Autodesk Revit Architecture 2013 for Architects and Designers

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CADCIM Technologies

Autodesk Revit Architecture for Architects and Designers
Sham Tickoo

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DEDICATION

To teachers, who make it possible to disseminate knowledge
to enlighten the young and curious minds
of our future generations

To students, who are dedicated to learning new technologies
and making the world a better place to live in

SPECIAL RECOGNITION

A special thanks to Mr. Denis Cadu and the ADN team of Autodesk Inc.
for their valuable support and professional guidance to
procure the software for writing this textbook

THANKS

To the faculty and students of the MET department of
Purdue University Calumet for their cooperation

To employees at CADCIM Technologies for their valuable help

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Preface

Autodesk Revit Architecture 2013

Welcome to the world of Autodesk Revit Architecture. This textbook introduces the users to the spectacular realm of one of the most powerful software in the architectural quiver, Autodesk Revit Architecture. This textbook is a gateway to power, skill, and competence in the field of architectural and interior presentations, drawings, and documentations.

This textbook is specially meant for professionals and students of architecture and interior design, facilities planners, and CAD professionals who are associated with the building construction and allied fields in the construction industry.

Special emphasis has been laid to explain new concepts, procedures, and methods in Revit Architecture by using sufficient text and graphical examples.The accompanying tutorials and exercises, which relate to the real world projects, help you understand the usage and abilities of the tools available in Autodesk Revit Architecture.

The main features of this textbook are as follows:

- **Project-based Approach**
  The author has adopted a project-based approach and the learn-by-doing theme throughout the textbook. This approach guides the users through the process of creating the designs given in the tutorials.

- **Real-World Designs as Projects**
  The author has used real-world building designs and architectural examples as projects in this textbook so that the users can correlate them to the real-time designs.

- **Tips and Notes**
  Additional information related to various topics is provided to the users in the form of tips and notes.

- **Learning Objectives**
  The first page of every chapter summarizes the topics that will be covered in that chapter. This will help the users to easily refer to a topic.

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- **Self-Evaluation Test, Review Questions, and Exercises**
  Every chapter ends with a Self-Evaluation test so that the users can assess their knowledge of the chapter. The answers to the Self-Evaluation Test are given at the end of the chapter. Also, the Review Questions and Exercises are given at the end of each chapter and they can be used by the Instructors as test questions and exercises.

- **Heavily Illustrated Text**
  The text in this book is heavily illustrated with around 900 line diagrams and screen capture images that support the command sections and tutorials.

Symbols Used in the Text

Note



The author has provided additional information to the users about the topic being discussed in the form of notes.

Tip



Special information and techniques are provided in the form of tips that helps in increasing the efficiency of the users.

New



This symbol indicates that the command or tool being discussed is new in the current release of Autodesk Revit Architecture.

Enhanced



This symbol indicates that the existing command or tool being discussed has been enhanced in the current release of Autodesk Revit Architecture.

Formatting Conventions Used in the Text

Please refer to the following list for the formatting conventions used in this textbook.

- Names of tools, buttons, options, browser, palette, panels, and tabs are written in boldface.

  Example: The **Wall: Architecture** tool, the **Modify** button, the **Build** panel, the **Architecture** tab, **Properties Palette**, **Project Browser**, and so on.

- Names of dialog boxes, drop-downs, drop-down lists, list boxes, areas, edit boxes, check boxes, and radio buttons are written in boldface.

  Example: The **Options** dialog box, the **Wall** drop-down of **Build** panel in the **Home** tab, the **Name** edit box of the **Name** dialog box, the **Chain** check box in the **Options Bar**, and so on.

- Values entered in edit boxes are written in boldface.

  Example: Enter **Brick Wall** in the **Name** edit box.

- Names of the files are italicized.

  Example: *c14_Club_tut2.rvt*

- The methods of invoking a tool/option from the ribbon, Application Menu, or the shortcut keys are given in a shaded box.

  Ribbon: Home > Build > Wall drop-down > Wall
  Application Menu: New
  Shortcut Keys: CTRL+N

- When you select an element or a component, a contextual tab is displayed depending upon the entity selected. In this textbook, this contextual tab is referred to as **Modify | (Elements / Components)**.

