

Chapter 2



Getting Started with Revit Architecture

Learning Objectives

After completing this chapter, you will be able to:

- *Start a new project.*
- *Set units of various measurement parameters for a project.*
- *Understand the concept of snaps, dimensions, and object snaps.*
- *Save a project.*
- *Modify parameters and settings of a project.*
- *Close a project and exit Revit Architecture.*
- *Open an existing project.*
- *Explore the building model using viewing tools.*
- *Use the Navigation tools.*

In this chapter, as you start learning to create a new building project, you will also learn the methods of creating the initial setups such as units, snaps, and others.

STARTING A NEW PROJECT

Shortcut Key:

CTRL+N

Application Menu:

New > Project

In Autodesk Revit Architecture, a project is considered as a single database that contains all information related to building design. As such, the three-dimensional models drawn using this software are called building information models. Starting from geometry to construction data, each project file contains the complete information of the building design

In Revit Architecture, whenever you start a new project, the new project file uses the default settings defined in a project template, called default.rte. To start a new project, choose the **Application** button from **Application Menu**, as shown in Figure 2-1. From **Application Menu**, choose **New > Project**; the **New Project** dialog box will be displayed, as shown in Figure 2-2. Using this dialog box, you can select an existing .rte template file format to use it for the new project.

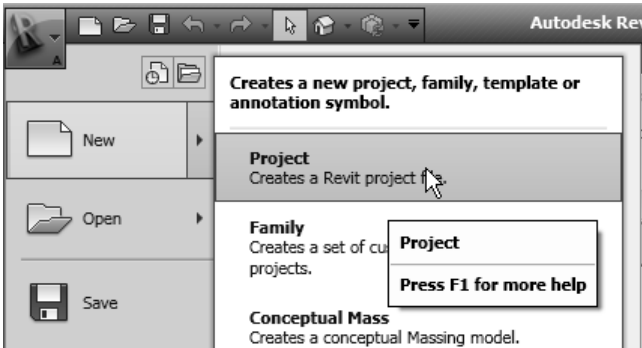


Figure 2-1 Choosing the *Project* option from the cascading menu

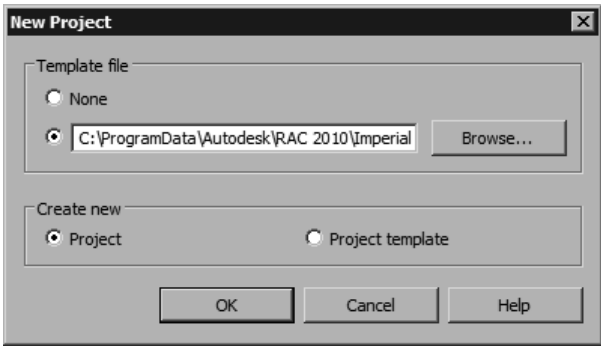


Figure 2-2 The *New Project* dialog box

A template file has various project parameters such as units and views, already saved in it. On using it, the new project will adopt the same parameters as the template file. The default template file is *default.rte*. The difference between a template and a project file is that the template files have a *.rte* extension whereas the project files have a *.rvt* extension. You can either select any of the template files provided in Revit Architecture or create your own file. Any project file can be saved as a template file. You can select the file to be used as a template by clicking on the **Browse** button in the **New Project** dialog box. To create a new project, select the **Project** radio button and to create a template, select the **Project template** radio button.



Note

*If you select the **None** and **Project** radio buttons from the **Template file** and **Create New** areas, respectively, a new project file will be created without a template file, but with the default settings of Autodesk Revit Architecture.*

SETTING UNITS

Ribbon: Manage > Project Settings > Project Units
Shortcut Key: UN

Units are the important parameters of a project. While installing the program, Revit Architecture prompts you to set the default unit as Imperial (feet and inches) or Metric (meter). The default selection of unit helps you start your project with a specific type of unit as per the conventions followed in the industry. To set units, choose **Project Settings > Project Units** from the **Manage** tab of the ribbon; the **Project Units** dialog box will be displayed, as shown in Figure 2-3. Project units are grouped into three disciplines: **Common**, **Structural**, and **Electrical**. Each discipline has a set of measurement parameters. You can select any of these disciplines from the **Discipline** drop-down list of this dialog box. In this drop-down list, the **Common** option is selected by default. As a result, various measurement parameters such as **Length**, **Area**, **Volume**, **Angle**, **Slope**, and **Currency** will be displayed in the **Project Units** dialog box. The **Format** column in the dialog box displays the current unit format for the corresponding parameter in the **Units** column. You can preview and select the possible digit grouping and decimal separators from the **Decimal symbol/digit grouping** drop-down list, which is at the lower left corner of the dialog box, refer to Figure 2-3.

Length Unit Setting

In Autodesk Revit Architecture, you can assign a different unit for the measurement of length in the **Project Units** dialog box. To do so, click in the **Format** column in the **Length** row; the **Format** dialog box will be displayed. This dialog box displays the units of length and its settings, as shown in Figure 2-4. You can select the desired unit from the **Units** drop-down list in the dialog box. The options that can be selected from the drop-down list are **Decimal feet**, **Feet and fractional inches**, **Decimal inches**, **Fractional inches**, **Meters**, **Centimeters**, **Millimeters**, and **Meters and Centimeters**. After selecting the desired unit, you can specify the rounding value for the selected unit. To do so, select the desired option from the **Rounding** drop-down list in the **Format** dialog box. Note that by default, the **Rounding increment** edit box in the **Format** dialog box is inactive. To make it active, select the **Decimal feet** or **Decimal inches** option from the **Units** drop-down list and then select **Custom** from the **Rounding** drop-down list. The default value in the **Rounding** edit box is

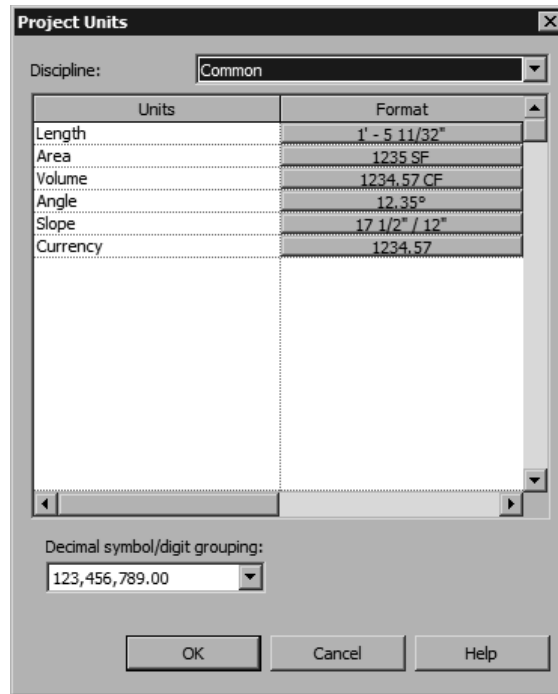


Figure 2-3 The Project Units dialog box

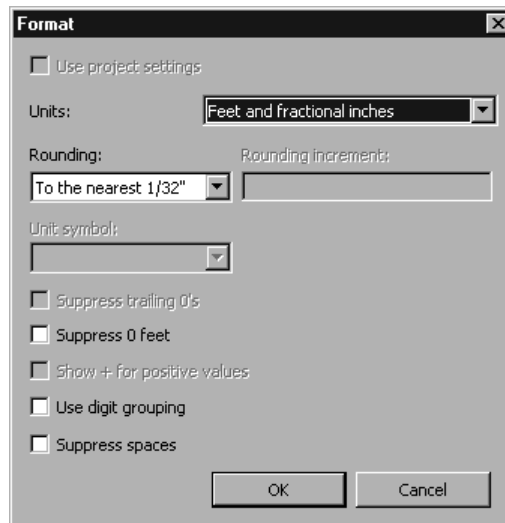


Figure 2-4 The Format dialog box

1. You can change the default value by entering a value in this edit box. Similarly, the **Units symbol** drop-down list will be inactive for the **Feet and fractional inches**, **Fractional inches**, and **Meters and Centimeters** options in the **Units** drop-down list. You can select the desired option from the **Units symbol** drop-down list to specify the measurement symbol that you want to add along with the unit of length. For example, to use the symbol 'm' after all metric

length measurements, you can select **m** from the drop-down list as the measurement symbol. In the **Format** dialog box, you can select the **Suppress spaces** check box to remove all spaces around the dash from the length strings. For example, you can remove spaces in the dash when a length string is expressed in feet and fractional inches to denote a particular measurement.



Tip: While selecting a rounding value from the **Rounding** drop-down list in the **Format** dialog box, you should consider the extent of detailing that may be required for the project and then select it. For projects that requires too much detailing, a lower rounding value may be set. This parameter, however, can be modified at any time during the project development.

Area Unit Setting

In the **Project Units** dialog box, you can assign a unit for measuring area. To do so, click in the **Format** column for the **Area** parameter; the **Format** dialog box will be displayed. In this dialog box, you can set the unit for measuring area from the **Units** drop-down list that contains various options for units of area such as **Square Feet**, **Square Meters**, **Acres**, and so on. The **Square feet** option is selected by default in this drop-down list, if you select Imperial units at the time of installing Revit Architecture. The settings for rounding, rounding increment, and unit symbol for the area units can be made from their respective drop-down lists and edit boxes.

Volume and Angle Unit Settings

The units for volume and angle can also be set similar to that of the length and area. You can set the unit for the volume measurement by selecting any of the options such as **Cubic yards**, **Cubic feet**, **Cubic meters**, **Liters**, and **US gallons** from the **Units** drop-down list in the **Format** dialog box of the **Volume** parameter. Similarly, you can specify the unit for the angle measurement by selecting the required option from the **Units** drop-down list in the **Format** dialog box of the **Angle** parameter. You can select either **Decimal degrees** or **Degrees minutes seconds** from the **Units** drop-down list for specifying the unit for the volume measurement.

Slope Setting

To specify the unit for the slope measurement, click in the **Format** column for the **Slope** parameter; the **Format** dialog box will be displayed. In this dialog box, you can specify the desired unit settings by selecting the required option from the **Units** drop-down list. The **Units** drop-down list contains various options such as **Ratio : 12**, **Ratio :10**, **Rise / 12"**, **Rise 1 / 1'-0"**, **Rise / 1000mm**, **Decimal degrees**, and **Percentage** as the unit of the slope measurement. The default option for the **Imperial** unit setting in the drop-down list is **Decimal degrees**.



