

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.*
- *Learn various options of saving a project.*
- *Modify parameters and settings of a project.*
- *Close a project and exit Revit Architecture.*
- *Use various techniques of opening an existing project.*
- *Explore the building model using the viewing tools.*
- *Understanding 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

Menu Bar: File > New > Project
Toolbar: Standard > New
Shortcut Key: CTRL+N



You can start a new project by choosing **File > New > Project** from the menu bar, as shown in Figure 2-1. On doing so, the **New Project** dialog box will be displayed, as shown in Figure 2-2. You can select a template file to be used for the project using this dialog box.

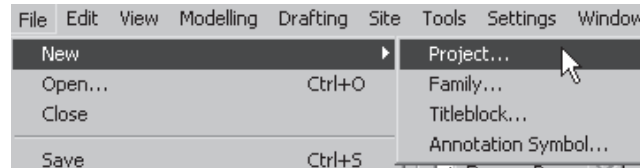


Figure 2-1 Starting a new project using the menu bar

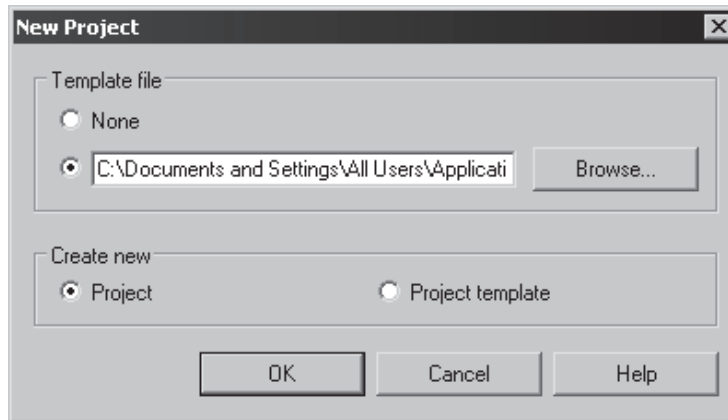


Figure 2-2 The New Project dialog box

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, whereas to create a template, select the **Project template** radio button.

SETTING UNITS

Menu Bar: Settings > Project Units
Shortcut Key: UN

Units are important parameters of a project. Revit Architecture prompts you to set the default units as Imperial(feet and inches) or Metric(meter) while installing the program. The default selection of unit helps you start your project with a specific type of unit as per the conventions followed in the industry. You can set the units by choosing **Settings > Project Units** from the menu bar. 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 having a set of measurement parameters. The **Common** option is selected by default in the **Discipline** drop-down list. It contains detailed units for various measurement parameters such as **Length**, **Area**, **Volume**, **Angle**, **Slope**, and **Currency**. The **Format** column displays the current unit format for each 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 located at the lower left corner of the dialog box, refer to Figure 2-3.

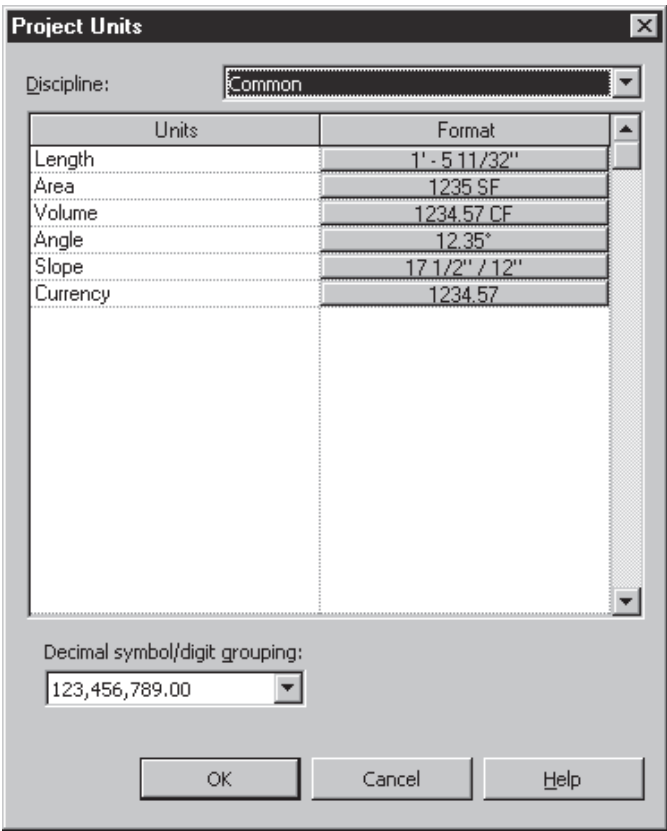


Figure 2-3 The Project Units dialog box

Length Unit Settings

You can click in the **Format** column in the **Length** row to change the settings of the units for measuring length. The **Format** dialog box displays the units of length and its settings, as shown in Figure 2-4. The desired units can be selected from the **Units** drop-down list. You can select any one option such as **Decimal feet**, **Feet and fractional inches**, **Decimal inches**, **Meters**, **Centimeters**, and so on from the **Units** drop-down list. You can set the value to

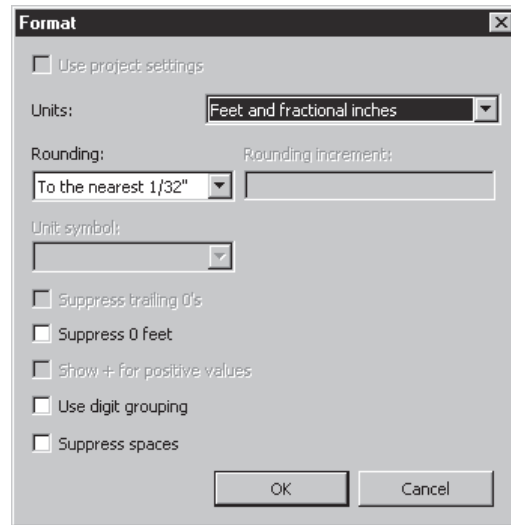
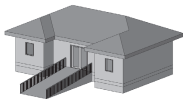


Figure 2-4 The *Format* dialog box

which the units will be rounded using the **Rounding** parameter. You can select the appropriate rounding value from the **Rounding** drop-down list. The **Rounding increment** parameter can be used to set the rounding increment. For certain units, the **Custom** option can be selected as the **Rounding** parameter to enable the rounding increment option. You can then specify an increment other than that given in the drop-down list.

The **Unit symbol** drop-down list is available only for certain units and you can select the measurement symbol that you want to add along with the length unit. For example, to use the symbol 'm' after all the metric length measurements, you can select **m** as the symbol from the drop-down list. Select the **Suppress spaces** check box to remove all spaces around the dash from the length strings. For example, you can remove the spaces in the dash when a length strength is expressed in feet and fractional inches to denote a particular measurement.

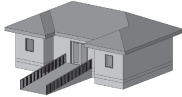


Tip: The **Rounding** parameter should be set by considering the extent of detailing that may be required in the project. For projects that demand greater details, a lower rounding may be set. This parameter, however, can be modified at any time during the project development.

