

Protecting Your Worksheet

There may be times when you want to lock your Excel worksheet so that end users cannot edit or manipulate the data in a worksheet. You can implement worksheet protection using ExcelWriter by calling the method `Worksheet.Protect()`.

Worksheet protection is meant to lock data for the purpose of presentation only. Worksheet protection should not be confused with **encryption**, and it should not be used to hide or protect sensitive data. When worksheet protection is activated, users can see the worksheet and all the data within it, but will be prevented from altering the content or formatting the cells.

Encryption can be performed on the workbook level, as shown below:

Workbook Encryption

```
//--- To encrypt a workbook, use the Workbook.EncryptPassword property:  
ExcelApplication xlw = new ExcelApplication();  
Workbook wb = xlw.Create();  
wb.EncryptPassword = "myPassword";  
xlw.Save(wb, outputPath);
```

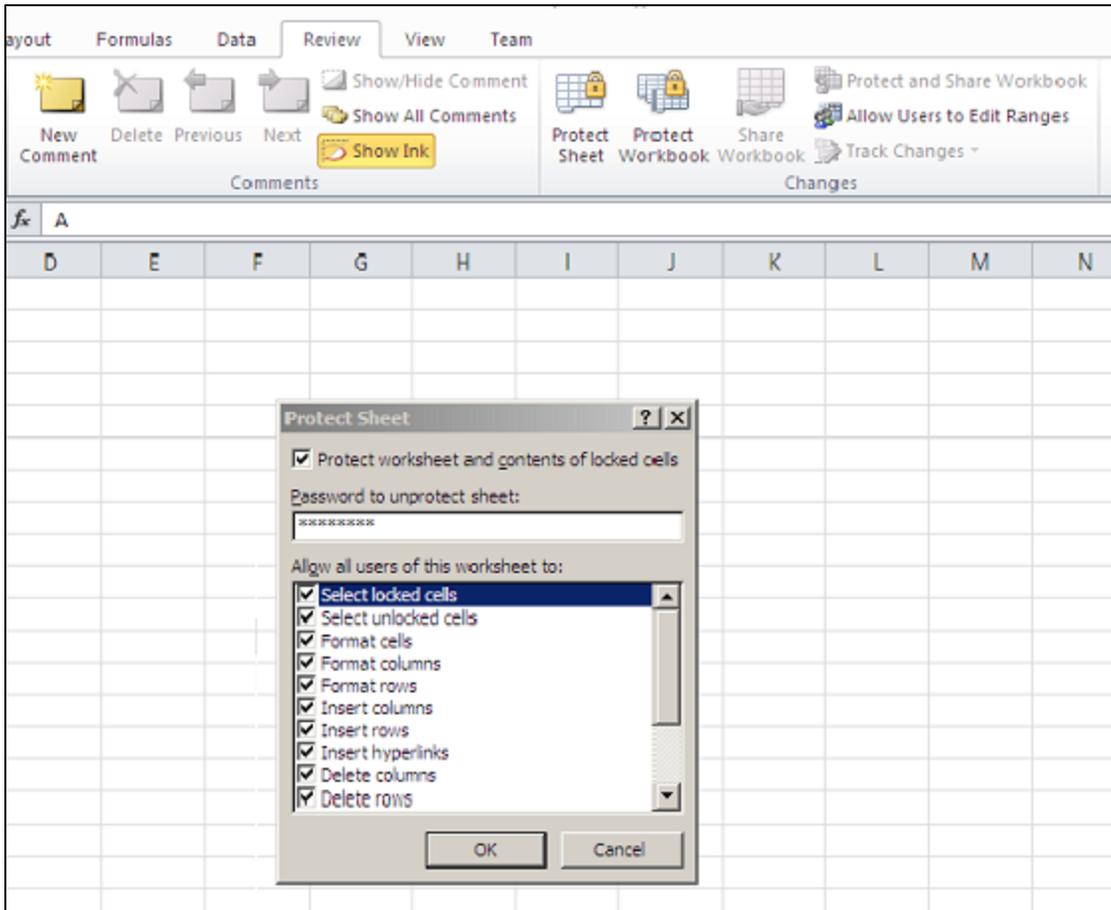
How to Activate Worksheet Protection with ExcelWriter

Using ExcelWriter, there are two ways to write-protect worksheets in your workbook:

1. [Protect in Microsoft Excel and Open in ExcelWriter](#)
2. [Protect in ExcelWriter Code](#)

Protect in Microsoft Excel and Open in ExcelWriter

Create a workbook in Microsoft Excel, click the Review tab, and select **Protect sheet**. Next, select the password you want to protect with and the properties you would like to set and click OK. Then, open the spreadsheet with ExcelWriter script, using either `ExcelTemplate` or `ExcelApplication.Open`. ExcelWriter will preserve all existing spreadsheet settings, including worksheet protection.



Protect in ExcelWriter Code

Use the method `Worksheet.Protect` to activate worksheet protection. Pass the method a password for unlocking the worksheet in Excel. Pass "" or null to protect the worksheet without a password.

```
ExcelApplication xla = new ExcelApplication();
Workbook wb = xla.Create();
Worksheet ws = wb.Worksheet[0];
ws.Protect("MyPassword");
```

Removing Worksheet Protection

To remove worksheet protection in Microsoft Excel,

1. From the **Tools** menu, select **Protection -> Unprotect Sheet**.
2. If a password was set, enter it and click **Ok**.

To remove worksheet protection with ExcelWriter, call `Worksheet.Unprotect`:

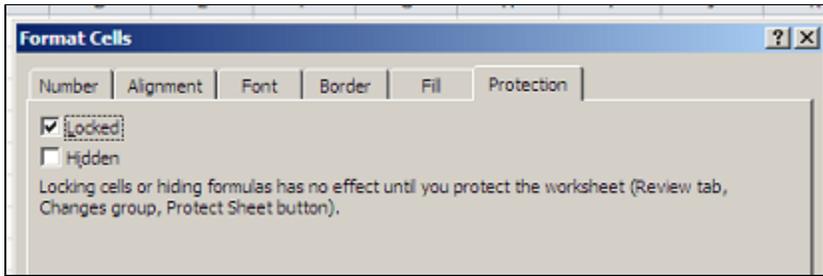
```
ws.Unprotect();
```

Protecting Specific Cells

When you activate worksheet protection, all of the cells in the worksheet will be locked by default. However, you can unlock cells within a protected worksheet, allowing the user to fill in or modify some fields.

To unlock cells in Microsoft Excel:

1. Select a cell or cells to unlock.
2. Right click and hit **Format Cell(s)...**
3. Select the **Protection** tab.
4. Uncheck **Locked**.



With ExcelWriter, you can unlock cells by setting `Style.CellLocked` to false and applying the style to an individual cell. The following example protects all cells except for A1 and B1:

```
ExcelApplication xla = new ExcelApplication();
Workbook wb = xla.Create();
Worksheet ws = wb.Worksheet[0];

//--- Turn on worksheet protection.
ws.Protect("MyPassword");

//--- Create an "unlocked" style.
Style unlockedStyle = wb.CreateStyle();
unlockedStyle.CellLocked = false;

//--- Apply the style.
ws.Cells["A1"].Style = unlockedStyle;
ws.Cells["B1"].Style = unlockedStyle;
```