Tip: As soon as you change the units and choose the **OK** button to close the **Format** dialog box, the numbers and units shown for each measurement parameter in the **Project Units** dialog box are modified to the new settings. You can modify their settings and format any time during the project.

Currency Setting

In Revit Architecture 2010, you can set the unit for currency as well. You can select different types of currency symbols from the **Unit symbol** drop-down list in the **Format** dialog box of the **Currency** parameter.

**Note**

*You can only format the display of units as they are represented on the screen or printout using the **Project Units** dialog box. The actual values for these units in the project may be different. For example, if you set the wall length rounding to the nearest 1', the wall may show this rounded value, but the actual length of the wall might be in fractional feet.*

SNAP SETTINGS

Ribbon:

Manage > Project Settings > Settings > Snaps

The **Snaps** tool is one of the most productive tools available while creating and editing elements in a building model. This tool represents the ability of the cursor to snap or jump to the preset increments or specific object properties of various elements such as endpoint, midpoint, and so on. To invoke the **Snaps** tool, choose **Project Settings > Settings > Snaps** from the **Manage** tab of the ribbon; the **Snaps** dialog box will be displayed, as shown in Figure 2-5. This dialog box has three areas, **Dimension Snaps**, **Object Snaps**, and **Temporary**. These areas are discussed next.

**Note**

The settings in this dialog box apply to all the projects opened in the session and are not saved with a particular project.

Dimension Snaps

Revit Architecture enables you to set increments for adding various elements of the project. The dimension snap is the increment, in which the cursor moves while creating components. Revit Architecture automatically adjusts the dimension snap values as the views are zoomed. The default settings are: **4'; 0'6"; 0'1"; 0'1/4"**. Note that every incremental value is separated by a semicolon (;). You can also set the increments by typing the values that are separated by a semicolon. For example, to create an interior layout plan in which the length of the partitions is in 5' modules, counter top width is 2' and the thickness of partitions is 4", you can enter the values for the dimension snaps as 5'; 2'; 4". This will enable the cursor to move in these increments and help create the layout with relative ease.

The angular dimension snap increments can be set in a similar manner by entering the values in the **Angular dimension snap increments** edit box, if desired. This parameter is quite useful for projects that have a radial geometry.



Tip: The **Dimension Snaps** parameter should be set based on the scale and the amount of detailing required for the project. You may set smaller increments for working on a detail or a small portion of a building.

Object Snaps

Object Snaps, a useful tool for creating and editing elements in Revit Architecture, refers to the cursor's ability to snap to geometric points on an element such as endpoints, midpoint, perpendicular, and so on. The advantage is that you do not need to specify the exact point. When enabled, the appropriate object snap is displayed as soon as the cursor is close to an element. For example, it is virtually impossible to pick the exact endpoint to start a wall from an endpoint of an already drawn wall. But when you enable the endpoint object snap,

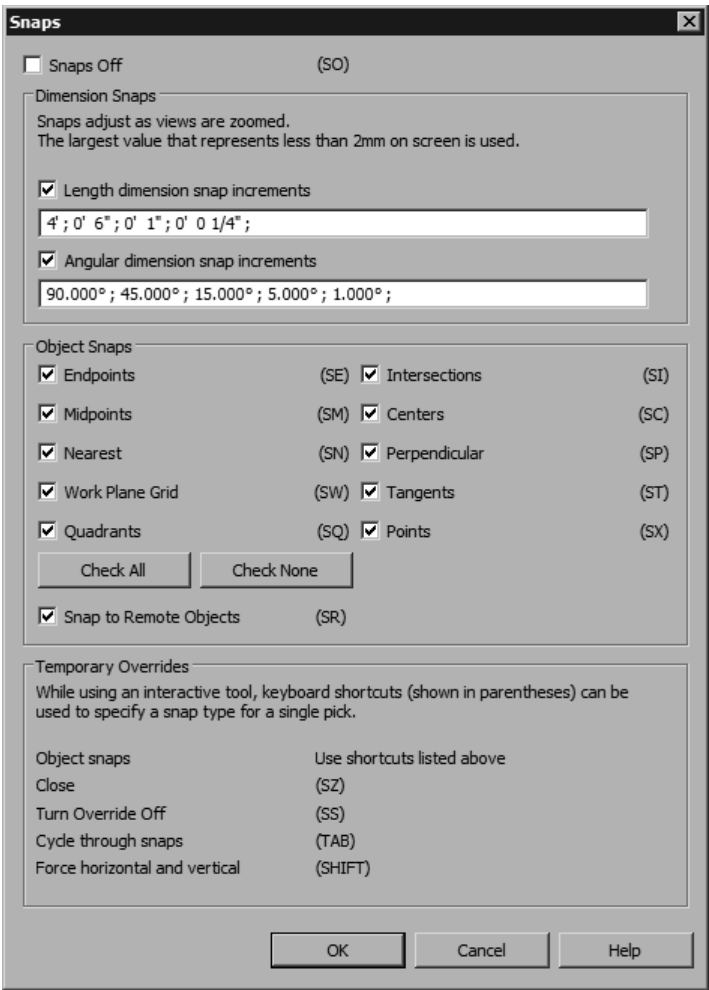


Figure 2-5 The Snaps dialog box

the cursor automatically jumps or snaps to the endpoint of this wall. This helps to start the new wall from the endpoint. This, besides making the drawing accurate, later helps in adding dimensions to the project.



Note

The object snaps tool works only with the objects that are visible on the screen. A tooltip, with the same name as the object snap, is also displayed when you bring the cursor close to snap point.

Various object snaps modes are available in Revit Architecture such as **Endpoints**, **Midpoints**, **Nearest**, **Work Plane Grid**, **Quadrants**, **Intersections**, **Centers**, **Perpendicular**, **Tangents**, **Points**, and **Snap to Remote Objects**.

The use of each object snap corresponds to its respective name. The **Work Plane Grid** snap option enables you to snap to a point on a reference plane already defined in the model. For example, you can place a furniture component exactly on the floor by snapping to the floor

level reference plane. You can also snap to the object that is closest to the cursor using the **Snap to Remote Objects** option.



Tip: The **Snap** tool is frequently used, not only while creating various building elements but also while editing and placing them. By using this feature efficiently, you can improve the performance and accuracy of your project besides making modeling much simpler.

Each object snap mode has a geometrical shaped marker to identify it from the other object snaps. For example, the endpoint object snap is indicated by a square, midpoint by a triangle, nearest by a cross, and so on. To use an object snap mode, move the cursor over the object. You will notice a marker that appears as you move it close to the snap point. To select the appropriate snap point, click when the corresponding marker or tooltip is displayed.

In Revit Architecture, all the enabled object snaps work simultaneously. You can turn off all the snap options including the dimension snaps and object snaps by checking the **Snaps Off** check box located at the top of the **Snaps** dialog box. Alternatively, you can type **SO** on the keyboard to turn them off and on while using a tool. The **Check All** and **Check None** buttons can be used to enable or disable the object snaps, respectively.

Temporary Overrides

The **Temporary Overrides** options provide you the alternative of overriding snaps setting for a single use only. For example, if you have not selected the **Endpoints** object snap in the **Snaps** dialog box and you want to use this option while working with a tool, you need not open the **Snaps** dialog box and set this option. Instead, you can type the shortcut, **SE** in this case, to temporarily activate the endpoint object snap. Once you have used this object snap option, snapping to the endpoint is automatically turned off.

You can toggle between various object snap options available at the same location using the TAB key on the keyboard. Hold down the SHIFT key to create the elements vertically or horizontally. This restricts the movement of the cursor in the orthogonal directions only. Once you release the SHIFT key, the cursor resumes its movement in all directions. You can select the **Snaps Off** check box to disable all types of snapping.

SAVING A PROJECT

| | |
|--------------------------|-------------------|
| Application Menu: | Save As > Project |
| Shortcut key: | CTRL+S |

You must save your work before closing a project or exiting a Revit Architecture session. You have the option of saving the project file in a permanent storage device, which may be a hard disk or a removable disk such as a CD, floppy or USB. Also, you must save your work at regular intervals to avoid loss due to any error in the computer's hardware or software.

Using the Save As Tool

In Autodesk Revit Architecture 2010, you can save your project file to the desired location. To do so, click the **Application** button and then choose **Save As > Project** from the **Application Menu**;

the **Save As** dialog box will be displayed, as shown in Figure 2-6. Alternatively, you can save the project file by choosing the **Save** button from the **Quick Access Toolbar**.

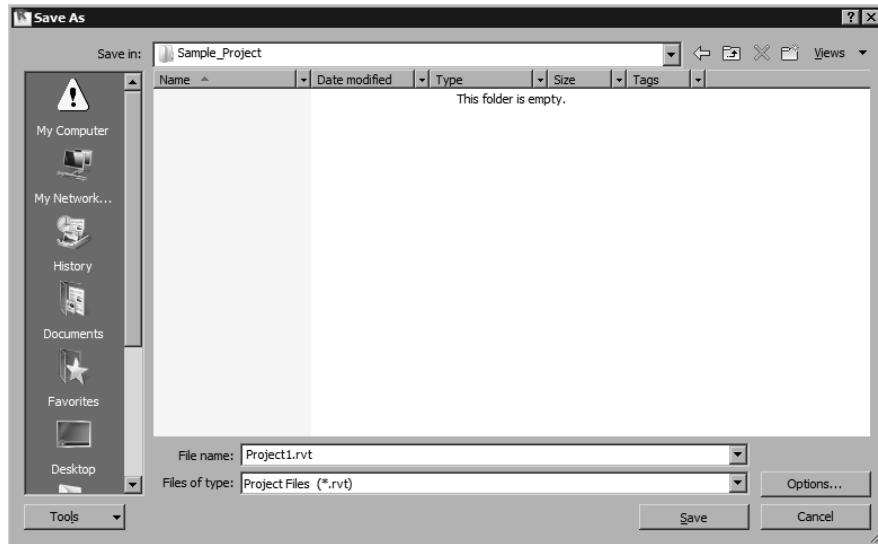


Figure 2-6 The Save As dialog box

In the **Save As** dialog box, the **Save in** drop-down list displays the current drive and path in which the project file will be saved. The list box below the **Save in** drop-down list shows all folders available in the current directory. The **File name** edit box can be used to enter the name of the file to be assigned to the project. The **Places List** area in the left of the **Save As** dialog box contains shortcuts for the folders that are frequently used.