Area Unit Settings

Click in the **Format** column for the **Area** parameter in the **Project Units** dialog box to set the units for measuring area. Select the desired unit setting from the drop-down list, which contains

various options for units of area such as **Square Feet**, **Square Meters**, **Acres**, and so on. The **Square feet** is the default setting, 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.



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.

Volume and Angle Unit Settings

The units for volume and angle can also be set in a similar manner by selecting them from the available options such as **Cubic feet**, **Cubic meters**, and so on.

Slope Setting

The **Slope** option in the **Project Units** dialog box enables you to set the units for measuring the slope in angles or with respect to the rise. The default option for **Imperial** units is **Rise/12**. You can select **Slope Angle** from the **Slope** drop-down list to give the output in decimal degrees.

Currency Setting

In Revit Architecture 2009, you can set the unit for currency. 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

Menu Bar: Settings > Snaps

The **Snap** is one of the most productive tools available while creating and editing elements in a building model. It 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 set **Snaps**, choose **Settings > Snaps** from the menu bar; the **Snaps** dialog box will be displayed, as shown in Figure 2-5. It has three sections, **Dimension Snaps**, **Object Snaps**, and **Temporary Overrides**.



Note

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

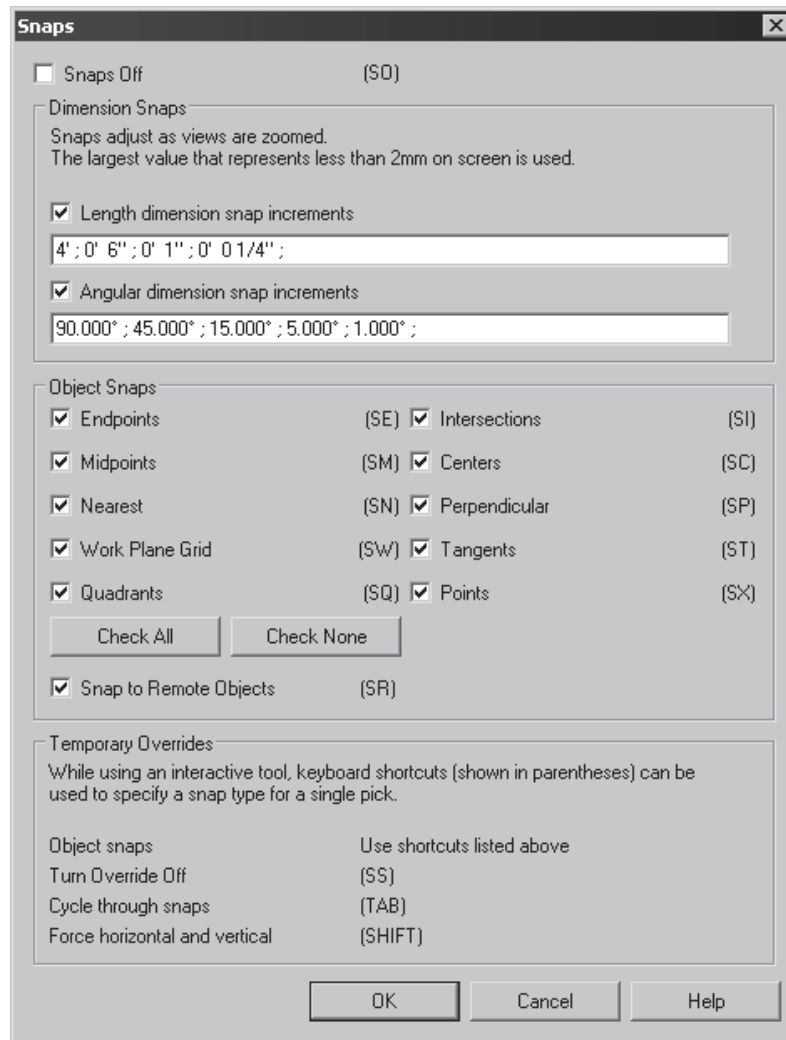
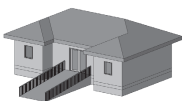


Figure 2-5 The *Snaps* dialog box

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 setting 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



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.

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 edit box, if desired. This parameter is quite useful, if you are working on a project that has a radial geometry.

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, 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.



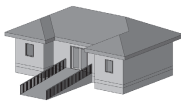
Note

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.

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.



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.*

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 THE PROJECT

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

Menu Bar:	File > Save As
Toolbar:	Standard > Save
Shortcut key:	CTRL+S

On choosing **File > Save As** from the menu bar, the **Save As** dialog box will be displayed, as shown in Figure 2-6.

The **Save in** drop-down list displays the current drive and path in which the project will be saved. The list box below the **Save in** drop-down list shows all the folders in that directory.

The **File name** edit box can be used to enter the name to be assigned to the project or a file. You can also save a file as a template using the **Save As** dialog box.

The **Places List** on the left side of the **Save As** dialog box contains shortcuts to the folders that are frequently used. You can directly access them from this **Places List**.

Using the Options Button

You can use different file saving features by choosing the **Options** button in the **Save As** dialog box. On choosing this option, the **File Save Options** dialog box will be displayed, as shown in

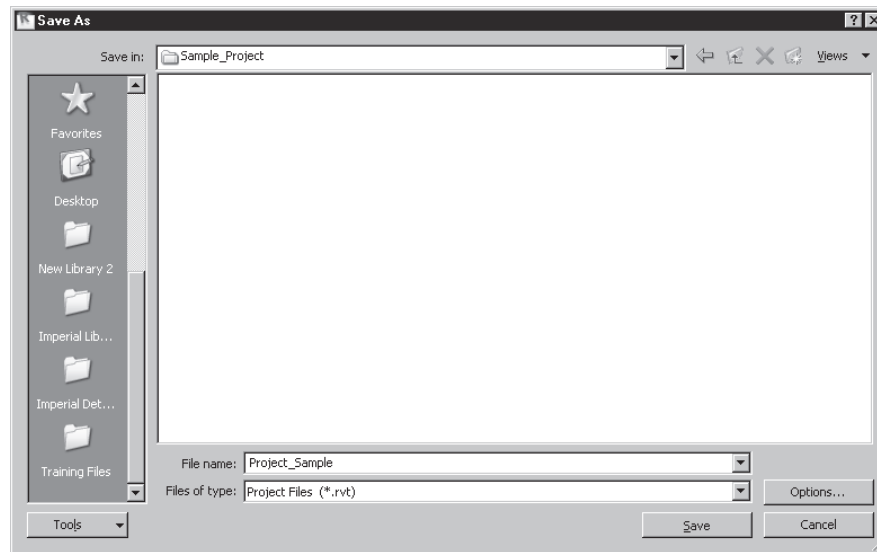


Figure 2-6 The Save As dialog box

Figure 2-7. You can specify the maximum number of backup files that you require to be stored for the project.

