



Rapid Report Generation

Fabulous Formulas & Mini Macros

Objective

- To generate a set of reports related in content

Constraints

- The data set has one or two fields which will differentiate each report from the others
- If using the report solution with different data sets, adjustments will be necessary if each field is not ordered and formatted as they were initially
- You are only limited by your imagination, RAM and 17,179,869,184 cells per sheet.

Overview

One-Two Approach:

- Formula-Oriented Template
- Macro

The Fixed-Row Formula Template

- Simple
- Fewer variables
- Be sure to save as macro-enabled workbook (.xlsm)

Term	Unduplicated Enrollment
FY2011	
Fall 2010	171
Winter 2011	0
Spring 2011	199
Maymester 2011	0
Summer I 2011	84
Summer II 2011	0
FY2012	
Fall 2011	606
Spring 2012	408
Maymester 2012	25
Summer I 2012	104
Summer II 2012	0
FY2013	
Fall 2012	612
Spring 2013	633
Maymester 2013	23
Summer I 2013	250
Summer II 2013	66
FY2014	
Fall 2013	580
Spring 2014	537
Maymester 2014	25
Summer I 2014	204
Summer II 2014	61
FY2015	
Fall 2014	582
Spring 2015	546
Summer 2015	236

Note: Program enrollment is based on curriculum specified in the catalog each year. Core courses have been excluded.

Measure1bAllData

ProgramList

Template





Formula Tips

- **VLOOKUP/HLOOKUP**

- Orient data with a unique lookup field on the left
- Unique lookup field should consist of combination of elements appearing on template
- Allow intermediary table to translate your values

- **IFERROR**

- Accounts for values absent from your data set during VLOOKUP

- **IF**

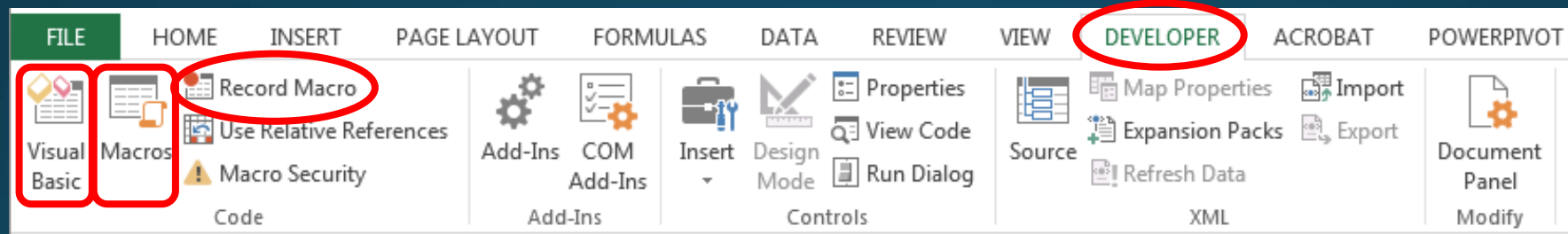
- For complex criteria

Accessing the Macro/VBA Menus

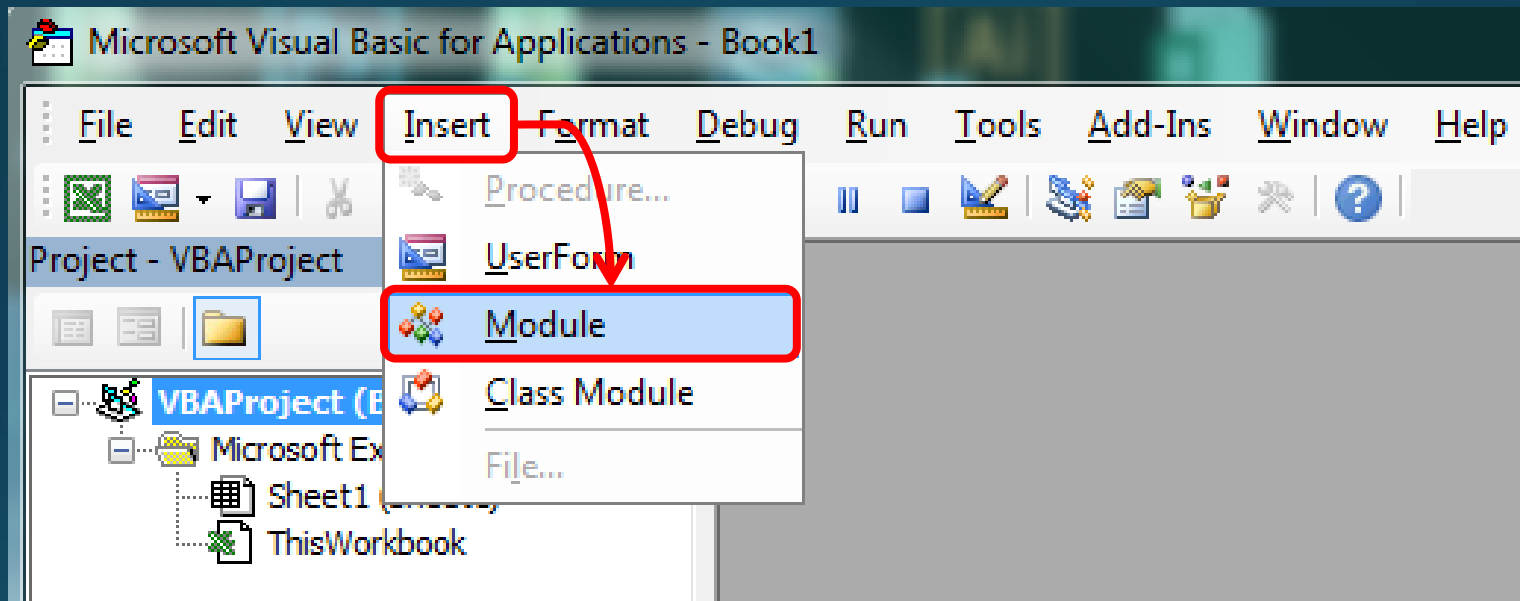
Add the Developer tab to the ribbon in Excel:

File tab -> Options -> Customize Ribbon

Check "Developer" on the right



Adding a Module Sans Recorder



Vital Macro Components

- Variable declaration
- Cell & range interaction
- Variable assignment
- Looping
- Output



Macros: Variable Declaration

Dim Variable As

- **Integer**
- **String**
- Boolean
- Currency
- Date
- Long
- Single

Macros: Cell & Range Interaction

- Single Cell Selection:
 - `Range("A1").Select`
- Multiple Cell Selection:
 - `Range("A1:D4").Select`
- Syntax structure is similar for most tasks

Macros: Variable Value Assignment

- Handled through use of the equals (=) sign
- Depending on variable type:
 - Literal Assignment
 - Assignment From Cell Value
 - Combination of Literal and Other Variables
 - Variables and Mathematic Modifications



Macros: Looping

- For... Next
 - Incremental/decremental structure
- Do While... Loop
 - Conditional loop, tests before executing
- Do... Loop While
 - Conditional loop, always executes at least once



Macros: Output

Recommended Options:

- Exporting to Adobe Acrobat PDF
- Printing*

Alternative Output Option:

- Save As Excel Workbook

*Use with care!

Opportunities for exploration

- Conditional formatting!
- Graphs!
- Variable-length reports!

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