Using the Options Button

You can use different file saving features by choosing the **Options** button from the **Save As** dialog box. On choosing this button, the **File Save Options** dialog box will be displayed, as shown in Figure 2-7. Using the **Maximum backups** edit box from this dialog box, you can specify the maximum number of backup files that you need to store for the project. In Autodesk Revit Architecture, the non-workshared projects have three backup files and the workshared projects have twenty backup files, by default. The options in the **Preview** area enable you to specify the image to be used as the preview of the project file. This image is used at the time of opening a project file. You can specify the view of the model to be used as a preview image from the **Source** drop-down list in the **Preview** area of the **File Save Options** dialog box.



Tip: The selection of large number of backup files for storing may use a lot of resources on the hard disk.

The **Active view/sheet** is the default option for previewing a project file. For example, to make the **Floor Plan: Level 1** the preview image, select it from the drop-down list. Whenever you select this project file, the preview will always show the **Floor Plan: Level 1**, irrespective of the last active view.

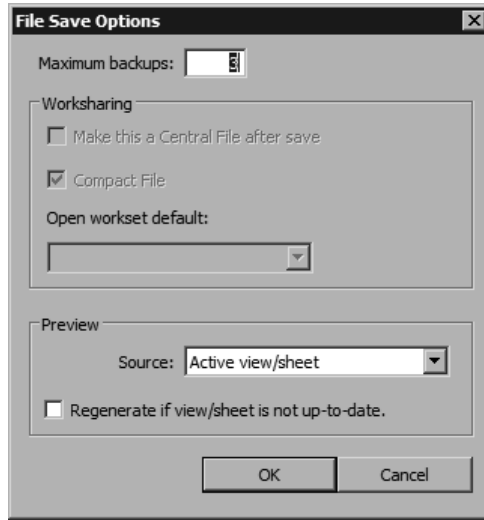


Figure 2-7 The *File Save Options* dialog box



Tip: The *Preview* image acts as a thumbnail to identify a project file. You must select a view that will help you identify the project file easily.

Select the **Regenerate if view/sheet is not up-to-date** check box to see the preview with the latest modifications. Selecting this check box will update the preview image on closing the project file.



Note

*Revit Architecture updates the preview image continuously. Therefore, selecting the **Regenerate if view/sheet is not up-to-date** check box can consume considerable resources.*

Using the Save Tool

| | |
|--------------------------|--------|
| Application menu: | Save |
| Shortcut Key: | CTRL+S |



Once the project is saved using the **Save As** tool, you do not need to re-enter the file parameters to save it again. To save a project to the hard disk, click the **Application** button and then choose the **Save** option from the **Application Menu**, as shown in Figure 2-8. While saving the project for the first time, the **Save As** dialog box is displayed, even if you invoke the **Save** tool.

Alternatively, you can save your project by choosing the **Save** button from the **Quick Access Toolbar**. As you save your project file, Revit Architecture updates it automatically without prompting you to re-enter the file name and path.

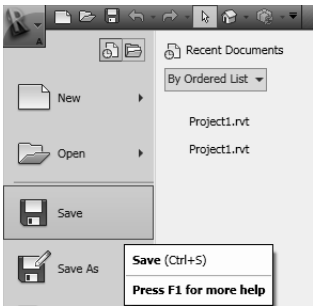


Figure 2-8 Accessing the *Save* tool from *Application Menu*

CONFIGURING GLOBAL SETTINGS

In Autodesk Revit Architecture, you can configure global settings by using the **Options** dialog box. This dialog box can be invoked by choosing the **Options** button from the **Application** menu. The **Options** dialog box, as shown in Figure 2-9, contains eight tabs: **General**, **Graphics**, **File Locations**, **Rendering**, **Spelling**, **SteeringWheels**, **ViewCube**, and **Macros**. The options of these tabs are discussed next.

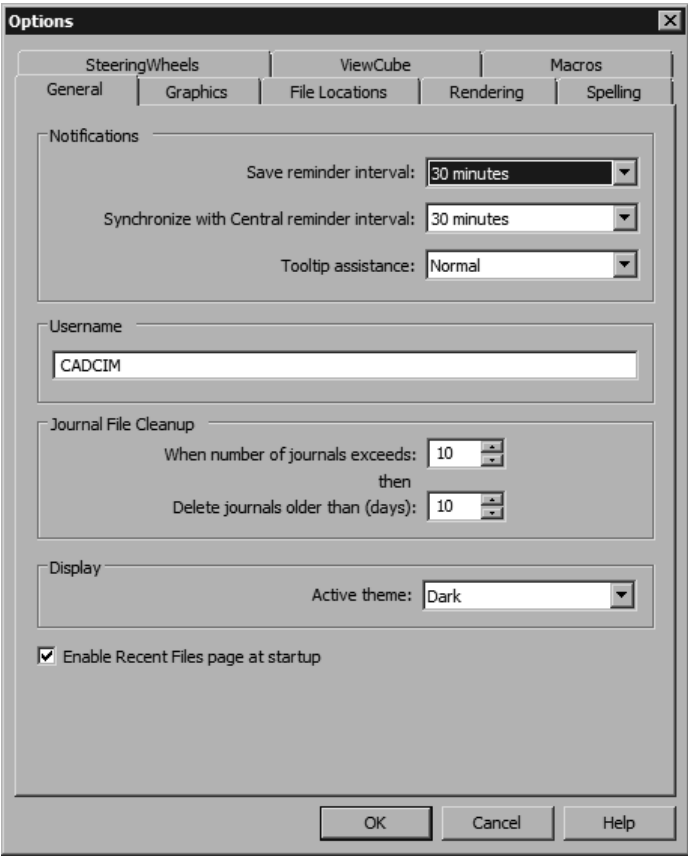


Figure 2-9 Setting file options using the *Options* dialog box

General Tab

The **General** tab is the default tab and contains four areas, **Notifications**, **Username**, **Journal File Cleanup**, and **Display**. These areas are discussed next.

Setting Notifications

Revit Architecture provides you the option of setting reminders to save work at regular intervals. You can set the time interval at which Revit Architecture will remind you to save the project file. The default value for the **Save Reminder interval** parameter is **30** minutes. You can specify the time interval by clicking on the down-arrow key and selecting the interval from the drop-down list. If you do not want a reminder, you can select the **No reminders** option from the drop-down list. Similarly, you can set the value for the **Synchronize with Central reminder interval** parameter.

The **Tooltip assistance** refers to a tooltip that is displayed with the cursor when it is close to a tool, snap, or an element. It can be set to the required level by selecting the appropriate option from the **Tooltip assistance** drop-down list. **Normal** is the default option that is selected in this drop-down list. Note that the tooltip will appear more frequently in your drawing if you select **High** in the **Tooltip assistance** drop-down list.

Setting the Username

In Autodesk Revit Architecture you can create a unique identification for a particular session. To do so enter a name in the edit box that is displayed in the **Username** area of the **General** tab. The name that you will enter in this edit box will be used for editing permissions in a multi-user Revit Architecture environment.



Note

*When you run Autodesk Revit Architecture in your system for the first time, you will notice that the Windows login name is displayed as the default username in the edit box in the **Username** area.*

Setting the Journal File Cleanup

Journal files are the text files that are used to resolve technical problems that may occur during the Revit Architecture session and they record every step during the session. Whenever you encounter any technical problem with the software, you can run this file to detect the problem as well as recover the lost files or steps that had caused the problem. In Autodesk Revit Architecture 2010, these files are saved in the following default location: *C:\Program Files\Autodesk Revit Architecture 2010\Journals*. These files are saved each time you close the Revit Architecture session. As such the quantity of these files keeps on increasing until you remove these files from their location. To retain certain files and clean others, you can use the **Journal File Cleanup** area in the **General** tab of the **Options** dialog box. This area contains two spinners: **When number of journal exceeds** and **Delete journals older than (days)**. You can set the required values in these spinners to retain the files that are recently created. For example, if you need to delete journal files if their number exceeds 15 and if they were created before 30 days. Then, in such a situation, set the value in the **When number of journal exceeds** spinner to **15** and the value in the **Delete journals older than (days)** spinner to **30**.

Setting the Display of the User Interface

In the **Display** area of the **General** tab, the **Active theme** drop-down list is available. From this drop-down list, you can select two options: **Dark** and **Light**. On selecting any of these options, the display of Autodesk Revit Architecture user interface will change.

Graphics Tab

The **Graphics** tab enables you to configure the display card of your computer to improve the performance of the display. You can also use this tab to assign colors for the selection, highlights and alerts, and enable anti-aliasing for 3D views. In the **Graphics Mode** area of this tab, select the **Use Hardware Acceleration** check box to enable hardware accelerators. On doing so, the large models in your project will be displayed faster on refreshing the views. In addition, it will help you speed up the process of switching between the windows of views and the creation and modification of annotations in your project.

In the **Colors** area of the **Graphics** tab, select the **Invert background color** check box to toggle the color of the background and elements. The **Selection color** parameter refers to a color that an element acquires when it is selected. The default color is **RGB 059-115-255**. To use any other color, click the button on the right of the **Selection color** parameter and select the desired color from the **Color** dialog box. Revit Architecture uses the **Alert Color** button to highlight elements when an error occurs.

File Locations Tab

By using the **File Locations** tab, you can set the path for various files and directories that are accessed frequently, as shown in Figure 2-10. The path for these files is set at the time of installing Revit Architecture, but you can modify the location by choosing the corresponding **Browse** button and specifying a new path. The default template file location can be changed, in case you wish to use a custom made template file for your projects. Revit Architecture uses the default path for user files for saving or opening a project. You can also specify the default path for family template files using the corresponding **Browse** button.