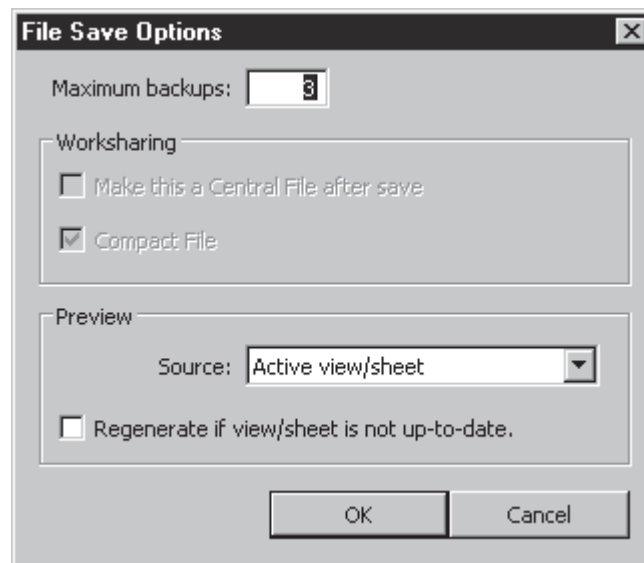
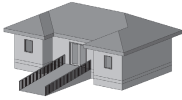


Figure 2-7 The File Save Options dialog box

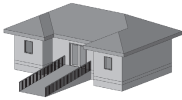
The options in the **Preview** area enable you to specify the image to be used as a preview of the project file. This image will be used at the time of opening a project file. You can specify the view of the model to be used as a preview image from the **Source** drop-down list provided in the **Preview** 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.

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.



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.



Note

Revit Architecture continuously updates the preview image and so selecting this check box can consume considerable resources.

Using the Save Tool

Menu Bar: File > 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, choose **File > Save** from the menu bar, 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.

The **Save** button in the **Standard** toolbar can also be used to access this tool. Alternatively, you can hold the CTRL key and press the S key to invoke this tool. Revit Architecture updates your project file automatically without prompting you to re-enter the file name and path. This enables you to save your project.

Using the Save to Central Tool

Menu Bar: File>Save to Central

The concept of creating a central file location refers to Revit Architecture's capability to support a team of architects and engineers to work simultaneously on a single project. This feature should be used only if a number of people are expected to work simultaneously on a single project.

You can create a central file location after enabling the worksets. It is the master project file that stores the information of all the worksets in the project. Choose **File > Save to Central** from the menu bar to save a file at the central file location.

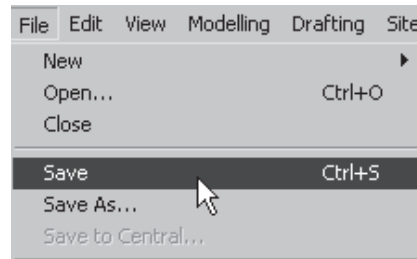


Figure 2-8 Accessing the *Save* and *Save As* tools from the menu bar

Using this feature, you can subdivide the project into worksets. A workset includes a collection of elements in a building model that can be accessed and edited only by an individual or a group. The collection can be a portion of a building model, a specific level or even a category, which is given a name and an authorization code. Authorized individuals or groups can access and work upon the collection using the code. People using other worksets can view the information in this workset and observe the progress of work. In this manner, a number of designers and engineers can work simultaneously on a single project, with each one being assigned a specific portion or characteristics of the work. This not only ensures a proper monitoring of the work for each workset but also avoids any conflict in the project as a whole. For example, in a building project, the layout project file can be the central file and a workset can be created for different types and portions of work such as external facade details, flooring patterns, toilet, staircase details, and so on. You will learn more about using worksets in Chapter 16.

MODIFYING OTHER SETTINGS

Menu Bar: Settings > Options

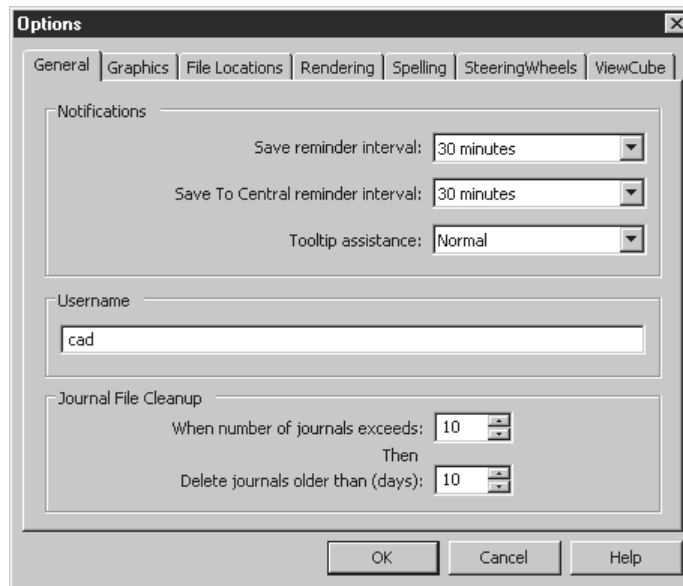
You can format some other settings for the project file using the **Options** dialog box. Choose **Settings > Options** from the menu bar to display the **Options** dialog box, as shown in Figure 2-9. It contains seven tabs, **General**, **Graphics**, **File Locations**, **Rendering**, **Spelling**, **SteeringWheels**, and **ViewCube**.

General Tab

The **General** tab is the default tab and contains three sections, **Notifications**, **Username**, and **Journal File Cleanup**.

Setting Notification

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 **Save To Central reminder interval** parameter.



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

The **Tooltip Assistant** refers to a text box 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 drop-down list. The default mode is **Normal**. A tooltip will appear more frequently if you select **High**.

Setting the Username

You can set the user name for the workset using this edit box, when the worksets are enabled.

Setting the Journal File Cleanup

This section of the **General** tab of the **Options** dialog box helps you to manage various projects. You can enter number of journal files to be retained for a project.

Graphics Tab

The **Graphics** tab enables you to configure the display card of your computer to improve the display performance. If your graphics card supports the Open-GL hardware acceleration, then you can select the check box for this parameter. This option may be required if any display related problems are encountered.

To toggle the background color of the display, use the invert background color check box. The **Selection Color** parameter refers to the color that an element acquires when it is selected. The default color is **Red**. To use any other color, click on the button available on the right of the **Selection Color** parameter and select the desired color from the displayed **Color** dialog box. Revit Architecture uses the **Alert Color** to highlight the 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 by Revit Architecture and also by you, 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** option and specifying a new path.

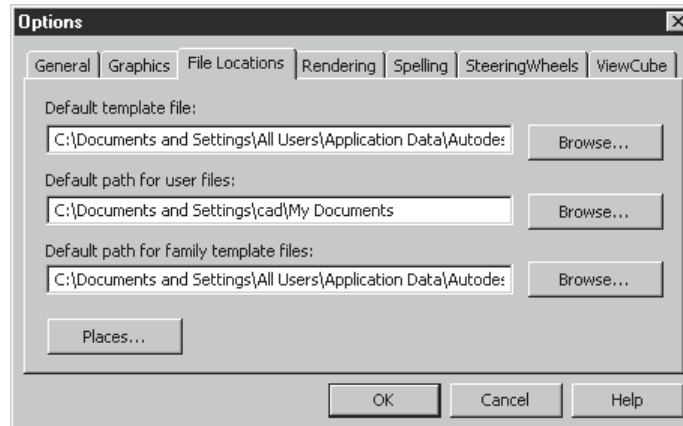


Figure 2-10 The File Locations tab of the Options dialog box

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.

