

Additional Topic

Visual C# Express vs. Visual Studio Professional vs. Visual Studio Tools for Applications (VSTA)

In this guide, you are using Visual C# Express. This is a free version of Visual Studio and a great tool to start writing and managing C# code for your Revit plug-in without investing in a more expensive tool. Microsoft has targeted the Express editions of Visual Studio at students, hobbyists and other part-time programmers. While it provides most of the features of Visual Studio Professional, such as IntelliSense, it does have certain limitations. For instance, it contains fewer project templates and has limited options for debugging and troubleshooting your code. If you are serious about plug-in development beyond this introductory guide, we recommend investing in one of the more fully-featured software of the Visual Studio product family.

Revit also provides you with a built-in Visual Studio Tools for Applications (VSTA) development environment. VSTA is a Microsoft technology that uses the .NET Framework to create small programs (called Macros) that help save time by automating repetitive tasks, similar to plug-ins. Revit VSTA is installed with Revit Architecture by default. The basic usage as a programming language is the same. The entry to the VSTA slightly differs from the Express edition that you are using. It is easy and quick to convert Revit VSTA code to Visual C#, and vice versa.

The equivalent VSTA code for all Visual C# Express lessons in this guide is provided. The functionality is the same with the provided C# code. You can refer to the product help to load and see the VSTA code.

For further details on working with Revit VSTA, please refer to the chapter “Creating Macros with Revit VSTA” in the Revit Architecture User Guide. This user guide can be downloaded from [here](#).

Choosing to Work with VSTA Code

In this guide we encourage you to work with Visual C# Express, however we have provided the Revit Project files with VSTA code for each lesson, in case you prefer to work with the built-in VSTA. Here are some basic instructions to help you get started with the VSTA files inside of Revit.

Deploy VSTA code:

1. Unzip the **lessonx_vsta.zip** files, under the Revit installation path, copy all unzipped folders to this subfolder (provided at the bottom of lesson 1, 5, 6, and 7):

\\Program\VstaMacros\AppHookup

By default, the subfolder path is

C:\Program Files\Autodesk\Revit Architecture 201x\Program\VstaMacros\AppHookup.

2. Restart/start Revit. The VSTA projects files will load.

View the VSTA code:

1. Inside Revit Architecture, click the **Manage** tab in the Ribbon; in the **Macros** panel, click **Macro Manager** icon.

- In **Macro Manager** dialog, click **Application** tab, then select **Lab1PlaceGroup** project, and then click **Lab1PlaceGroup** command.
- Finally click **Edit** button to open the code editor to see the project code. From here you can edit and work with this code following along with the lessons in the guide, keeping in mind that some steps will need to be ignored because they are relevant to Visual C# Express.