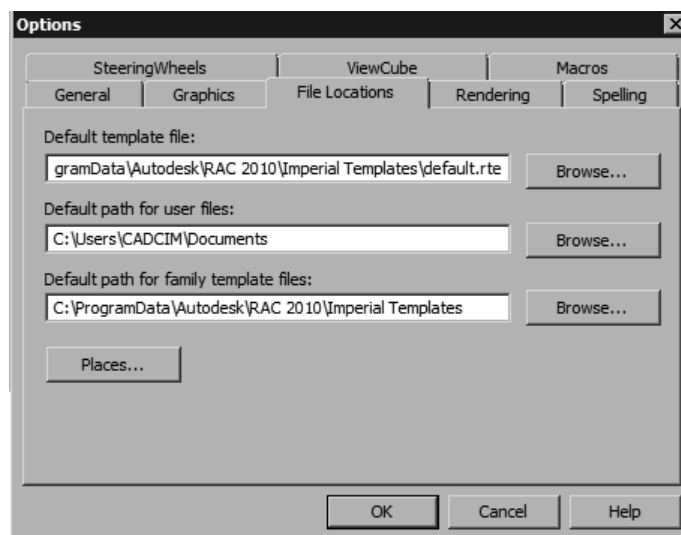


Figure 2-10 The **File Locations** tab of the **Options** dialog box

Rendering Tab

Autodesk Revit Architecture 2010 uses the mental ray rendering engine for its rendering process. The mental ray has its own library, named Render Appearance Library. This library stores information about render appearances for materials, default RPC contents in the software, and other information relevant to the rendering process. The Render Appearance Library is a read-only library and is loaded into the following default location while installing the Revit Architecture software: *C:\Program Files\Autodesk Revit Architecture 2010\Data\Rendering\assetlibrary_base.fbx*.

However, if you need to access the **Render Appearance Library**, which is not stored in its default location, click the **Browse** button in the **Render Library Location** area of the **Rendering** tab. In addition to the default **Render Appearance Library** location, you can also specify the paths for the additional image files defining texture, bump map, custom color for the render appearance that you can use in the project. These image files are not present with the software and therefore, you need to specify their paths to use them. To do so, choose the **Add Value** button, in the **Additional Render Appearance Paths** area and specify the required path in the displayed field or choose the **Browse** button; the **Browse for Folder** dialog box will be displayed. In this dialog box, select the desired path and choose the **Open** button to add the path in the field.

Spelling Tab

Revit Architecture provides you the option to run spell check to find spelling errors in the text and then rectify them. You can choose the **Spelling** tab to display its options. Various self-explanatory settings can be selected from the **Settings** list. In the **Main Dictionary** area of this tab, you can select the type of dictionary, to be used as main dictionary for the spelling check, from the Autodesk Revit drop-down list. Apart from the main dictionary, you can also use additional dictionaries such as the personal and building industry dictionaries. This facilitates the use of various personal and industry related terms in the text matter of the project. There are many words that are not included in the main dictionaries but are frequently used in the building industry. For example, the abbreviation for concrete 'conc' is not available in the main dictionaries. The additional building industry dictionary has many such words and abbreviations that can be used in the text matter of the project without being prompted for errors while checking spellings. You can also add or remove words from your personal and building industry dictionary. Choose any of the **Edit** buttons available in the **Additional Dictionaries** area to view the list of words. You can enter or remove any word from these lists using the cursor and keyboard. To run spell check in your drawing, choose **Annotate > Text > Spelling** from the ribbon; the **Spelling** dialog box will be displayed, wherein you can rectify the spelling errors in the text by selecting the correct spelling and then choosing the **Change** button in the dialog box, as shown in Figure 2-11. Alternatively, you can press the F7 key to display the **Spelling** dialog box, refer to Figure 2-11, and then make necessary corrections in the text.

SteeringWheels Tab

The **SteeringWheels** tab in the **Options** dialog box is chosen to control the visibility, appearance and operational tools of different types of SteeringWheels. This tab has seven different areas of control to use the SteeringWheels, as shown in Figure 2-12. The areas are discussed next.

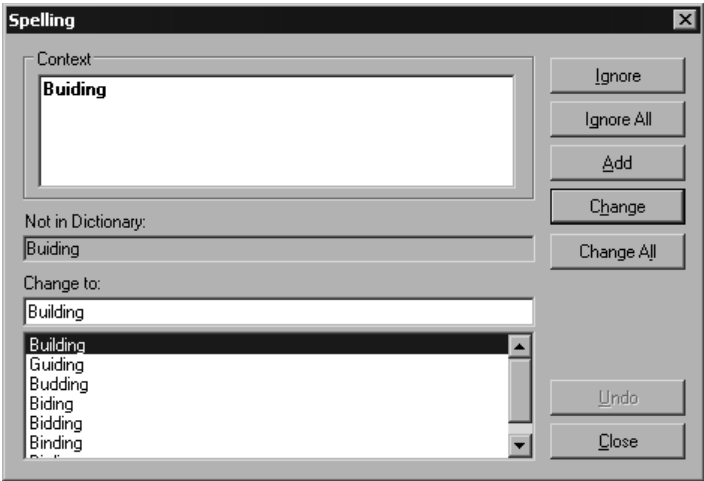


Figure 2-11 The *Spelling* dialog box

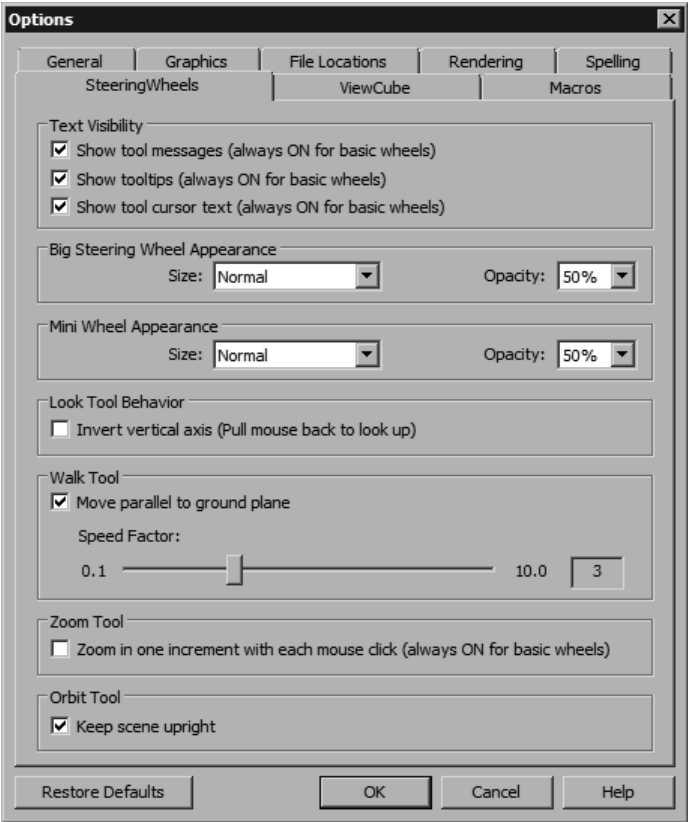


Figure 2-12 The *SteeringWheels* tab of the *Options* dialog box

Text Visibility Area

You can control the display of tool messages, tooltips, and tool cursor of the SteeringWheels by using the options in the **Text Visibility** area of the **SteeringWheels** tab.

You need to select the **Show tool messages** check box to enable the visibility of tool messages in SteeringWheels. To display the tooltips along with the SteeringWheels, select the **Show tooltips** check box in this area. Similarly, to control the display of the cursor text when a -tool is active, use the **Show tool cursor text** check box. Select this check box to display the cursor text when the tool is active.

Big Steering Wheel Appearance and Mini Wheel Appearance Areas

To set the size of the SteeringWheels, select the required option from the **Size** drop-down list in the corresponding areas and set its size to small, normal, or large. Similarly, you can set the transparency of the SteeringWheels by selecting the required option from the **Opacity** drop-down list.

Look Tool Behavior and Walk Tool Areas

In the **Look Tool Behavior** area of the **SteeringWheels** tab, select the **Invert Vertical Axis** check box to change the vertical axis movement of the view. Selecting the check box enables the view to move in the same direction as the cursor in the vertical axis.

In the **Walk Tool** area of the **SteeringWheels** tab, use the **Speed Factor** slider to change the speed of the walk, when using the **Walk** tool of the SteeringWheels. Select the **Constrain Walk Move parallel to ground plane** check box in the **Walk Tool** area to constrain the movement angle of the walk to ground plane.

Zoom Tool and Orbit Tool Areas

Select the **Zoom in one increment with each mouse click** check box in the **Zoom Tool** area to enable the zooming operation with a single click.

In the **Orbit Tool** area, select the **Keep scene upright** check box to maintain the perpendicularity between the sides of the model and the ground plane while using the **Orbit** tool.

ViewCube Tab

The **ViewCube** tab in the **Options** dialog box is used to edit various settings of the ViewCube. It has four different areas of modification, **ViewCube Appearance**, **When Dragging the ViewCube**, **When Clicking on the ViewCube**, and **Compass** as shown in Figure 2-13. These areas are discussed next.

ViewCube Appearance Area

The appearance and display of the **ViewCube** can be controlled by the **ViewCube Appearance** area in the **ViewCube** tab.

In the **ViewCube Appearance** area, the **Show the ViewCube** check box is selected by default, so the ViewCube will be visible. If you clear this check box, the **ViewCube** will disappear and all options in the **ViewCube** tab will be deactivated.

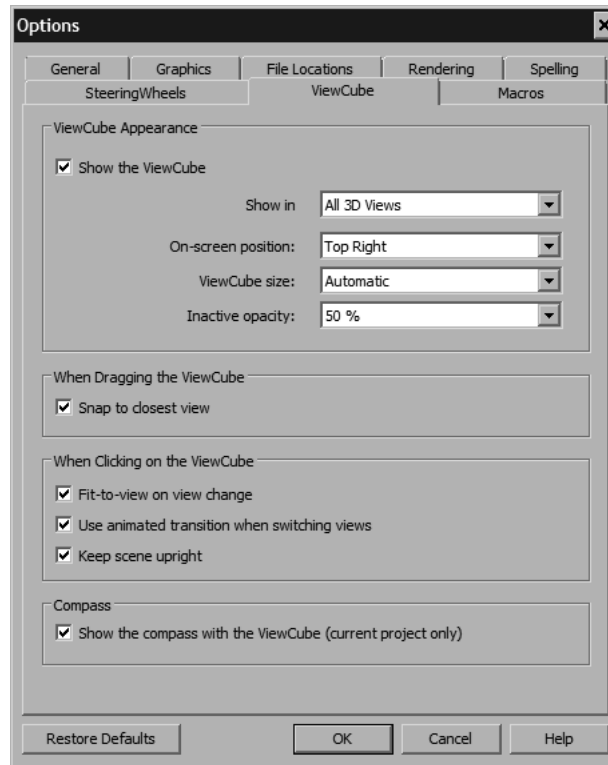


Figure 2-13 The ViewCube tab of the Options dialog box

In the **ViewCube Appearance** area you can use various drop-down lists to align, resize, and change the transparency of the ViewCube.

