ISM 4547 - Module 3 Assignment, Parts 1-5 (150 points). Module 3a includes parts 1-4, Module 3b includes part 5.

Video overview / key: https://www.youtube.com/watch?v=Kssua4njHM8

Part 1 Setup and Functions (25 pts)

1. Start with a blank workbook and name it to include your last name, first initial and _Mod3a (WarnerB_Mod3a.xlsm).
2. Create a worksheet (Named "Student Scholarships") with the following columns

	A	B	C	D	E	F	G	H	I	J	K
1	Last Name	First Name	Major	Status	Semesters at USF	GPA	Donor Scholarship	Scholarship Increase	Total Scholarship	Percent Increase:	2.5%

3. Create data for the 40 students. To minimize typing use the techniques below.
   - Last and First Names. Use a website that gives your random first and last names. You can Google this, split the names into two cells.
   - Majors (use at least 5 College of Business majors and repeat them randomly in your list)
   - Status (Domestic, International or FL Resident – you can repeat randomly). In this column, use conditional formatting to add a bright fill background to all Florida residents.
   - Semesters at USF. Use the randbetween function to select numbers between 1 and 8. Once done, copy and paste the results as values (so they don't keep changing!)
   - GPA (1-4 with 1 decimal place). Again, use randbetween to generate values, you may have to 'do some math' / create a formula to get the values to display as 1 through 4 with 1 decimal place. Put your formula in the comment area of the GPA heading. Apply the formula to all 40 students and then select all the GPAs, copy them and save them as values.
   - Donor Scholarship (100 to 8,000, again use randbetween and combine it with the round function), format as currency with no decimal places. Put your formula in the comment area of the Donor Scholarship heading. Then copy and paste the results so they are values (not formulas).
4. In cell K1, format the cell as a percent and enter 2.5

Functions

5. Create and use a custom function called UPDATE that takes 3 cell references and calculates the scholarship increase by multiplying the GPA(double), by the Donor Scholarship (integer) by the percent increase in K1 (double). The formula in these cells should start with =UPDATE(and should be formatted as currency with 2 decimal places.
6. Create and use a second custom function called NEWTOTAL that calculates the new scholarship (old plus increase). The formula in these cells should start with =NEWTOTAL(and should be formatted as currency with 2 decimal places.
7. Create a macro that asks for a new percent rate and puts this value into K1. Include a button (in the L1 area – see below) and a macro name starting with UPPCT and a descriptive phrase.

	A	B	C	D	E	F	G	H	I	J	K	L
1	Last Name	First Name	Major	Status	Semesters at USF	GPA	Donor Scholarship	Scholarship Increase	Total Scholarship	Percent Increase:	4.0%	
2	Harmon	Norman	Sales	Domestic	6	4	$6,900	$1,104.00	$8,004.00			Update Percent Increase
3	Harvey	Rodolfo	Marketing	International	2	3	$4,600	$552.00	$5,152.00			
4	Smith	Dennis	Sales	FI Resident	7	3.9	$4,800	$748.80	$5,548.80			

8. ***Make a copy of the Student Scholarships worksheet after part 1 called 'Student Copy'– before starting part 2. You may need this later as a backup as you work on macros.***

Part 2 Macros – Within the Student Scholarships worksheet, create the macros as described below.(40 pts) Each macro name should start with Mac and the macro number and be followed by a short descriptive phrase. Example: Mac1_SortLast. Then create a button for each macro as well and name similarly.

1. Mac1_ Sort the all the student data by last name, then first name. This should work if there are 30 or 300 students and should end with the cursor in cell A1.
2. Mac2_ Sort the student data by Status, then last name. This should work if there are 30 or 300 students and should end with the cursor in cell A1.
3. Mac3_ Add two rows to the top of your worksheet. The first should include your name, entered using an input box. The second should include the current date and time.

