NET Web Pages Tutorials</title>
    </head>
    <body>
        <h1>Hello World, ASP.NET Web Page</h1>
```

```
      <p>Hello World!</p>
    </body>
</html>
```

Now to test this web page, let's select the arrow which is below the Run option on the Home tab and select Internet Explorer as shown in the following screenshot.

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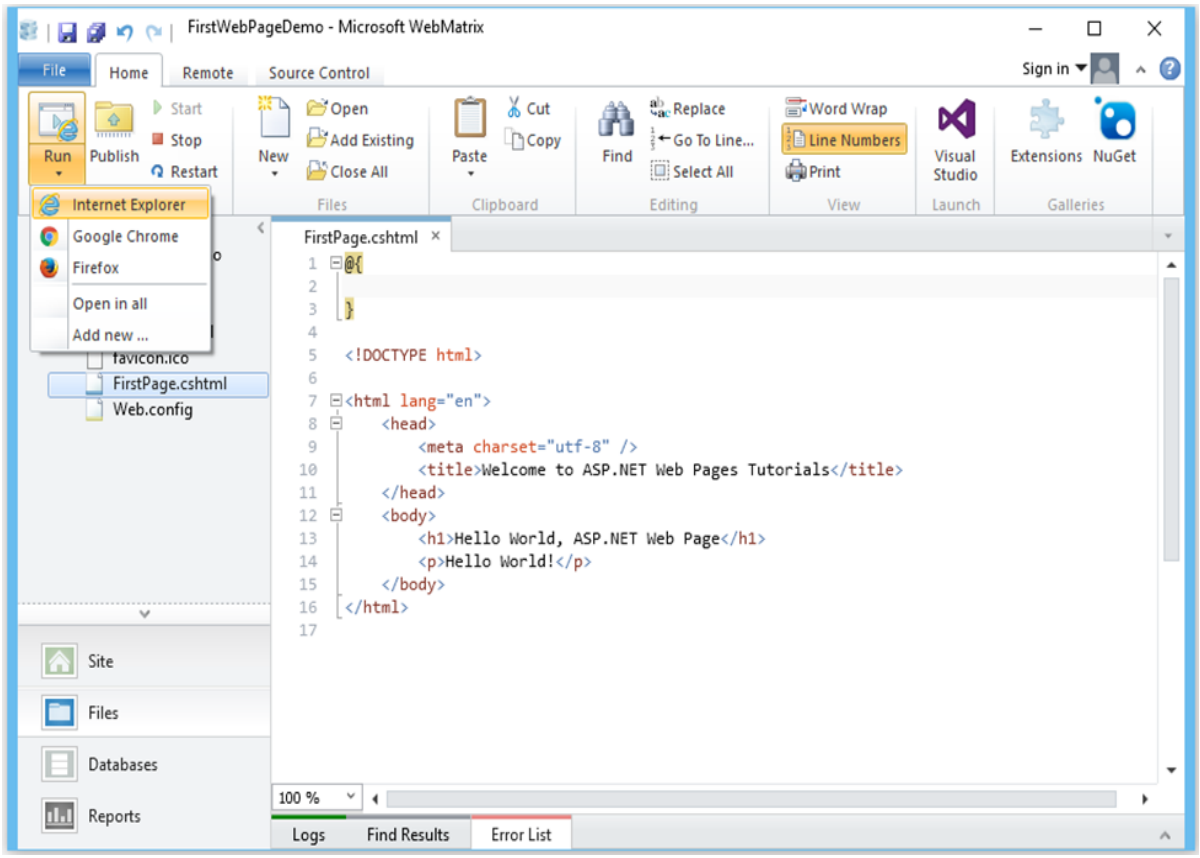
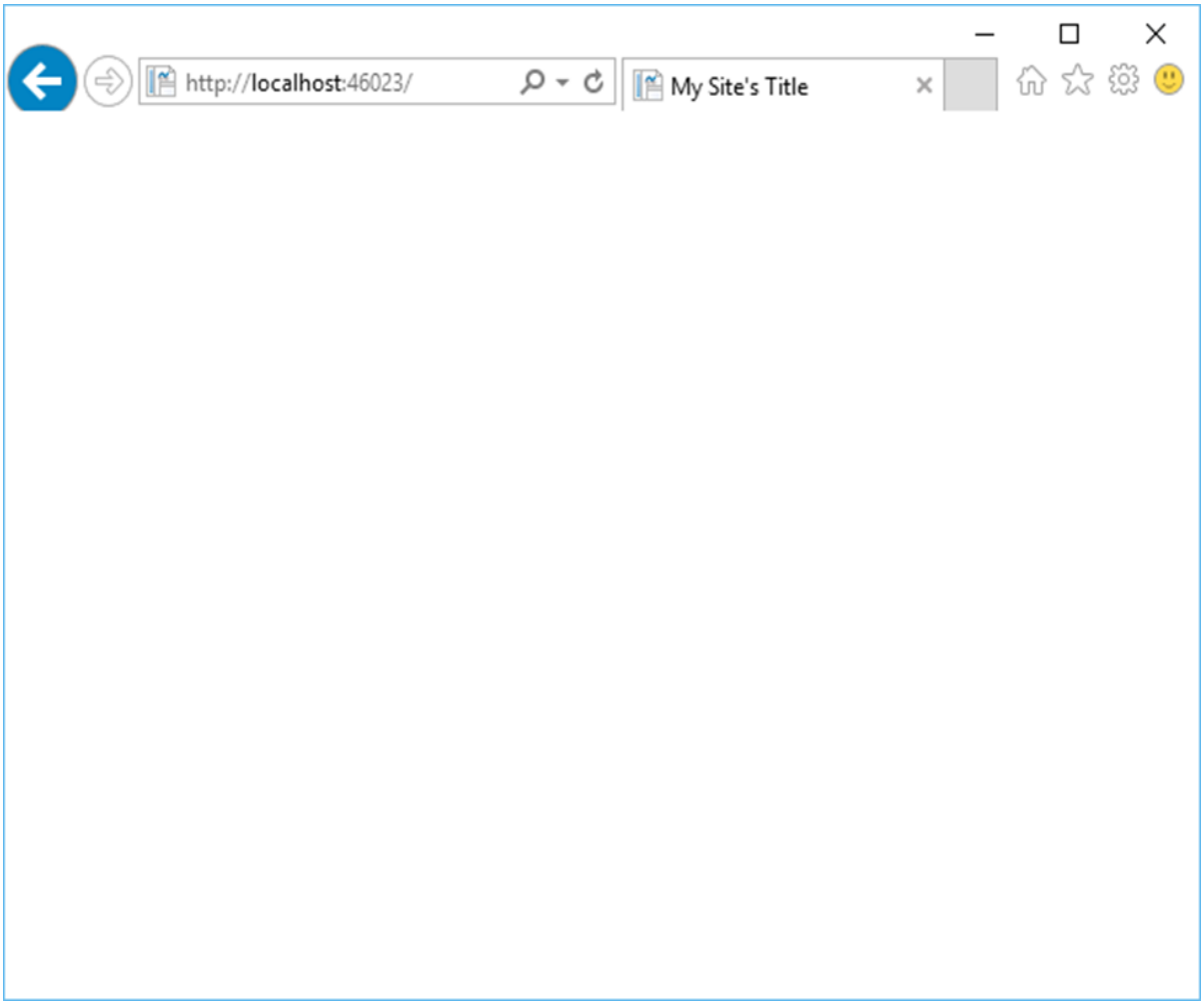


Now you will see the following empty web page.