Select the options from the **On-screen Position** drop-down list to align the ViewCube on the screen. Similarly, if you want to resize the ViewCube, then select the required option from the **ViewCube size** drop-down list. You can also set the opacity of the inactive ViewCube by selecting various options from the **Inactive Opacity** drop-down list.

When Dragging the ViewCube Area

Select the **Snap to closest view** check box in the **When Dragging the ViewCube** area in the **ViewCube** tab to enable the snap to select the closest view in the ViewCube.

When Clicking on the ViewCube Area

Select the **Fit-to-view on view change** check box in the **When Clicking on the ViewCube** area to fit the view on screen while changing the viewing direction. The **Use animated transition on switching views** check box is selected by default in this area that enables the view to change in animation. Clearing this check box will result in the change of view without any animation, when using the ViewCube. Select the **Keep scene upright** check box to keep the sides of the ViewCube and the sides of the view perpendicular to the ground plane. Clear the check box to turn around the model in full 360-degree swing. Clearing this check box can be useful when you are editing a family.

Compass Area

The **Show the compass with the ViewCube** check box in the **Compass** area is selected by default. As a result, the compass along with the ViewCube will be visible in the drawing.

In the **ViewCube** tab, you can choose the **Restore Defaults** button to restore the default settings that were changed in its different areas.

CLOSING A PROJECT

To close a project, choose the **Application** button and then select the **Close** option from the displayed **Application Menu**, as shown in Figure 2-14. If you have already saved the latest changes, the project file will be closed. Otherwise, Revit Architecture will prompt you to save the changes through the **Save File** confirmation box. You can save the changes by choosing the **Yes** button or discard them by choosing the **No** button. You can also choose the **Cancel** button to return to the interface and continue working on the project file. You can also use the **Close** button (X) in the drawing window to close the project.

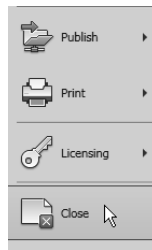


Figure 2-14 Accessing the Close option from Application Menu

EXITING A PROJECT

To exit a Revit Architecture session, choose the **Exit Revit** button from the **Application Menu**. Even if the project is open, you can still choose the **Exit Revit** button to close the file and exit Revit Architecture. In case, the project has not been saved, it enables you to save the work through the **Save File** confirmation box, as shown in Figure 2-15. If you choose the **No** button, all changes that were not saved will be lost. You can also use the **Close** button (X) of the main Revit Architecture window (in the title bar) to end the Revit Architecture session.

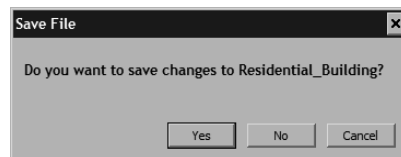


Figure 2-15 The Save File confirmation box



Tip: You must be cautious while choosing the **No** button in the **Save File** confirmation box because it discards all the changes made in the project since the last save.

OPENING AN EXISTING PROJECT

In Revit Architecture, several options are available to open an existing project.

Opening an Existing Project Using the Open Tool

Application Menu: Open > Project
Shortcut Key: CTRL+O

To open an existing project file, choose **Open > Project** from the **Application Menu**, as shown in Figure 2-16. Alternatively, you can open a project by choosing the **Open** button from **Quick Access Toolbar** or by pressing CTRL+O. On invoking the **Open** tool, the **Open** dialog box will be displayed, as shown in Figure 2-17. In this dialog box, you can open a particular project file by accessing the appropriate folder using the **Look in**

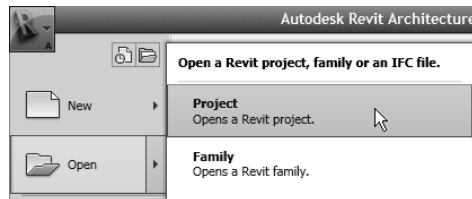


Figure 2-16 Opening an existing project using the Application Menu

drop-down list. The **Preview** area of the **Open** dialog box shows the preview of the selected project file. It helps you select a particular file by viewing its contents, even if you are not sure about the file name. The window icons such as the **Views** menu, placed along with the **Look in** drop-down list help you select a project file based on its size, type, and the date when it was last saved. On choosing the **Thumbnails** option from the **Views** menu, you can preview the contents of the project files inside the selected folder in the file list area, as shown in Figure 2-18. The **Places** list is located on the left in the **Open** dialog box. You can add or remove folders from the **Places** list by choosing the **Options** button from the **Application Menu**. On doing so, the **Options** dialog box will be displayed. Choose the **File Locations** tab from the dialog box, and then choose the **Places** button from it; the **Places** dialog box will be displayed, as shown in Figure 2-19.



Tip: The names of the recently opened files are displayed at the end of the **File** menu in the interface. On starting Revit Architecture, you can click the name of the project file that you wish to open.

The **Places** dialog box contains two columns: **Library Name** and **Library Path**. You can add or remove folders in the libraries list to create a list of frequently accessed folders. The four buttons on the left of the **Places** dialog box can be used to create or delete a library, or move it up and down in the list. To create a new library, choose the **Add Value** button, which is the third button from the top; a new library will be added to the defined path. By default, the name of the new library in the **Library Name** section will be **NewLibrary1**. Change the name of the new library and then click in the **Library Path** column to display the browse button. Choose the browse button and select the folder to be added in the libraries list using the **Browse for Folder** dialog box. Choose the **Open** button after selecting the folder; the new folder gets

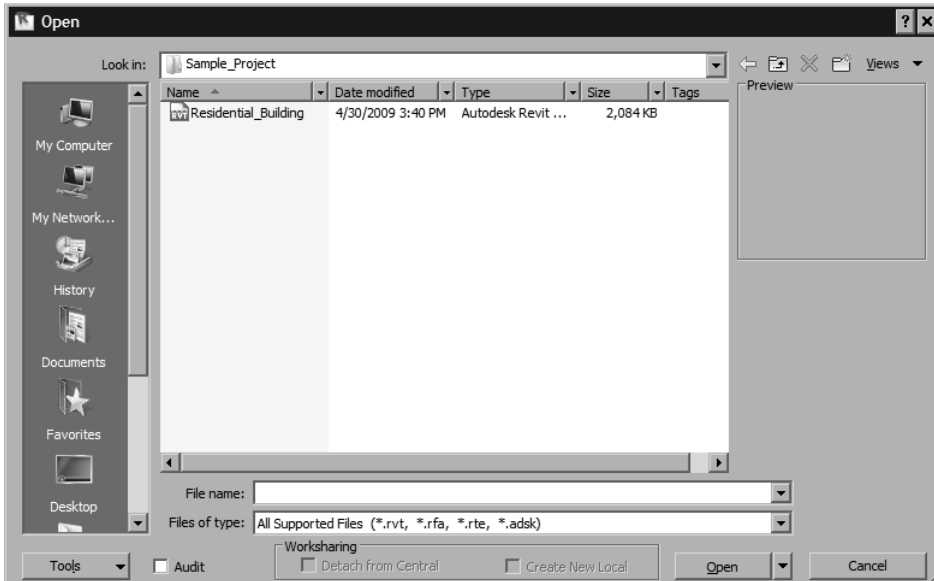


Figure 2-17 The *Open* dialog box



Figure 2-18 Previewing the contents inside the file using the *Thumbnails* option



Tip: By default, the preview of a file is the last active view or sheet at the time it was last saved. You can set the preview to a particular view from the **Options** button in the **Save As** dialog box.

added to the list. If required choose the upward arrow button in the **Places** dialog box to move the folder up to the top of the list. Similarly, you can choose the down arrow button to move it down. To delete any library, select the library and choose the **RemoveValue** button. Choose

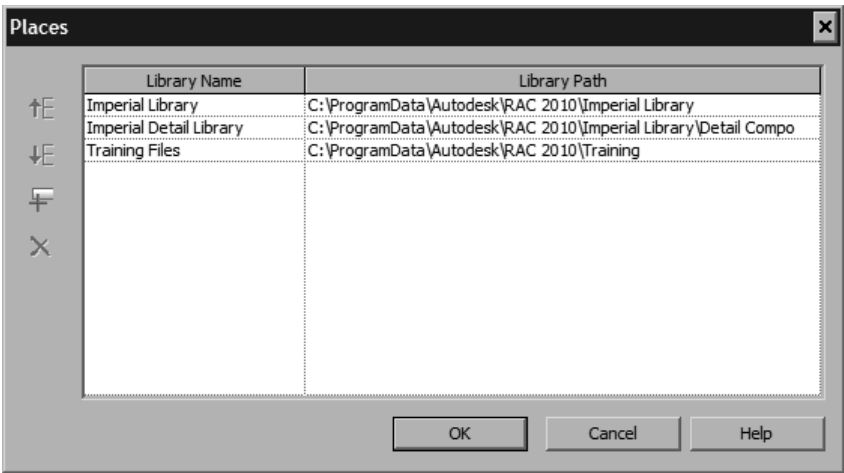


Figure 2-19 The Places dialog box



Tip: When you rest the cursor on the project file name, a tooltip appears, which provides you the information regarding the type and size of the project file.

the **OK** button in the **Places** dialog box to exit, and then close the **Options** dialog box. When you invoke the **Open** tool next time, the new folder icon will be displayed in the places list.

Once the file to be opened has been selected, its name will be displayed in the **File Name** edit box of the **Open** dialog box and its preview will be displayed in the **Preview** area.



Note

If you try opening an already opened file, which has been modified in the Revit Architecture session, a message box appears, prompting you to close the file first and reopen it. In case you open a file that has been created using an older version of Revit, the **Program Upgrade** message box is displayed. It mentions that the file is being upgraded to the latest file format and that this is a onetime process. Once the file is opened, it gets upgraded to Autodesk Revit Architecture 2010 version.