Rendering Tab

Revit Architecture 2009 has enhanced its rendering engine from AccuRender to mental ray. The mental ray has its own library named as **Render Appearance Library**, which stores information about the render appearances for materials, default RPC contents in the software, and other informations that are relevant to the rendering process. The **Render Appearance Library** is a read-only library, which is loaded into a default location while installing the Revit Architecture software.

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 first 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 of checking the spelling of the text matter in the project. You can choose the **Spelling** tab to display its options. Various self-explanatory settings can be selected from the **Settings** list. You can select the type of dictionary from the **English (United States)** or **English (United Kingdom)** dictionaries options. 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 the **Edit** button to view the list of words. You can enter or remove any word from these lists using the cursor and keyboard.

To run the spell check tool, choose **Tools > Spelling** from the menu bar; the **Spelling** dialog box will be displayed, wherein you can rectify the spellings of the text matter by selecting the correct spelling and then choosing the **Change** button in the dialog box. Alternatively, you can press the **F7** key to display the **Spelling** dialog box, as shown in Figure 2-11.

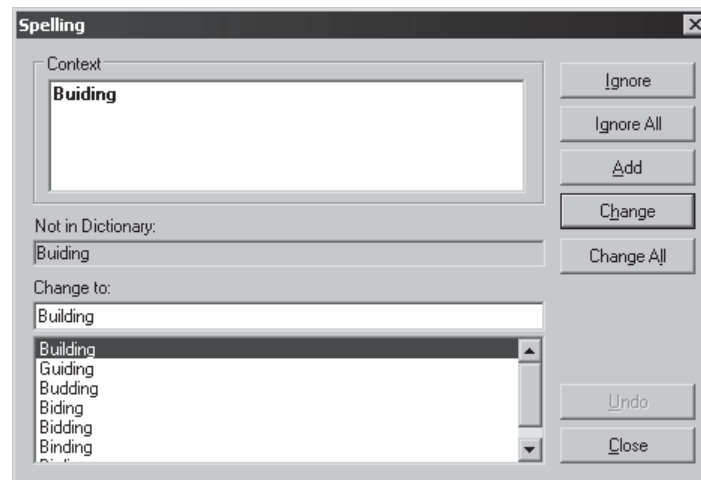


Figure 2-11 The **Spelling** dialog box

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, and these areas are discussed next.

Steering Wheel Visibility Area

You can control the display of tool messages, tooltips, and pinned wheel of the SteeringWheels by using the options in the **Steering Wheel Visibility** area of the **SteeringWheels** tab.

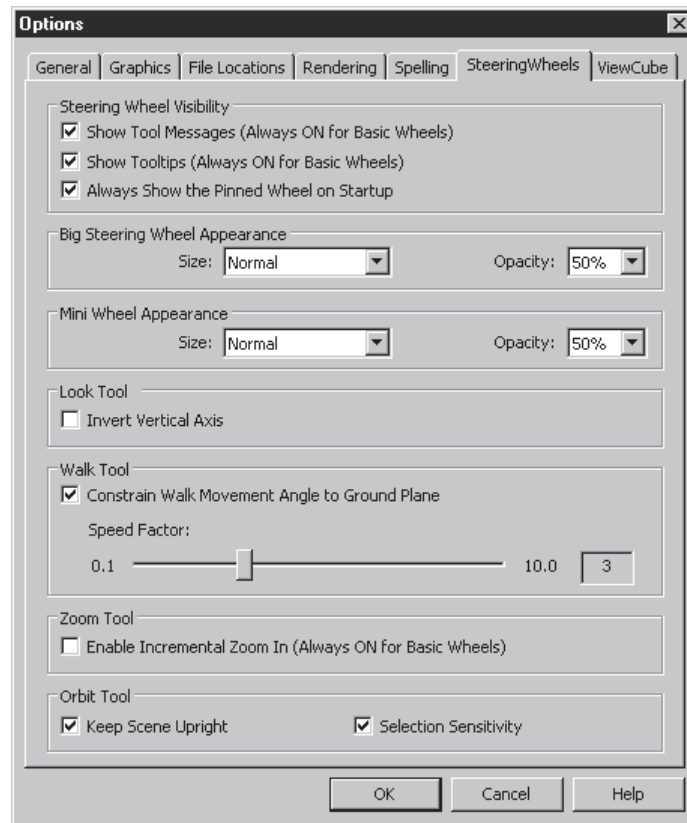


Figure 2-12 The *SteeringWheels* tab of the *Options* dialog box

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 display the first contact balloon on startup, select the **Always Show the Pinned Wheel on Startup** check box in this dialog box.

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 and Walk Tool Areas

In the **Look Tool** 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 Movement Angle 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 **Enable Incremental Zoom In** check box in the **Zoom Tool** area to enable the incremental zoom ability of the **Zoom** tool in the SteeringWheels. Invoke the **Zoom** tool; you will be able to zoom into your model.

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.

Select the **Selection Sensitivity** check box in the **Orbit Tool** area to enable the **Orbit** tool of the SteeringWheels to orbit around the center of the element that you have selected. If you clear this check box, the **Orbit** tool will orbit around the center of the current geometry, irrespective of the element selected.

ViewCube Tab

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

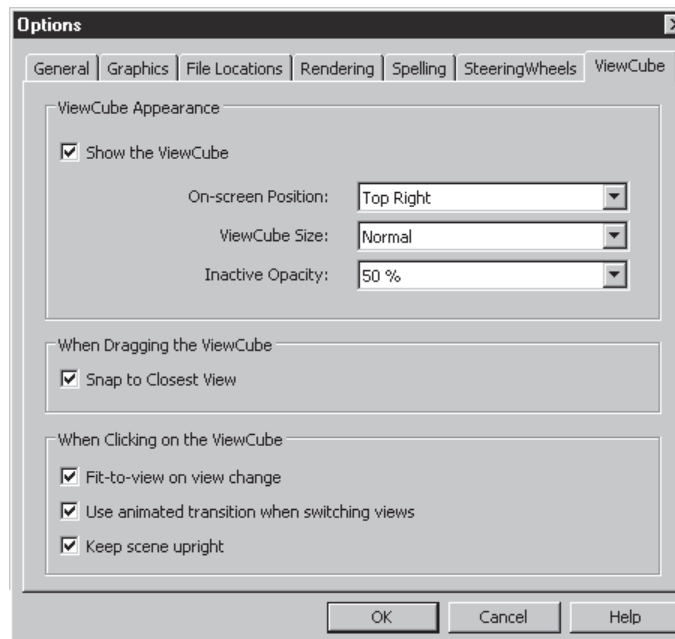


Figure 2-13 The **ViewCube** tab of the **Options** dialog box

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.

You can select various options from the drop-down lists available in the **ViewCube Appearance** area 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 Views** 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

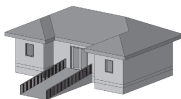
Select the **Fit-to-view on view change** check box in the **When Clicking on the ViewCube** area to fit the view on screen while changing the viewing direction. The **Use animated transition on switching views** check box is selected by default in this area that enables the view to change in animation. 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.

