Hello, today I’ll be talking a little bit about Excel Macro. I’ve used macro only once before, and it was 2 years ago when I was preparing for my first year presentation, and I needed a macro to do some meta-analysis computation. Although I didn’t sign up for this topic, I think I learned a lot while preparing for this talk, and today I’ll try to deliver to you what I’ve learned.

If someone should take credit for the slides, it’s not going to be Kanye, but this guy called Nick Weisenberger. My slides are basically a simple version of this presentation of his on Excel Macro. Now let’s get started.

First of all, what is a macro? A macro is just like a box of chocolates, except that you know what you are going to get. And these chocolates are actually a series of functions that do all sorts of jobs. Macros are written in an Excel-specific programming language, visual basic for applications (VBA). However, it doesn’t mean you need to a programmer to be able to create your own macro.

And once the macro is triggered by pressing some preassigned keys, all functions contained in the macro will run in order, automatically.

So why do we use macros? Can’t we just run the functions by ourselves? The thing is, macro is more efficient and accurate than us. If you are only running a few function for 5 rows of data, then a macro and a human being may have no difference. However, imagine you want to run 10 functions for 500 columns of data… Also, macros are flexible, they are customized, and therefore, they expand Excel’s capabilities.

If macros are so wonderful, how should we write them? There are actually two major approaches. One is to use the macro recorder, and one is to write the code in VBA. This is kind of like SPSS, you can do it with point-and-click, or actually write syntax. And like SPSS, Excel can generate the syntax for you during the recording.

So, to access macro-related options, go to View, Macros, View macros, if you are using a PC, and for macs, you can either go to Tools, Macro, Macros… or go to View, and you’ll see the buttons called “view macros” and “record macros”.

The view macros option allows you to take a look at the existing macros, and the record macros option is the first way of creating a macro. A recording studio record your voice and the music, and Excel records your mouse and keyboard actions. After you click the record button, the recording of the macro starts, once you enter the name your macro and click OK. You’ll find a little square at the bottom left, indicating that your macro is being recorded. Next all you need to do is perform the whole procedure of what you want your macro to do for you in the future. All these actions will be recorded, and when you are done, click the little square, and you just created your own macro.

Before our little macro recording practice, there are a couple of things you want to pay attention to.

First, make sure there’s no “noise”, which means unnecessary actions here. Like you don’t want to open your chrome and check your Facebook page during the recording, if you don’t want your macro to do that.

Second, there’s no going back when recording a macro. If you make a mistake, I guess the only thing you can do is stop recording, and do it all over again.

Lastly, when you are done, never forget to call your macro on a new set of data to make sure it works the way you want it to.

Now, let’s do a little recording practice. Please open the spreadsheet I sent out last night, and go to the Sheet1. On sheet1, I made up 10 totally random names with 10 random quiz grades of them. Now what I want to do is to accomplish something looking like Sheet2. See I have a new column of IDs, names for the other two columns, too. Also, grades that are above 80, which is a B, are all highlighted. This is not something hard to do, but what if you have 20 classes like this? Do you want to do the same thing 20 times? Probably not. So let’s create a macro to do this.

Now that we know how to record macros, and it seems to be fun and convenient, why do we need the syntax anyways? Macro syntax is important because recorded macro could contain unnecessary lines due to unintentional mouse actions, and you can’t leave any comments in your macro simply by recording a macro. Also, recorded macros do not have some of the more complicated commands, like the If statement, or the for loop.

Then where do we write the syntax, and how do we do it? Go to … for PC, and … for Mac. The part between Sub and End sub is where you plug in your code. Now let’s try this macro that asks the Excel message box to show whatever information you’d like it to.

And how about you have opened 10 Excel files, and now you want to close all of them without quitting the program? This syntax will do the trick. The first line asks Excel to not to display any alerts when workbooks are closed. Then assign the name “myTotal” to the total number of workbooks. Next, we use the for loop to close all the windows on after one, which can’t be used if you record the macro.

Due to the limited time, this is all I have to say about Excel macro, and for more information, I find this webpage that has a list of Excel experts, most of whom have a website dedicated to Excel and Excel macro tutorials. Check them out if you are interested.

And that’s it. Any questions?