Tip: The names of the recently opened files are displayed in the **Application Menu**. On starting Revit Architecture, you can click the name of the project file that you wish to open.

Using the Windows Explorer to Open an Existing Project

Apart from using the **Open** tool from the Revit Architecture interface, you can also open files directly from the **Windows Explorer** by using the methods discussed next.

A file can be opened by double-clicking on its icon in the **Windows Explorer**. It opens the project file in the latest Revit Architecture session. If Revit Architecture is not running, double-click on the file icon to start Revit Architecture and then open the file.

Another method of opening a project file is by dragging the project file icon from the **Windows Explorer** and dropping it into the drawing window of the Revit Architecture interface. You can also select, drag, and drop more than one file in the drawing window. In this case, Revit Architecture prompts you to open the files in separate windows. Choose the **OK** button to open all files in the same Revit Architecture session.

MODEL DISPLAY TOOLS

As described earlier, in Revit Architecture, you can create the building model using the 3D parametric elements. Various tools are provided to view the building model. Based on the requirement, you can use these tools to navigate and edit elements in the building model.

Using the Zoom Tools

The **Zoom** tools are used to enlarge or reduce a project view in the viewing area. To use this tool, you need to invoke the **Navigation Bar** in your drawing. To do so, choose **Window > User Interface** from the **View** tab of the ribbon; a cascading menu will be displayed, as shown in Figure 2-20. In the cascading menu, select the **Navigation Bar** check box; the **Navigation Bar** will be displayed in the viewing area. In the **Navigation Bar**, click on the down arrow below the **Zoom in Region** tool; a cascading menu will be displayed, as shown in Figure 2-21. This cascading menu displays different zooming options, which are discussed next.

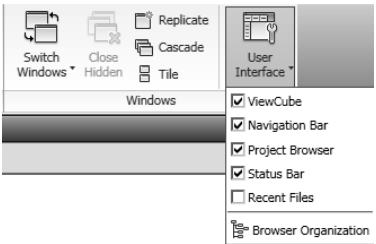


Figure 2-20 Selecting the Navigation Bar check box from the displayed cascading menu

Zoom In Region

This tool is used to zoom into a specified area or window. When you invoke the **Zoom In Region** tool from the **Navigation Bar**, the cursor is replaced by a magnifying glass. To zoom into an area, you need to define a rectangular window by picking its diagonally opposite corners. You can click at a point to specify the start point of the window. When you move the cursor, a dynamic rectangular window is created whose one corner is the specified point and the other corner is attached to the cursor. Move the cursor across the area you want to enlarge. When the area is enclosed in the rectangle, click to specify the diagonally opposite corners of the zoom window. The specified portion of the current view is enlarged. For example, to work on the stairs of the building plan, you can invoke the **Zoom In Region** tool and click to specify the two opposite corners of the window, as shown in Figure 2-22. The resulting enlarged view is shown in Figure 2-23.

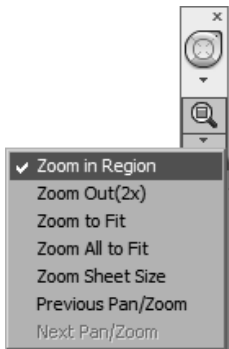


Figure 2-21 Different zooming options in the cascading menu

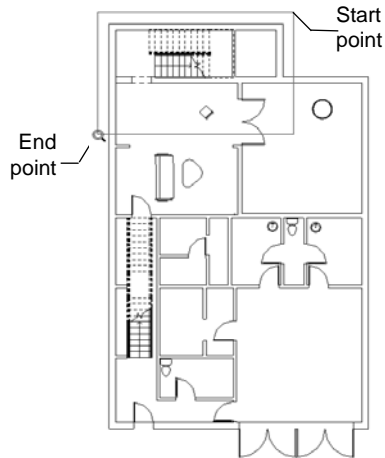


Figure 2-22 Specifying the corners of the zoom window

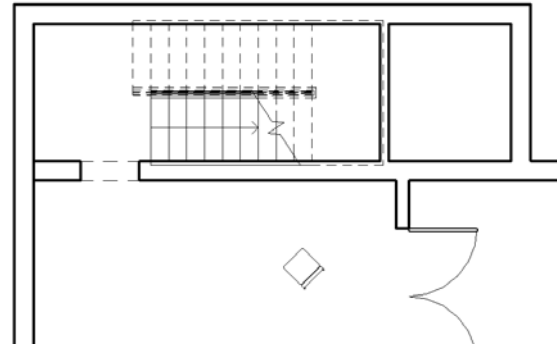


Figure 2-23 The resulting enlarged view

Zoom Out(2X)



This tool is used to zoom out of the existing view by twice the size of the current view. This means, when you invoke this tool, the new view will show twice the length and width of the original view.

Zoom To Fit and Zoom All to Fit



The **Zoom To Fit** tool is used to display all the contents of the project in the current view. On invoking this tool, the drawing window will adjust to show all the elements that have been created in a view. If there are multiple windows open with different zoom factors, invoke the **Zoom All to Fit** tool to perform **Zoom To Fit** in all the windows.

Zoom Sheet Size



The **Zoom Sheet Size** tool is used to fit the drawings in the default sheet size displayed in the **Paper** tab of the printer's **Properties** dialog box. This dialog box will be displayed on choosing the **Properties** button in the **Print** dialog box.

Previous Pan/Zoom and Next Pan/Zoom

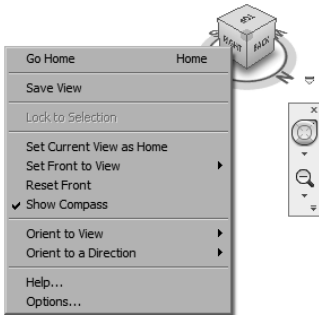
The **Previous Pan/Zoom** tool reverts back to the last displayed view using zoom or pan, whereas the **Next Pan/Zoom** tool is a toggle tool to show the next displayed view.

Using the Orient Tool

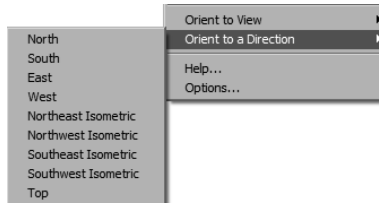
In Revit Architecture, you can view a building model in 3D from the preset viewpoints using the **Orient** tool.

To activate the **Orient** tool, first you need to activate the 3D view by double-clicking on {3D} under the **3D Views** head in the **Project browser**. Alternatively, you can also activate the 3D view by choosing **Create > 3D View > Default 3D** from the **View** tab of the ribbon. On doing so, the current view will orient to the default 3D view along with the ViewCube displayed at

the upper-right corner of the drawing area. Now, place the cursor over the ViewCube and right-click; a shortcut menu will be displayed, as shown in Figure 2-24. Now, in the shortcut menu, click on the **Orient to a Direction** option; a cascading menu will be displayed, as shown in Figure 2-25. From this cascading menu, select the appropriate view that will be displayed in the drawing window.



*Figure 2-24 Options in the shortcut menu of the **ViewCube***



*Figure 2-25 Options in the cascading menu of the **Orient to Direction** tool*

Navigation Tools

Autodesk Revit Architecture 2010 navigation tools help you navigate and maneuver into your model in different directions and views. Two new navigation tools have been added in Autodesk Revit Architecture 2010, the SteeringWheels and the ViewCube, and these are discussed next.

ViewCube

The ViewCube is an interactive 3D navigation tool that appears in all 3D views of Revit Architecture 2010. By default, the **ViewCube** tool is visible at the top right corner of your drawing area.

The **ViewCube** navigation tool comprises of a cube, a compass ring at the base with various directions marked on it, and a home icon that helps you set the default view, as shown in Figure 2-26. The **ViewCube** navigation tool is displayed in your drawing area either in the active or inactive state, as shown in Figures 2-27 and 2-28. By default, the ViewCube in its inactive state and it appears partially transparent over your drawing area, so as to prevent the obstruction of the view of your model. Whereas, in its active state, the ViewCube appears opaque and distinct and obstructs the view of your model. You can change the size, on-screen placement, visibility of the compass, and the inactive opacity of the ViewCube as per your requirement. To do so, choose the **ViewCube** tab from the **Options** dialog box as discussed earlier.

In the ViewCube, there are twenty-six defined areas, comprising of faces, edges, and corners. The twenty-six defined areas can be divided into three categories, corner, edge, and face, as shown in Figure 2-29. Out of the twenty-six defined areas, six areas represent the standard orthographic views of a model such as top, bottom, front, back, left, and right. The standard orthographic views are set by clicking on one of the faces on the ViewCube. The other twenty areas are defined to access the angular views of a model.

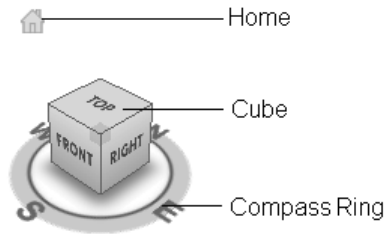


Figure 2-26 *The ViewCube and its various components*



Figure 2-27 *The ViewCube in the active state*



Figure 2-28 *The ViewCube in the inactive state*

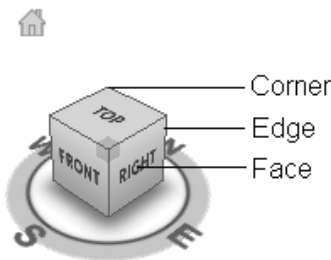


Figure 2-29 *Different area on the ViewCube*

When you move the cursor on the faces, edges, or vertices of an active ViewCube, the corresponding area gets highlighted in dark-gray color. These highlighted regions are called hotspots. While using the ViewCube, you can click on these hotspots to orient your view as per your requirement.

SteeringWheels

The **SteeringWheels** navigation tools are tracking menus that comprise of multiple navigation features in a single interface. Using the features in these tools, you can pan, zoom, walk, look, and adjust the view of your model as per your requirement. The **SteeringWheels** tool

is divided into different sections known as wedges. Each wedge represents a unique function for navigation.

To activate the **SteeringWheels** navigation tool in your model, press the F8 key. The **SteeringWheels** tool will appear according to the state of view in which you are working. If you are currently working in a 2D view, you can use the 2D **SteeringWheels** tool. Similarly you can use the 3D **SteeringWheels** tool when you are working in the 3D view.