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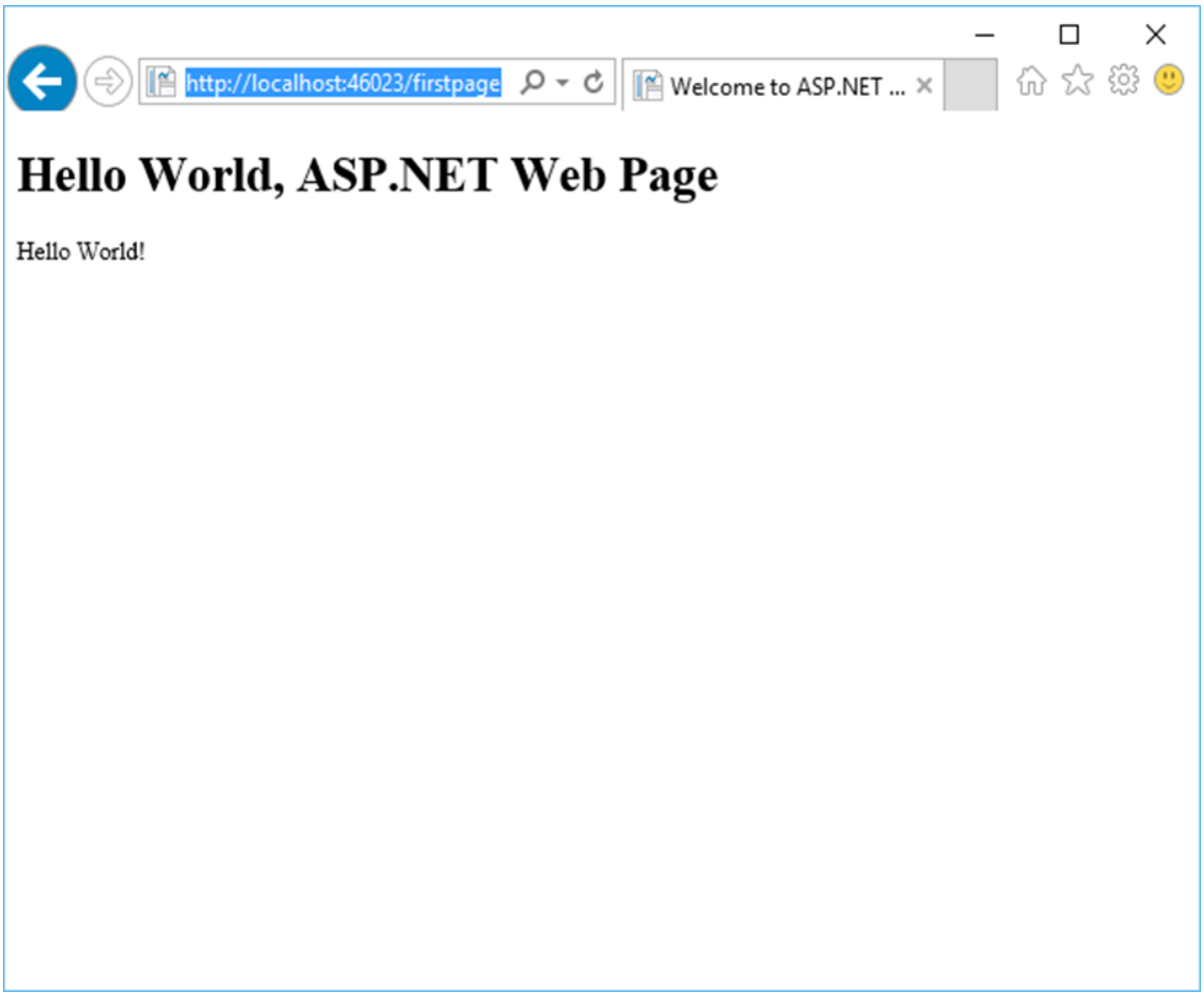
Now let's specify the following url – **http://localhost:46023/firstpage** in the browser and you will see the following output.



4. ASP.NET WP – VIEW ENGINES

The View Engine in ASP.NET is used to translate our views to HTML and then render them to the browser. By default, ASP.Net supports **ASPX** and the **Razor View Engine**. The view engine templates have a different syntax than the implementation. In this chapter, we will discuss the two most important view engines which are –

- ASPX View Engine also known as Web Form View Engine and
- Razor View Engine

There are many more third-party view engines, like **Spark, Nhaml,** etc.

ASPX View Engine

ASPX or Web Form Engine is the default view engine for ASP.NET that is included with ASP.NET MVC from the beginning itself.

- The syntax used for writing a view with the ASPX View Engine is the same as the syntax used in the ASP.NET web forms.
- The file extensions are also the same as for ASP.NET web forms (like .aspx, .ascx, .master).
- ASPX uses "<%= %>" or "<%: %>" to render server-side content.
- The namespace for Webform Engine is **System.Web.Mvc.WebFormViewEngine**.
- ASPX View Engine does nothing to avoid Cross-Site Scripting attacks by default.
- ASPX View Engine is comparatively faster than Razor View Engine.

Razor View Engine

Razor Engine is an advanced view engine that was introduced with **MVC3**. It is not a new language, but it is a new markup syntax.

- The Razor syntax is based on the C# programming language.
- The Razor syntax also supports the Visual Basic language, and everything that we will do using C#, you can do all of that in Visual Basic as well.
- The namespace for Razor Engine is **System.Web.Razor**.
- Razor uses the "@" character instead of "<% %>" as used by the ASPX View Engine.

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