CLOSING A PROJECT

Menu Bar: File > Close

To close a project, choose **File > Close** from the menu bar, as shown in Figure 2-14. If you have already saved the latest changes, the project file will be closed. Otherwise, Revit Architecture prompts you to save the changes through the **Revit** conformation 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.



Tip: You must be cautious while selecting **No** in the save changes options because it discards all the changes made to the project since the last save.

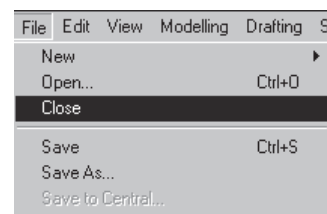


Figure 2-14 Accessing the **Close** option from the **File** menu

EXITING REVIT ARCHITECTURE

Menu Bar: File > Exit
Toolbar: Close

To exit a Revit Architecture session, choose **File > Exit** from the menu bar. Even if the project is open, you can still choose **Exit** 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 **Revit** conformation box, as shown in Figure 2-15.

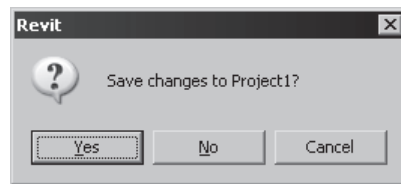
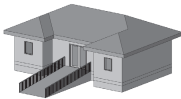


Figure 2-15 The *Revit* conformation box

If you choose the **No** button, all changes made in the current project till the last save 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.



Tip: If you have opened more than one project in a single Revit Architecture session and you choose the **Exit** option, Revit Architecture will close the projects that have already been saved. For other projects, it will display the **Save Changes** dialog box and prompt you to save the files.

OPENING AN EXISTING PROJECT

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

Opening an Existing Project Using the Open Tool

Menu Bar: File > Open
Toolbar: Open
Shortcut Key: CTRL+O



To open an existing project file, choose **File > Open** from the menu bar, as shown in Figure 2-16. Alternatively, you can invoke the **Open** tool from the **Standard** toolbar or press CTRL+O to invoke the **Open** tool.

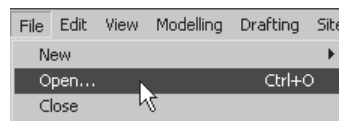


Figure 2-16 Opening an existing project using the menu bar

The **Open** dialog box is displayed, as shown in Figure 2-17. You can open a particular project file by accessing the appropriate folder using the **Look in** drop-down list.

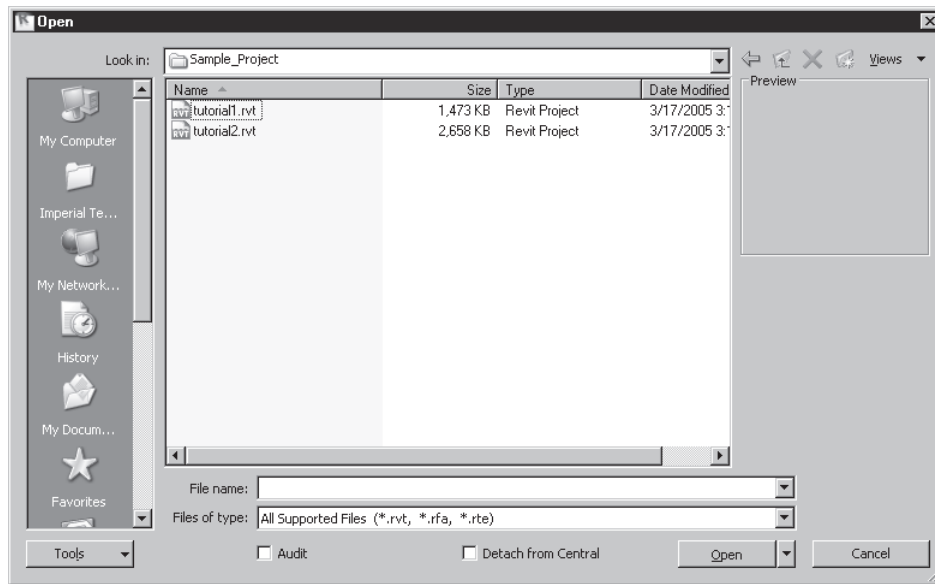


Figure 2-17 The *Open* dialog box

The **Preview** area of the **Open** dialog box shows a 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. Windows icons such as the **View** menu, placed along with the **Look in** drop-down list, helps you select a project file based on its size, type, and the date when it was last saved. By choosing the **Thumbnails** option in the **View** menu, you can preview the tents of project files inside the selected folder in the file list area, as shown in Figure 2-18.

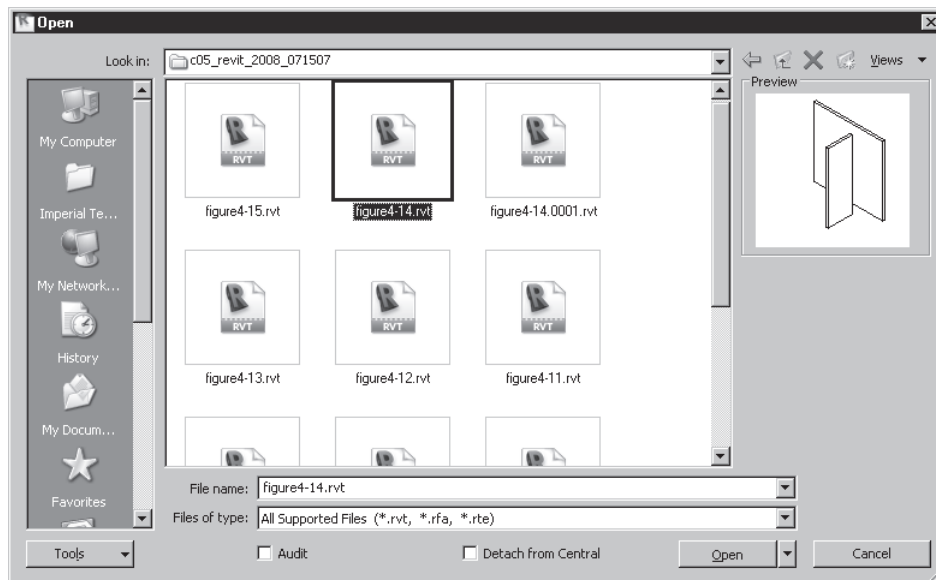
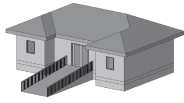


Figure 2-18 The *Thumbnails* option in the *Open* dialog box



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.

The **Places** list is located on the left of the **Open** dialog box. You can add or remove folders from the **Places** list by choosing **Settings > Options** from the menu bar; the **Options** dialog box will be displayed. Choose the **File Locations** tab. Now, choose the **Places** button; the **Places** dialog box will be displayed, as shown in Figure 2-19.