In Autodesk Revit Architecture 2010, you can access various types of SteeringWheels from the **Navigation Bar**. In the **Navigation Bar**, click on the down arrow below the default **Full Navigation Wheel** tool; a shortcut menu with various types of Steering Wheels will be displayed, as shown in Figure 2- 30.

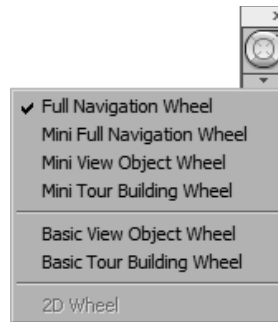


Figure 2-30 Shortcut menu displaying various types of SteeringWheels

To navigate the 2D view, you can use the 2D navigation wheel, as shown in Figure 2-31. The 2D navigation wheel has three navigation tools, **Zoom**, **Pan**, and **Rewind**. **Zoom** is a common navigation tool for enlarging or reducing the viewing scale of the model. You can use the **Pan** tool for traversing across the model view. The **Rewind** tool can be used to see the views of the previous zooming states which are saved temporarily.



Figure 2-31 The 2D Steering Wheels navigation tool

The 3D **SteeringWheels** navigation tools help you navigate through your 3D views. Based on the size and appearance, the 3D SteeringWheels is categorized into two groups, Mini Steering Wheels and Big SteeringWheels.

The Mini SteeringWheels are classified into three types, **Mini View Object Wheel**, **Mini Tour Building Wheel**, and **Mini Full Navigation Wheel**, as shown in Figure 2-32.

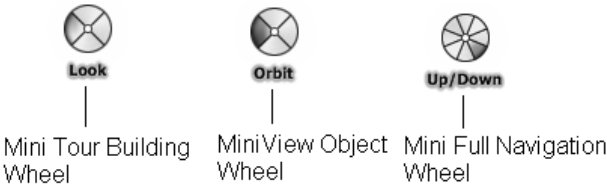


Figure 2-32 Types of Mini SteeringWheels for 3D Views

The **Mini View Object Wheel** has four distinct navigation tools, **Pan**, **Zoom**, **Rewind**, and **Orbit**. Similarly, the **Mini Tour Building Wheel** comprises of four unique navigation options, **Up/Down**, **Look**, **Walk**, and **Rewind**. The **Full Navigation Wheel** comprises of eight wedges with each wedge defining an unique navigation function. The **Mini Full Navigation Wheel** combines all the functions of the **Mini View Object Wheel** and **Mini Tour Building Wheel**. The Big SteeringWheels has the similar classification as that of the Mini SteeringWheels, as shown in Figure 2-33, and it has the same navigation tools as that of the Mini SteeringWheels with the only difference in their appearances on screen.

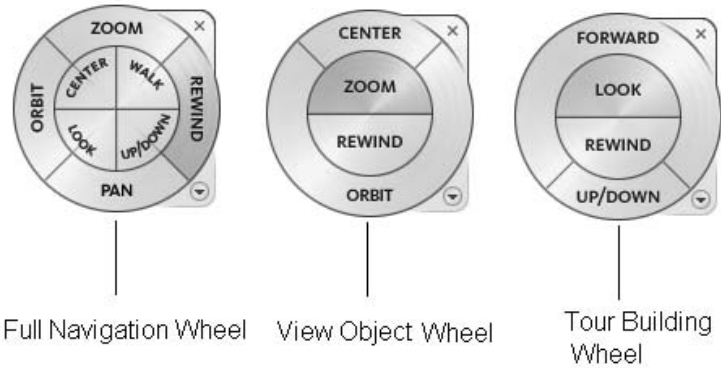


Figure 2-33 Appearance of Big SteeringWheels

As you put your cursor over any of the navigation tools, the tooltips and messages are displayed, as shown in Figure 2-34. The tooltips inform you regarding the tool that you want to use and provide instruction for using it. You can control the visibility of the tooltips and the tool messages while using the SteeringWheels by using the **Options** dialog box, as discussed earlier in this chapter.

While using the **SteeringWheels** navigation tool, you can activate the available navigation tools by clicking and holding the left mouse button over any one of the wedges. After holding the

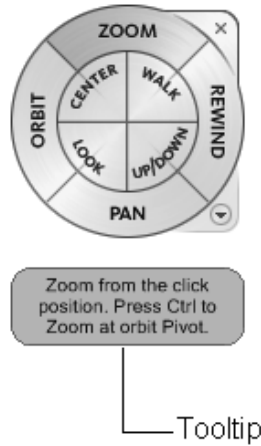


Figure 2-34 *Appearance of the tooltip with the SteeringWheels*

left mouse button and dragging it over the drawing area, you can use the selected navigation tool for reorienting your view. Now, to exit the selected navigation tool, release the left mouse button.

Other Display Options

Revit Architecture provides five options to view the building model in different modes of shading. You can select these options by clicking on the **Model Graphics Style** button from the **View Control Bar**, and then selecting the desired option from the shortcut menu that will be displayed. There are four options that are available in the shortcut menu and are described next.

- Wireframe** : Displays the model with all lines and edges without surfaces
- Hidden Line** : Displays the model with lines and edges by removing those which are hidden by surfaces
- Shading** : Displays the building model with the surfaces shaded with respect to the material shading and default lighting effect
- Shading with Edges** : Displays the model with shaded surfaces and all visible lines and edges



Note

By default, these options affect the current view only. However, you can save the shading effects by saving the shaded view in the project file.

TUTORIALS

In the following chapters, you will setup two projects, an apartment complex and a club building. Some portions of these two projects will be completed in the tutorials and the rest are given as exercises. The tutorials and exercises form a sequence and to complete these projects, you will need to complete the tutorials and exercises in the previous chapters. The following tutorials will familiarize you with the tools and concepts discussed in this chapter such as starting Revit Architecture, opening a new project, setting units, setting snaps, saving and closing the project.

Tutorial 1

Apartment 1

In this tutorial, you will create a new project file for the *Apartment 1* project with the following parameters.
(Expected time: 15 min)

1. Template file- **Imperial Templates > default.rte**.
2. Project Units- **Feet and fractional inches**, Rounding- **To the nearest 1/2"**.
3. Length dimension snap increment- **5';2'6";3";0'1/2"**.
4. File name to be assigned- *c02_Apartment1_tut1.rvt*

The following steps are required to complete this tutorial:

- a. Start a Revit Architecture session.
- b. Use **default.rte** as the template file for the project, refer to Figure 2-35.
- c. Set **Feet and fractional inches** as the project units using the **Project Units** dialog box, refer to Figure 2-36.
- d. Set **5';2'6";3"; 0'1/2"** as the length dimension snap increment using the **Snaps** dialog box.
- e. Set **Endpoint, Midpoint, Nearest, Perpendicular, Work Plane Grid**, and **Intersection** as the object snaps in the **Snaps** dialog box.
- f. Save the project as *c02_Apartment 1.rvt* using the **Save As** tool, refer to Figure 2-37.
- g. Close the project using the **Close** tool.

Starting Autodesk Revit Architecture 2010

1. Start Revit Architecture by choosing **Start > Programs > Autodesk > Autodesk Revit Architecture 2010 > Autodesk Revit Architecture 2010**. The program is loaded and the user interface screen is displayed.

Opening a New Project

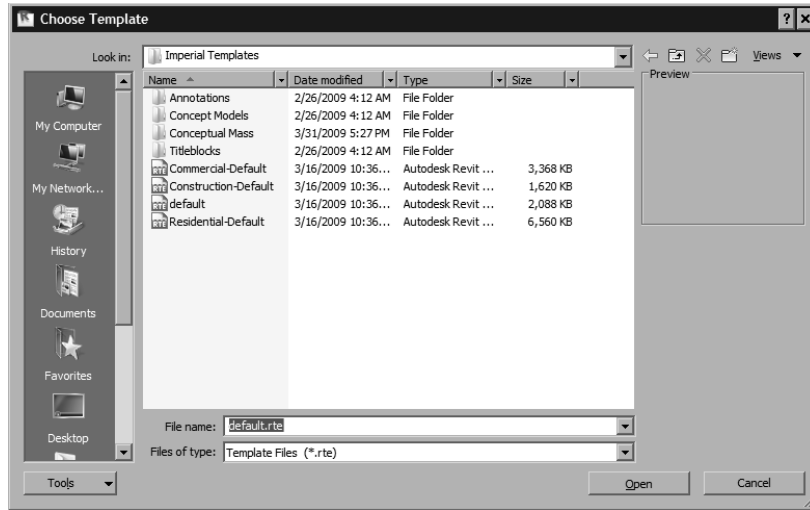
1. Click on the **Application** button; **Application Menu** is displayed. Choose **New > Project** from this menu; the **New Project** dialog box is displayed.



Using the Template File

To use the template file for the project, you need to access the appropriate folder and select the required template file.

1. In the **New Project** dialog box, choose the **Browse** button; the **Choose Template** dialog box is displayed, showing a list of the template files available in the **Imperial Templates** folder.
2. In the **Choose Template** dialog box, the **default.rte** template file is already selected as the default template file, as shown in Figure 2-35. Choose the **Open** button to close the **Choose Template** dialog box and assign the selected template file to the **New Project** dialog box.



*Figure 2-35 Selecting the template file from the **Choose Template** dialog box*

3. Use the **Project** radio button (default) to create a project file and choose the **OK** button to close the **New Project** dialog box; the **default.rte** template file is loaded. Notice that the **Project browser** now shows different levels and views which have already been created in the selected template file.

Setting the Units

1. To set the units for the project, choose **Project Settings > Project Units** from the **Manage** tab of the ribbon; the **Project Units** dialog box is displayed.
2. Click in the **Format** column next to the **Length** parameter; the **Format** dialog box is displayed.
3. In the **Format** dialog box, click on the **Units** drop-down list for setting the length units. Select **Feet and fractional inches** (default option).
4. Click on the **Rounding** drop-down list and select the **To the nearest 1/2"** option, as shown in Figure 2-36.
5. Choose the **OK** button; the **Project Units** dialog box is displayed. Again, choose the **OK** button to apply the specified units and exit the displayed dialog box.