  Ribbon: Modify | (Elements / Components) > Modify > Move
  Shortcut Keys: MV

Naming Conventions Used in the Text

Tool

If you click on an item in a panel of the ribbon and a command is invoked to create/edit an object or perform some action, then that item is termed as **tool**.

For example:
Wall: Architectural tool, **Window** tool, **Railing** tool
Filled Region tool, **Trim/Extend to Corner** tool, **Rotate** tool
Link Revit tool, **Detail Line** tool

If you click on an item in a panel of the ribbon and a dialog box is invoked wherein you can set the properties to create/edit an object, then that item is also termed as **tool**, refer to Figure 1.

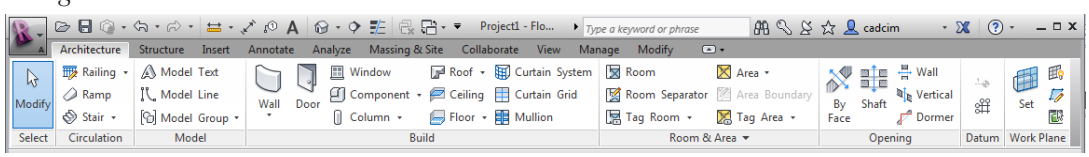


Figure 1 *Tools in the ribbon*

For example:
Load Family tool, **Materials** tool, **Project Units** tool
Design Options tool, **Visibility/Graphics** tool

Button

The item in a dialog box that has a 3d shape like a button is also termed as **Button**. For example, **OK** button, **Cancel** button, **Apply** button, and so on. If the item in a ribbon is used to exit a tool or a mode, it is also termed as button. For example, **Modify** button, **Finish Edit Mode** button, **Cancel Edit Mode** button, and so on; refer to Figure 2.

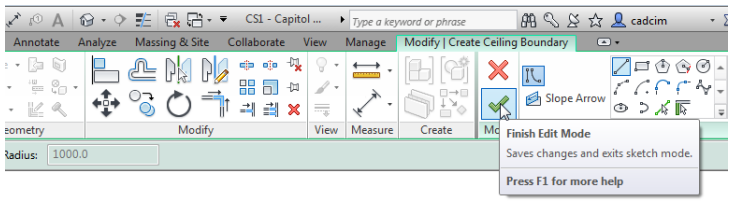


Figure 2 *Choosing the* ***Finish Edit Mode*** *button*

Dialog Box

In this textbook, different terms are used to indicate various components of a dialog box; refer to Figure 3 for different terminologies used in a dialog box.