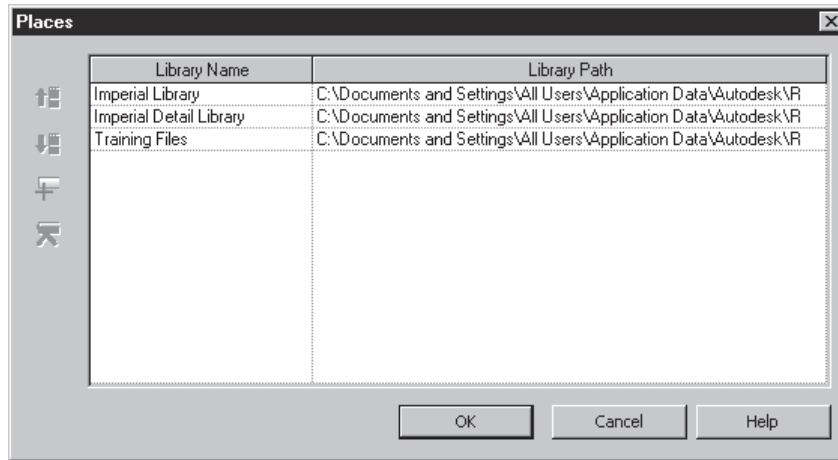
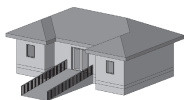


Figure 2-19 The **Places** dialog box

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 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 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, and its preview will be displayed in the **Preview** area.



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.

**Note**

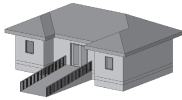
If you try opening an already opened file, which has been modified in the Revit Architecture session, a message box appears, prompting you to close the file first and reopen it. In case you open a file that has been created using an older version of Revit, the **Program Upgrade** message box is displayed. 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 2009 version.

The **Open** dialog box can also be used to open template files (.rte) and family files (.rft). The selection of file types can be made from the **Files of type** drop-down list. You will learn more about template and family files in the later chapters.

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.



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.

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 the project view in the viewing area. To use it, choose **View > Zoom** from the menu bar. The cascading menu displays different options available, as shown in Figure 2-20.

Apart from the menu bar, you can also access the **Zoom** tools from the **View** toolbar, as shown in Figure 2-21.

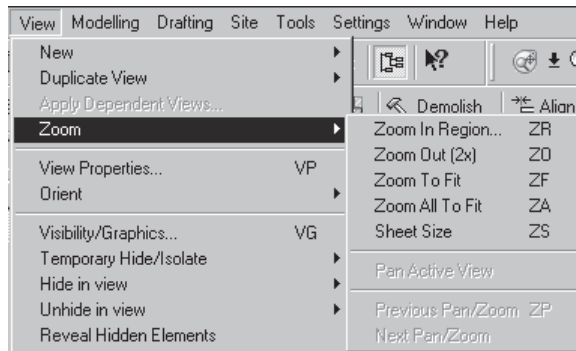


Figure 2-20 Choosing the **Zoom** options from the menu bar

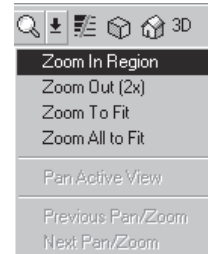


Figure 2-21 Choosing the **Zoom** options from the menu bar

Zoom In Region

Menu Bar: View > Zoom > Zoom In Region
Toolbar: View > Zoom > Zoom In Region
Shortcut Key: ZR



This tool is used to zoom into a specified area or window. When you invoke the **Zoom In Region** tool, 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.

Zoom Out

Menu Bar: View > Zoom > Zoom Out (2x)
Toolbar: View > Zoom > Zoom Out (2x)
Shortcut Key: ZO

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

Menu Bar: View > Zoom > Zoom To Fit; Zoom All to Fit
Toolbar: View > Zoom > Zoom To Fit; Zoom All to Fit
Shortcut Keys: ZF; ZX

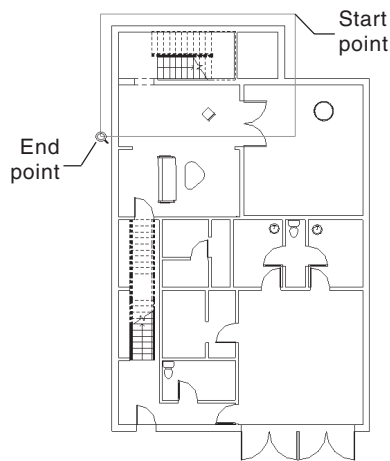


Figure 2-22 Specifying the corners of the zoom window

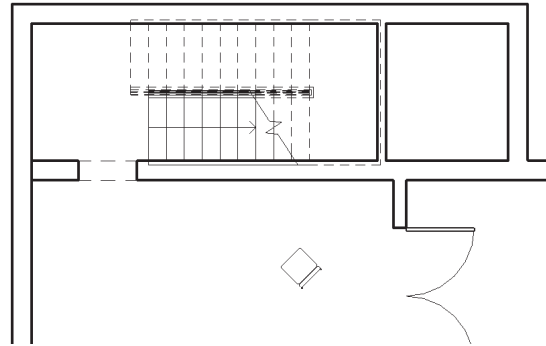


Figure 2-23 The resulting enlarged view

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.

Sheet Size

Menu: View > Zoom > Sheet Size
Shortcut Keys: ZS

The **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. The default paper size is **8.5 x 11** inches. You can select the sheet size from the **Size** drop-down list 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.

Pan Active View

Menu: View > Zoom > Pan Active View
Toolbar: View > Zoom > Pan Active View

This command is activated when you add and activate the views on sheets. Autodesk Revit Architecture 2009 allows you to pan or move the views in the views on the sheets using the **Pan** tool.

Previous Pan/Zoom and Next Pan/Zoom

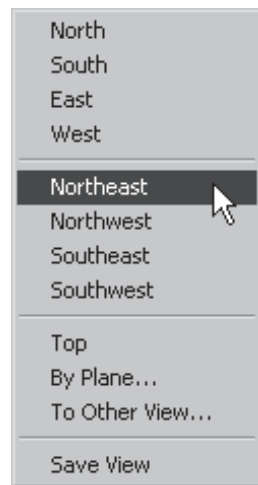
Menu Bar: View > Zoom > Previous Pan/Zoom; Next Pan/Zoom
Toolbar: View > Zoom > Previous Pan/Zoom; Next Pan/Zoom
Shortcut Key: ZP

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 to show the next displayed view.

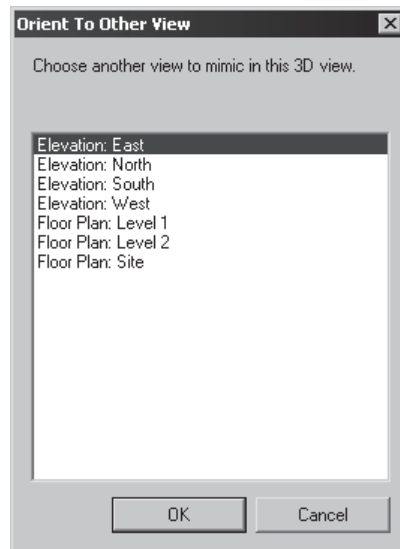
Using the Orient Tool

The **Orient** tool can be used to view the building model in three-dimensions from the preset viewpoints. To activate the **Orient** tool options, you first need to activate the 3D view by selecting {3D} from the **3D Views** head in the **Project browser** or by invoking the **Default 3D View** tool from the **View** toolbar. You can then choose **View > Orient** from the menu bar. This displays the view options in a cascading menu, as shown in Figure 2-24. You can now select the appropriate view, which will be displayed in the drawing window.