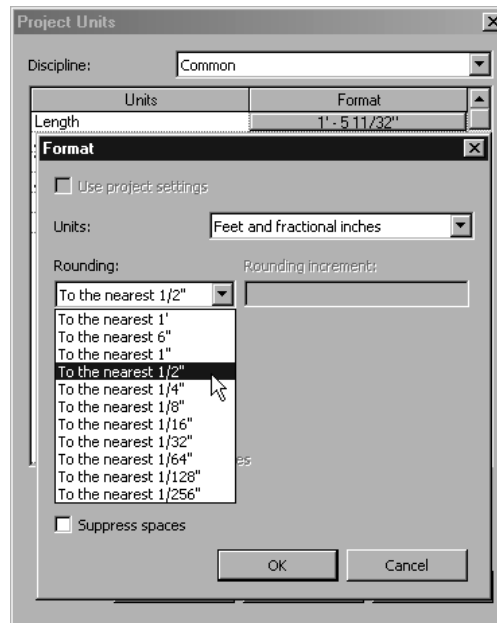


Figure 2-36 Setting the *Rounding* parameter in the **Format** dialog box

Setting Dimension and Object Snaps

To set the dimension snaps and object snaps, use the **Snaps** tool. These settings are made based on the type of the project and the amount of detailing required.

1. Choose **Project Settings > Settings > Snaps** from the **Manage** tab of the ribbon; the **Snaps** dialog box is displayed. In the **Length dimension snap increments** edit box, type **5';2'6";3"; 0'1/2"**. (Refer to the **Snap Settings** section of this chapter to know more about the **Snaps** tool)
2. In the **Object Snaps** area, click on the **Quadrants**, **Centers**, **Tangents**, and **Points** check boxes to disable them. Leave the other options such as **Endpoints**, **Midpoints**, **Nearest**, **Perpendicular**, **Work Plane Grid**, **Snap to Remote Objects**, and **Intersections** enabled. Choose the **OK** button to apply the settings and exit the **Snaps** dialog box.

Saving the Project

The project parameters set in the previous steps are an integral part of the project file. To save this project file with these settings, use the **Save** tool.

1. To save the project, choose the **Save** option from the **Application Menu**. As you are saving the project for the first time, the **Save As** dialog box is displayed.
2. Browse to the *Documents* folder and create a folder with the name *revit_2010*.
3. Open the *revit_2010* folder and save the file with the name *c02_Apartment1_tut1.rvt*, as shown in Figure 2-37.

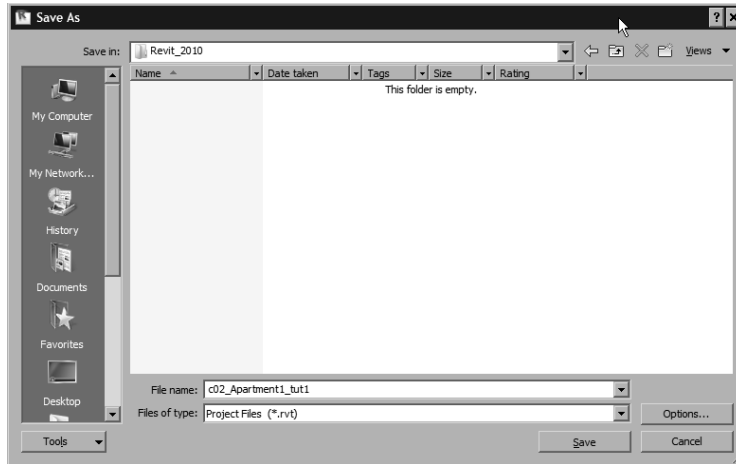


Figure 2-37 Saving the project using the *Save As* dialog box

Closing the Project

1. To close the project, choose the **Close** option from **Application Menu** in the ribbon. As you have already saved the latest changes made to the project file, choose **Close** to close the project file.

Tutorial 2

Club

In this tutorial, you will create a new project file for the *Club* project using the following parameters.
(Expected time: 15 min)

1. Template file- **Imperial Templates > Commercial-Default.rte**.
2. Project Units- **Feet and fractional inches**.
3. Length dimension snap increment- **10';2'6";1'; 0'3"**.
4. Object snaps to be set- all available object snaps.
5. File name to be assigned- *c02_Club_tut2.rvt*

The following steps are required to complete this tutorial:

- a. Start a Revit Architecture session.
- b. Use **Commercial-Default.rte** as the template file by accessing the **Imperial Templates** folder.
- c. Set **Feet and fractional inches** as the project units using the **Project Units** dialog box.
- d. Set **10';2'6";1'; 0'3"** as the length dimension snap increment in the **Snaps** dialog box.
- e. Enable all the object snaps using the **Snaps** dialog box.
- f. Save the project as *c02_Club_tut2.rvt* using the **Save As** tool.
- g. Close the project using the **Close** tool

Starting Revit Architecture and Opening a New Project

1. Start a new Revit Architecture session by double-clicking on the Autodesk Revit Architecture 2010 shortcut icon on the desktop. The program is loaded and the user interface screen is displayed. In case, the Revit Architecture session is already running, this step can be ignored and the project file can be opened directly.
2. Choose **New > Project** from **Application Menu**; the **New Project** dialog box is displayed.

Using the Template File

As given in the project parameters, you need to use the **Commercial-Default** template file for this project. This template file can be selected from the **New Project** dialog box.

1. In the **New Project** dialog box, choose the **Browse** button; the **Choose Template** dialog box is displayed. From the **Imperial Templates** folder of the displayed dialog box, select the **Commercial-Default** template file and choose **Open**. Choose **OK** to exit the **New Project** dialog box.

The **Commercial-Default.rte** template file is loaded. Notice that the **Project browser** now shows several levels that are preloaded in the template file.

Setting Units

You can set the units for various measurement parameters using the **Project Units** dialog box.

1. Choose **Project Settings > Project Units** from the **Manage** tab of the ribbon; the **Project Units** dialog box is displayed.
2. Click in the **Format** column next to the **Length** unit; the **Format** dialog box is displayed. In this dialog box, make sure that the **Feet and fractional inches** option (default option) is selected.
3. Click on the **Rounding** drop-down list and select **To the nearest 1/4"**.
4. Choose **OK** to return to the **Project Units** dialog box. Next, choose the **OK** button to apply the settings and return to the user interface screen.

Setting Dimensions and Object Snaps

Next, access and modify the settings in the **Snaps** dialog box. You need to specify the dimension snap increment and enable all object snap options.

1. Choose **Project Settings > Settings > Snaps** from the **Manage** tab of the ribbon; the **Snaps** dialog box is displayed.
2. In **Object Snaps** area, click on the **Check All** button to enable all object snaps options.

3. In the **Length dimension snap increments** edit box, enter **10';2'6";1'; 0'3"**; and then choose the **OK** button to apply the settings and exit the **Snaps** dialog box.

Saving the Project

In this section, you will save the project and the settings using the **Save As** dialog box.

1. To save the project with the settings, choose **Save As > Project** from the **Application Menu**. As you are saving the project for the first time, the **Save As** dialog box is displayed.
2. Browse to the `revit_2010` folder and enter **c02_Club_tut2** in the **File name** edit box. Notice that the **File of type** drop-down list shows **Project Files (*.rvt)** as the default option.
3. Choose the **Save** button to save the project as `c02_Club_tut2.rvt`. The project is saved in the specified location.

Closing the Project

1. To close the project, choose the **Close** option from **Application Menu**.

The file is closed and this completes Tutorial 2 of Chapter 2.

Self-Evaluation Test

Answer the following questions and then compare them to those given at the end of this chapter:

1. You can open only one Revit Architecture project at a time. (T/F)
2. In Revit Architecture, all enabled object snaps work together. (T/F)
3. While saving a project file for the first time, when you choose the **Save** option from **Application Menu**, the **Save As** dialog box is displayed. (T/F)
4. A project file can be opened by double-clicking on the file name in the Windows Explorer. (T/F)
5. You can save any project file as a template file. (T/F)
6. The shortcut key to use the **Save** option is _____.
7. To specify the location of the default template file, you can use the _____ tab in the **Options** dialog box.
8. The _____ button in the **Save As** dialog box can be used to specify the maximum number of backup(s) for a project file.

9. The _____ option of Revit Architecture enables you to override the snap settings for a single pick only.
10. You can add folders to the _____ in the **Save As** dialog box to access the frequently used folders directly.

Review Questions

Answer the following questions:

1. You can modify the project unit settings anytime during the project. (T/F)
2. The project file name and path have to be specified each time you save the project. (T/F)
3. You cannot control the visibility of the tooltip assistant. (T/F)
4. The **Save reminder interval** drop-down list that is available in the **General** tab of the **Options** dialog box is used to specify the time interval between the reminder prompts to save the project file. (T/F)
5. If the changes made to a project file have not been saved, on choosing the **Close** option, Revit Architecture prompts you to save the changes before closing it. (T/F)
6. You can open only one project file at a time in a Revit Architecture session. (T/F)
7. You can add words to the additional dictionaries for checking spellings. (T/F)
8. Which of the following options is not an object snap option?
 - a) **Endpoint**
 - b) **Work Plane Grid**
 - c) **Dimension**
 - d) **Centers**
9. Which of the following keys can be used to toggle between the object snap options available at the same point?
 - a) TAB
 - b) CTRL
 - c) ALT
 - d) F3
10. Which of the following shortcut keys is used to activate the SteeringWheels.
 - a) F2
 - b) F6
 - c) CTRL
 - d) F8

Exercises

Exercise 1

Apartment 2

Create a new project file for the *Apartment 2* project with the following parameters.

(Expected time: 15 min)

1. Template file- **Imperial Templates > default.rte**
2. Project Units- **Feet and fractional inches**
3. Length dimension snap increment- **5';2'6";3"; 0'1/2"**
4. File name to be assigned- *c02_Apartment2_ex1.rvt*

Exercise 2

Elevator and Stair Lobby 2

Create a new project file for the *Elevator and Stair Lobby* project with the following parameters.

(Expected time: 15 min)

1. Template file- **Imperial Templates > default.rte**
2. Project Units- **Feet and fractional inches**
3. Length dimension snap increment- **5';1';3"; 0'1"**
4. File name to be assigned- *c02_ElevatorandStairLobby2_ex2.rvt*

Answers to Self-Evaluation Test

1. F, 2. T, 3. T, 4. T, 5. T, 6. CTRL+S, 7. File Locations, 8. Options, 9. Temporary Overrides, 10. Places list