Contents

[1. Creating a Macro 1](#_Toc173407355)

[2. Using What-If Analysis 1](#_Toc173407356)

[3. Password Protect the Worksheet 2](#_Toc173407357)

[4. Using the SWITCH Function 2](#_Toc173407358)

Advanced Excel Functions

# 1. Creating a Macro

1. **Enable the Developer Tab**:
   * Go to the menu and select File > Options.
   * In the Excel Options window, click on Customize Ribbon.
   * In the right panel, check the box next to Developer.
   * Click OK to close the window.
2. **Record the Macro**:
   * Go to the Developer tab and click on Record Macro.
   * In the Record Macro dialog box:
     + Name your macro: enter CalculateTotalSales.
     + Assign a shortcut key: type T (optional).
     + Store the macro in This Workbook.
     + Optionally, enter a description like "Calculates total sales."
     + Click OK.
3. **Perform the Action**:
   * Click on cell F2, enter the formula =D2\*E2, and press Enter.
   * Click and drag the fill handle from F2 to F6 to copy the formula.
4. **Stop Recording**:
   * Click on Stop Recording in the Developer tab.
5. **When the "Record Actions" menu pops up after creating a macro:**
   * Click on **Save Script**.
   * Provide a descriptive name, such as CalculateTotalSales, to easily identify the macro later.
   * Optionally, add a description to note what the macro does, e.g., "Calculates total sales by multiplying units sold by unit price."
   * Click **Save**.

This ensures that your macro is stored and can be run later on other datasets or shared with others. If the macro is saved in the current workbook, it will be available whenever you open that workbook. If you want to use the macro in other workbooks, consider saving it in your Personal Macro Workbook or as an Excel Add-in, depending on your version of Excel.

A screenshot of a computer

Description automatically generated

**Running the Macro on the Second Dataset**

1. **Open the Workbook**:
   * Open the Excel workbook where you initially created the macro. If the workbook is already open, ensure that the macro CalculateTotalSales is accessible.
2. **Import the Second Dataset**:
   * If the second dataset is not already in the workbook, you can import it:
     + Go to Data > Get Data > From Text/CSV and navigate to second\_dataset.csv that you downloaded.
     + Select Import > Load and Excel will display the data in a new worksheet.
3. **Ensure Correct Positioning**:
   * Make sure the data is correctly placed in columns A to F with the first row containing the headers:
     + A1: Product ID
     + B1: Product Name
     + C1: Category
     + D1: Units Sold
     + E1: Unit Price
     + F1: Total Sales (this should be empty or zeroed out before running the macro).
4. **Run the Macro**:
   * Go to the Developer tab. If the Developer tab is not visible, enable it via File > Options > Customize Ribbon and check the Developer box.
   * Click on Macros in the Developer tab.
   * In the Macro dialog box, select the macro named CalculateTotalSales.
   * Click Run.
5. **Verify Results**:
   * After running the macro, check that the Total Sales column (F) in the second dataset is populated with the correct values, calculated as Units Sold multiplied by Unit Price.

# 2. Using What-If Analysis

**Goal Seek**:

1. Select cell F2, which contains the first Total Sales value.
2. Go to Data > What-If Analysis > Goal Seek.
3. In the Goal Seek dialog box:
   * Set Set cell: F2 (make sure it's selected).
   * Set To value: 4000 (or your desired value).
   * Set By changing cell: D2 (the Units Sold).
   * Click OK, then OK again in the next dialog box.

# 3. Password Protect the Worksheet

1. **Protect the Worksheet**:
   1. Go to Review > Protect Sheet.
   2. In the Protect Sheet dialog box:
      * Enter a password: YourPassword (replace with your desired password).
      * Check the options you want to allow (e.g., Select locked cells).
      * Click OK.
   3. Confirm the password in the dialog box by re-entering it and click OK.

# 4. Using the SWITCH Function

1. **Create a new column** next to the Category column. In G1, type Category Type.
   1. Right Click on the *E* column and Select *Insert*.
   2. Enter a column header, “Dept”, in D1.
2. **Enter the SWITCH function** in D2:

=SWITCH(C2, "Gadgets", "Electronics", "Tools", "Hardware", "Appliances", "Home Goods", "Other")

1. **Copy the formula** from D2 down to D6.

By following these steps precisely, you'll have created a dataset, recorded a macro, performed What-If Analysis, protected the worksheet, and utilized the SWITCH function effectively in Excel.