The **Top** option can be selected to view the model from the top. The **By Plane** option displays the **Select Orientation Plane** dialog box in which you can specify the orientation plane from the different defined planes in the project. The **To Other View** option displays the **Orient To Other View** dialog box, as shown in Figure 2-25. You can double-click on the desired option to invoke the corresponding view in the drawing window.



*Figure 2-24 Options available in the **Orient** cascading menu*



*Figure 2-25 Options in the **Orient To Other View** dialog box*

Navigation Tools

Autodesk Revit Architecture 2009 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 2009, 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 2009. 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.

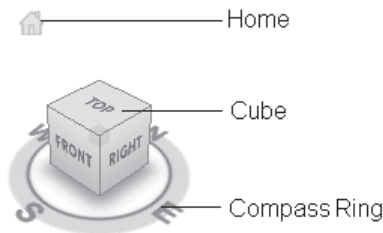


Figure 2-26 The ViewCube and its various components

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 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.



Figure 2-27 The ViewCube in the active state



Figure 2-28 The ViewCube in the inactive state

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** option from the **Options** dialog box as discussed previously.

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.

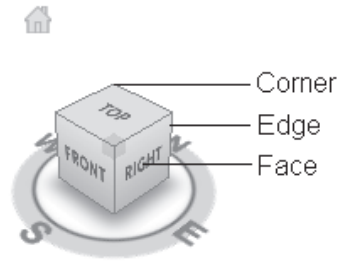


Figure 2-29 Different categories for selecting the ViewCube

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 an 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.

If you are using the **SteeringWheels** tool in your 3D view for the first time in the file, the first contact balloon will appear in your screen, as shown in Figure 2-30. The first contact balloon serves as an introductory panel to the purpose and the usage of the **SteeringWheels**. You can use different types of **SteeringWheels** tools with reference to the current 2D or 3D view.

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.

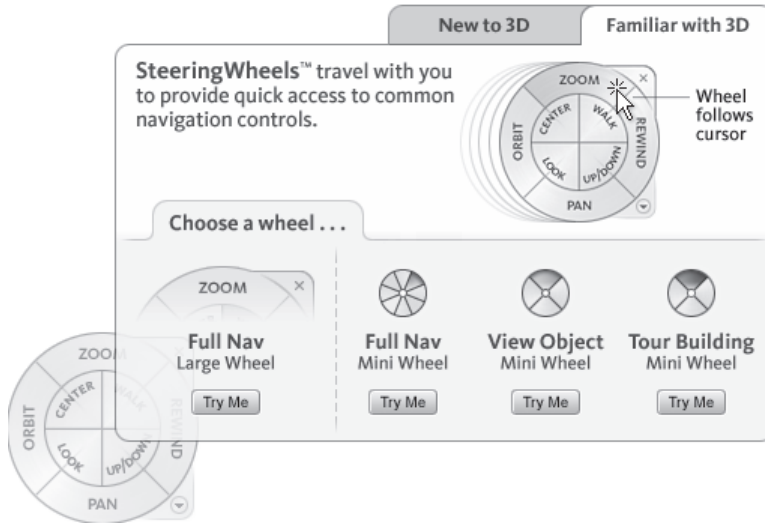


Figure 2-30 The first contact balloon



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 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.

The **Mini View Object Wheel** has four distinct navigation tools, **Center**, **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**.

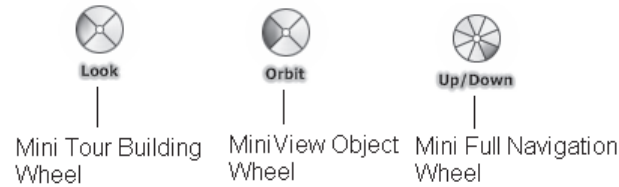


Figure 2-32 Types of Mini SteeringWheels for 3D Views

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.

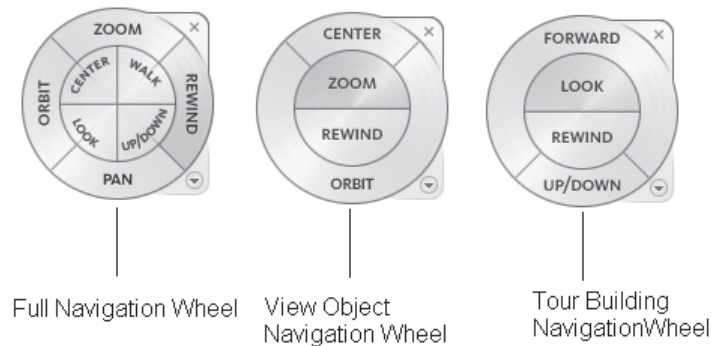


Figure 2-33 Appearance of the Big SteeringWheels

As you put your cursor over any of the navigation tools, the tooltips and the 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 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.

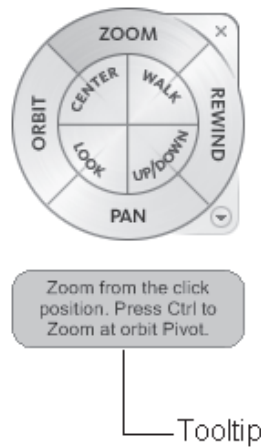


Figure 2-34 Appearance of the tooltip with the *SteeringWheels*

Other Display Options

Revit Architecture provides five options to view the building model in different modes of shading. You can select these options from the **View** menu. The five options are described next.

- Wireframe** : Displays the model with all lines and edges without surfaces
- Hidden Line** : Displays the model with the 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
- Advanced Model Graphics** : Controls the shadow and silhouette lines of the model



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 develop two projects, an apartment complex and a club building. Some portions of both 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, and so on.

Tutorial 1**Apartment 1**

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- *Apartment 1.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 *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 2009

1. Start Revit Architecture by choosing **Start > Programs > Autodesk > Revit Architecture 2009 > Revit Architecture 2009**. The program is loaded and the user interface screen is displayed.

Opening a New Project

1. Choose **File > New > Project** from the menu bar; 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. The same name is displayed in the **File name** edit box. Choose the **Open** button to close it and return to the **New Project** 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.

