Getting Started in Excel and Visual Basic

A. Introduction

This handout is meant to provide a very broad overview of some of the frequently asked questions to get you started in Excel. This is by no means a substitute for getting a good book on how to become a power user of Excel.

Recommended Books:
- Excel For Dummies
- Excel VBA Programming For Dummies

Prerequisite Excel Skills:
- Entering Data
- Copying/Pasting Data
- Formatting Cells

B. General Excel Questions

1. Are there any general-purpose tools in Excel?

In the “formula” toolbar there are several important classes of functions. These can be used by going to the insert menu, and selecting function. From there you can select the individual function to be inserted. To use a function place an = at in the cell, followed by the function. The syntax for the function can be accessed at the link below, or the help menu in Excel.

Financial Functions: Provide built in tools for calculating financial values including Net Present Value.

Lookup Functions: Allow for finding a value that meets criteria within a large group of cells. The main functions for this are Lookup, and Match

Math/Statistical Functions: Are used to calculate values, and return singular values. Functions include Average, Sum, Absolute Value, Minimum, and Maximum.

For more information on all the functions available in Excel go to


2. Are these tools already activated in the version of Excel on my computer?

The functions in the “formula” toolbar are pre-installed. However, to access many of the advanced features available in Excel the Analysis Tool Pack and Solver need to be installed. This can be done by going to the tools menu → Add-Ins… and then select the checkboxes for Analysis ToolPack and Analysis ToolPack-VBA. Also if Solver is not installed it can be installed by clicking the check box for Solver. The functions can
then be used by going to the tools menu → Data Analysis… , and then selecting from the list.

3. Can Excel be used as a programming environment?
   Excel has the ability to incorporate Microsoft’s Visual Basic for applications. Visual Basic is an easy to use language that allows users to create a dynamic front end, while providing for powerful yet simple manipulation of data. It can be used to connect multiple workbooks, and spreadsheets. Also because it is built into Excel it has the ability to use it’s built in functions. Because of these advantages it is well suited for solving business problems.

   C. Visual Basic Related Questions

1. Where can I find useful Visual Basic tutorials?
   These tutorials provide a simple entry point, complete with pictures to the world of Visual Basic. They are not a substitute for purchasing a book on Excel to help you use it beyond the elementary level.
   Tutorial 1 http://www.anthony-vba.kefra.com/vba/vbabasic1.htm

   Tutorial 1 is a very basic introduction that provides a good overview specific to using visual basic in excel.

   Tutorial 2 provides an overview as well as specifics associated with Excel.

2. How do I open the Visual Basic Editor in Excel?
   To start using Visual Basic open the Tools Menu → Macro → Visual Basic Editor
   This will display the Visual Basic editor
   On the left is the project browser. This has the different components of the program.
   To add a macro, double click on the sheet or workbook you wish to modify within the project browser window and a new module will open.
   Example “Hello World” Type don’t paste
   Sub showMessage()
      MsgBox “Hello World”
   End Sub
   To run this program go to the Run menu on the top menu bar and click on the Run Sub/UserForm. The program will display the phrase Hello World in a dialog box that pops up. It demonstrates how macros are made of Subs, which are subroutines in the program. If you familiar with Java or C this is similar to a method. See Tutorial 1 for more detail.

3. How do I reference a cell in a workbook?
   To reference a cell the Range command is used. See Tutorial 1 Sec 2 for more details.
D. Macintosh Related Questions

1. How do I access the visual basic editor if I have a Mac?
   The directions for accessing visual basic in Excel 2004 or earlier are the same as on a PC. However, if you have Office 2008 support for visual basic was removed, and will need to use the lab computers or acquire a copy of Excel 2004 or earlier.

2. How do I access the analysis tool pack/Solver in Office 2008?
   The analysis toolpack, and Solver were removed from Office 2008 because it relies on visual basic. To use these functions you will need to use the lab computers or acquire a copy of Excel 2004.
   How do I add Graphical User Interface elements to a spreadsheet?
   On a Mac the toolbox is located in a different location than on a PC. The toolbox can be accessed through View → Toolbars → Forms.

E. Examples of Software from Previous Years

Here are sample screenshots from SCM software that was created in previous years.

Example 1: Main Menu: High-level GUI Showing Modules Available to the User
   The screen presents each area that the user can proceed to enter in an easy to follow manner.
**Example 2: Demand Forecasting GUI Showing Inputs By the User**

This screen is follows the main page when the demand forecasting is selected. In this screen the inputs, as well as the output of the system are shown. Similar screens exist to show the results from the other modules of the system.

**Alternative Output for Demand Forecasting**

This screen shot shows another groups project. It shows another method of display without the menu, and relies on embedded buttons, and controls. They are both valid ways of approaching the project.