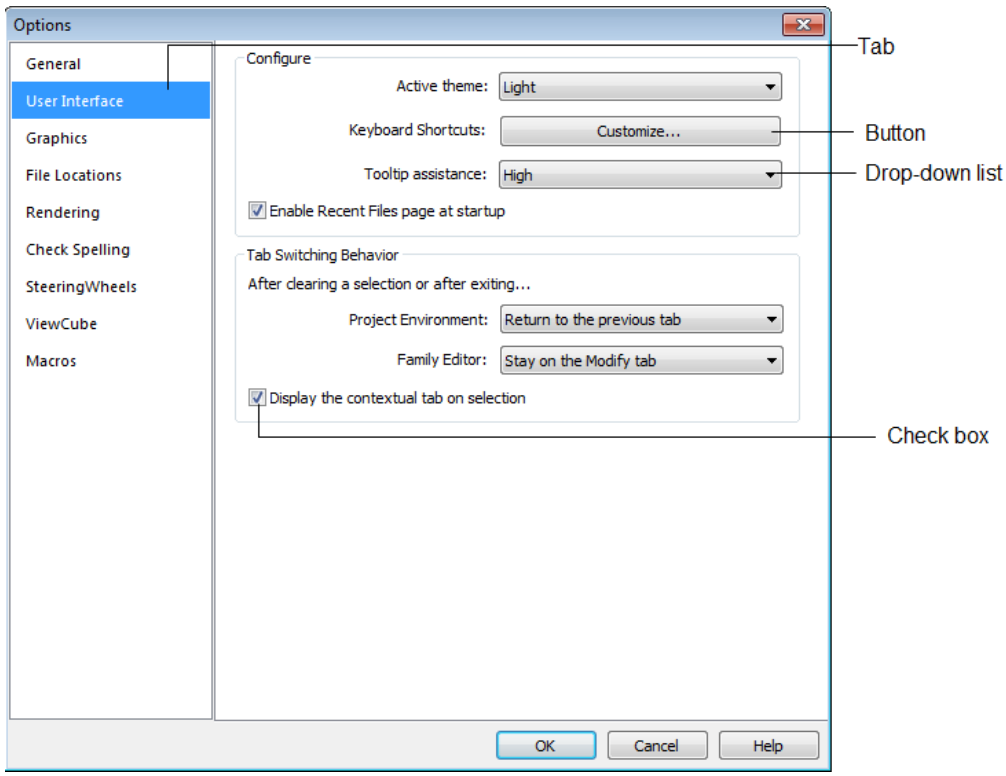


Figure 3 *Different components of a diaalog box*

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Drop-down

A drop-down is one in which a set of common tools are grouped together for creating an object. You can identify a drop-down with a down arrow on it. The drop-downs are given a name based on the tools grouped in them. For example, **Wall** drop-down, **Component** drop-down, **Region** drop-down, and so on; refer to Figure 4.

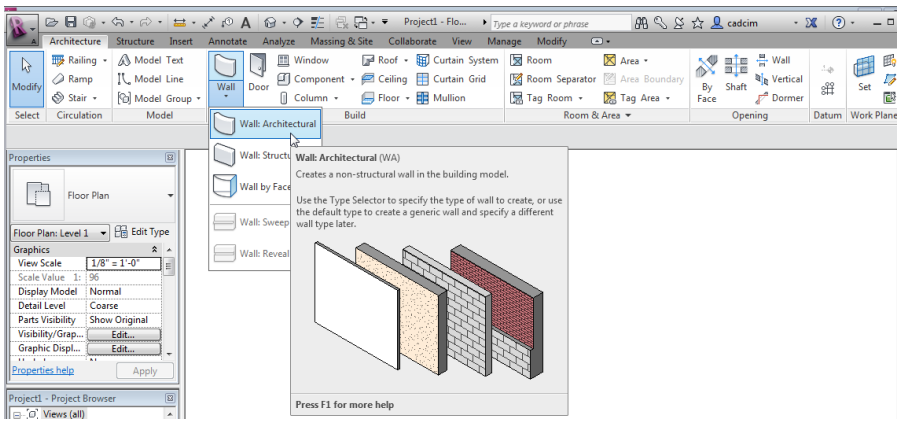


Figure 4 *Choosing a tool from the drop-down*

Drop-down List

A drop-down list is one in which a set of options are grouped together. You can set various parameters using these options. You can identify a drop-down list with a down arrow on it. For example, **Type Selector** drop-down list, **Units** drop-down list, and so on; refer to Figure 5.

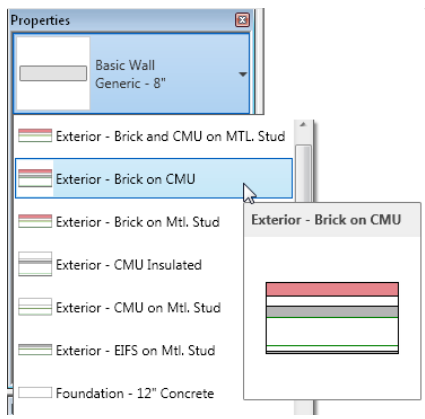


Figure 5 *Selecting an option from the* ***Type Selector*** *drop-down list*

Options

Options are the items that are available in shortcut menu, drop-down list, dialog boxes, drop-down lists, and so on. For example, choose the **Zoom In Region** option from the shortcut menu displayed on right-clicking in the drawing area; refer to Figure 6.

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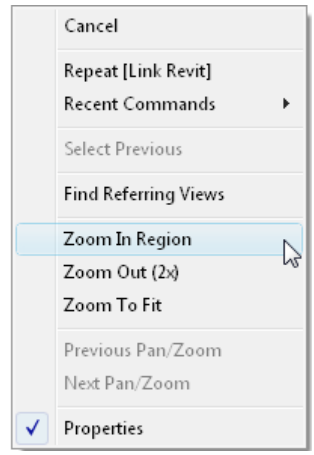


Figure 6 *Choosing an option from the shortcut menu*

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- **Instructor Guide**
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