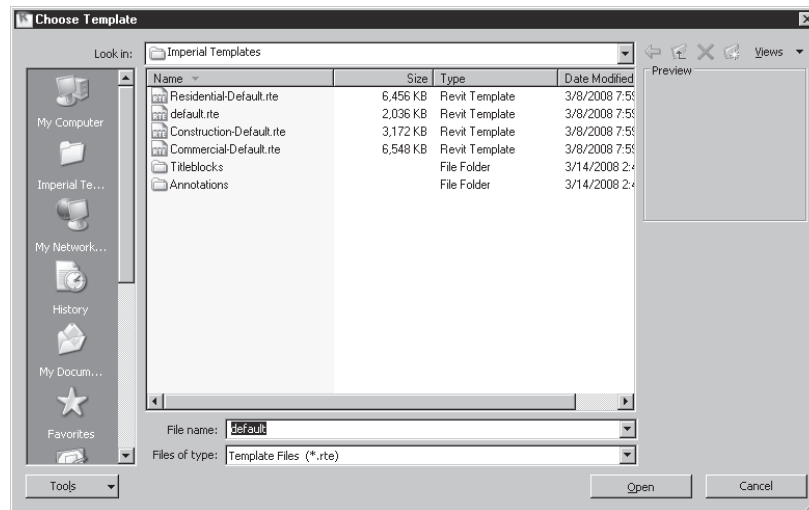


Figure 2-35 Selecting the template file from the **Choose Template** dialog box

The **default.rte** template file is loaded. Notice that the **Project browser** now shows the 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 **Settings > Project Units** from the menu bar. The **Project Units** dialog box is displayed.
2. Click in the **Format** column in front of the **Length** parameter.
3. In the **Format** dialog box, click on the **Units** drop-down list for setting the length units and 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 to return to the **Project Units** dialog box. Again, choose it to close this dialog box and return to the user interface screen.

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 **Settings > Snaps** from the menu bar; the **Snaps** dialog box is displayed. In the **Length dimension snap increments** edit box, type **5';2'6";3"; 0'1/2";**.
2. In the **Object Snaps** section, click on the check boxes to disable the **Quadrants**, **Centers**, **Tangents**, and **Points** object snaps. Leave the other options such as **Endpoints**,

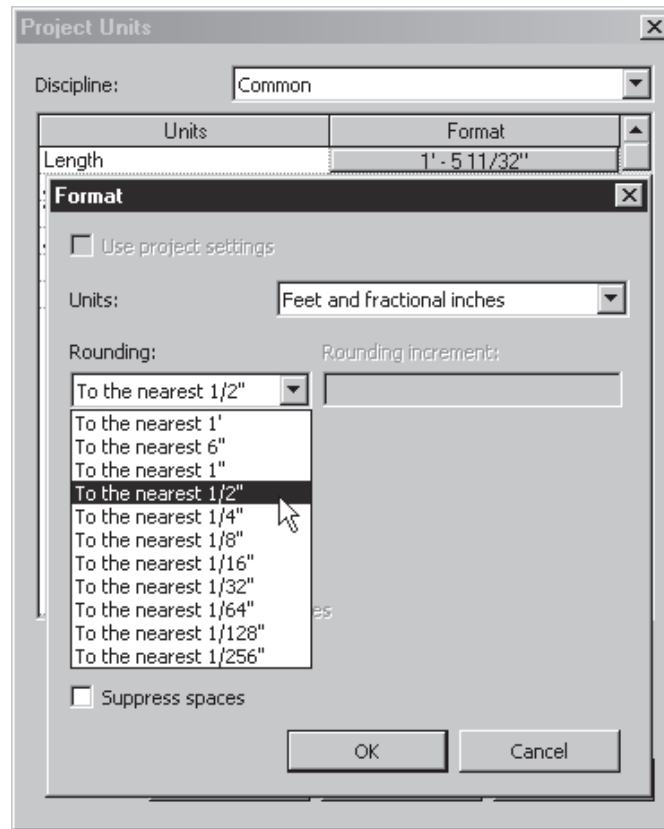


Figure 2-36 Setting the **Rounding** parameter in the **Format** dialog box

Midpoints, Nearest, Perpendicular, Work Plane Grid, Snap to Remote Objects, and Intersections enabled. Choose the **OK** button to close 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** command.

1. To save the project, choose **File > Save** from the menu bar. As you are saving the project for the first time, the **Save As** dialog box is displayed.
2. Browse to the *My Documents* folder and create a folder with the name *revit_2009* in this folder.
3. Open the *revit_2009* folder and save the file with the name *Apartment1.rvt* in this folder, as shown in Figure 2-37.

Closing the Project

To close the project, choose **File > Close** from the menu bar. As you have already saved the latest changes made to the project file, choosing **Close** closes the project file.

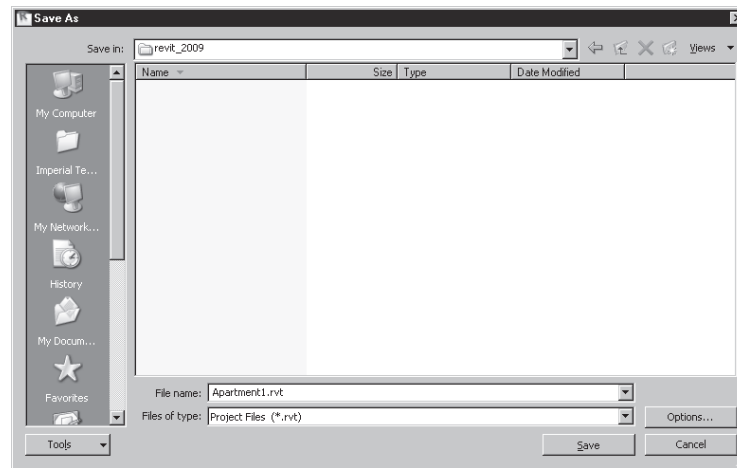


Figure 2-37 Saving the project using the *Save As* dialog box

Tutorial 2

Club

In this tutorial, you will create a new project file for a *Club* project using the following project 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- *Club.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 *Club.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 2009 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 **File > New** from the menu bar and choose **Project**; the **New Project** dialog box is displayed.

Using the Template File

You need to use the **Commercial-Default** as the template file for this project, as given in the project parameters. Select the template file to be used for this project using the **New Project** dialog box.

1. In the **New Project** dialog box, choose the **Browse** button. From the **Imperial Templates** folder, select the **Commercial-Default.rte** as the 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 **Settings > Project Units** from the menu bar; the **Project Units** dialog box is displayed.
2. Click in the **Format** column of the **Length** unit. In the **Format** dialog box, verify 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. Again, choose the **OK** button to close this dialog box 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 the object snap options.

1. Choose **Settings > Snaps** from the menu bar; the **Snaps** dialog box is displayed.
2. In the **Length dimension snap increments** edit box, type **10';2'6";1'; 0'3"**.
3. In **Object Snaps** section, click on the **Check All** button to enable all the object snaps options. Choose the **OK** button to close the **Snaps** dialog box.

Saving the Project

Save the project and the settings using the **Save As** dialog box.

1. To save the project with the settings, choose **File > Save** from the menu bar.

As you are saving the project for the first time, the **Save As** dialog box is displayed.

2. Browse to the *revit_2009* folder. Type **Club** in the **File name** edit box.

Notice that the **Save as type** drop-down list shows **Project Files (*.rvt)** as the default option.

3. Choose the **Save** button to save the project as *Club.rvt*. The project is saved in the desired folder.

Closing the Project

To close the project, choose **File > Close** from the menu bar. As you have already saved the latest changes made to the project file, choosing **Close** closes the project file.

The file is closed and this completes Tutorial 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 **File > Save** from the menu bar, 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** 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- *Apartment 2.rvt*

Exercise 2

Elevator and Stair Lobby

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- *Elevator and Stair Lobby.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