4. Mac4_ Using an input box for a file name, do a 'save as' with this input. You can allow for a new path or just a new file name – either is fine. Include an error handling routine with an appropriate message if the save as doesn't work or the path / folder doesn't exist.
5. Mac5_ With a range of cells selected, add a bright fill (any color)
6. Mac6_ With a range of cells selected, clear any fill (conditional formatting will not be removed, as it not considered the same as formatted fill).
7. Mac7_ With a range of cells selected, toggle between adding fill (any color) and clearing fill.
8. Mac8_ With a range of cells selected, highlight all the cells that contain formulas and add a background fill . Create a custom error message that will be displayed if no formulas are included in the selection.
9. Mac9_ Be able to select a range of cells and convert any formulas to values in the selected range. Don't leave the cells in the 'copy mode' when the macro finishes. Test it on a small range within your workbook and then replace the formulas before submission.
10. Mac10_ Add a total row to the bottom of the data for the columns G-I. Test that this works for all students or if there is a subset of 10 on the worksheet (temporarily delete some students to test). Format column G as currency with no decimals / decimal places, and columns H and I as currency with 2 decimal places.
11. When all your macros and buttons are created and working
    a. Adjust your buttons so they are all the same size and lined up and equally distributed vertically (use the drawing tools design options)
    b. Put the original student data back into this worksheet (you made a copy) so I can test your buttons / macros.

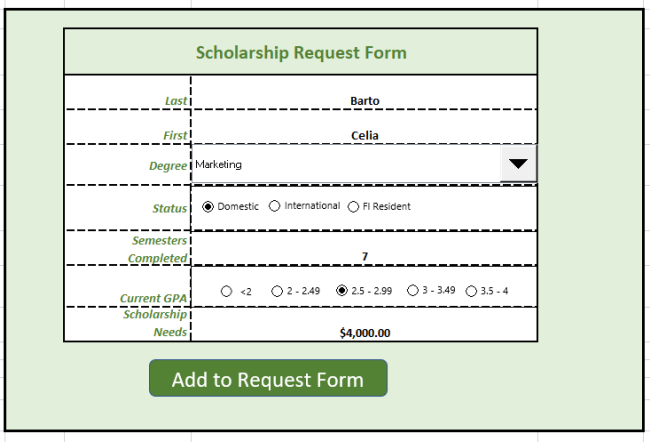
At the end – your worksheet should look something like this:

	Last Name	First Name	Major	Status	Semesters at USF	GPA	Donor Scholarship	Scholarship Increase	Total Scholarship	Percent Increase:	4.0%
2	Harmon	Norman	Sales	Domestic	6	4	$6,900	$1,104.00	$8,004.00		
3	Harvey	Rodolfo	Marketing	International	2	3	$4,600	$552.00	$5,152.00		
4	Smith	Dennis	Sales	FI Resident	7	3.9	$4,800	$748.80	$5,548.80		
5	Moody	Cynthia	Accounting	Domestic	5	2.3	$5,400	$496.80	$5,896.80		
6	Bowen	Minnie	Sales	International	3	3.9	$2,000	$312.00	$2,312.00		
7	Hodges	Wilbert	Info Technology	FI Resident	6	2.4	$3,000	$288.00	$3,288.00		
8	Bridges	Cesar	Info Technology	Domestic	6	2.2	$2,900	$255.20	$3,155.20		
9	Chambers	Jerry	Sales	International	8	2	$5,800	$464.00	$6,264.00		
10	Mcdaniel	Stella	Accounting	FI Resident	2	1	$5,700	$228.00	$5,928.00		
11	Becker	Kristin	Accounting	Domestic	1	1.9	$6,100	$463.60	$6,563.60		
12	Wells	Casey	Sales	International	7	4	$5,900	$944.00	$6,844.00		
13	King	Roger	Marketing	FI Resident	7	3.1	$7,100	$880.40	$7,980.40		
14	Howell	Betsy	Marketing	Domestic	1	2.3	$1,800	$165.60	$1,965.60		
15	Wallace	Randy	Marketing	International	4	3.2	$4,600	$588.80	$5,188.80		
16	Hill	Lawrence	Marketing	FI Resident	5	2.8	$4,300	$481.60	$4,781.60		
17	Tran	Rene	Accounting	Domestic	7	1.5	$7,400	$444.00	$7,844.00		
18	Jensen	Clyde	Marketing	Domestic	1	1.1	$5,400	$237.60	$5,637.60		
19	Perkins	Anthony	Marketing	Domestic	5	4	$2,000	$320.00	$2,320.00		
20	Leonard	Austin	Sales	International	2	1.9	$1,800	$136.80	$1,936.80		
21	Reeves	Bertha	Sales	International	6	3.4	$4,600	$625.60	$5,225.60		
22	Greene	Victor	Info Technology	FI Resident	2	2.4	$2,400	$230.40	$2,630.40		
23	Kennedy	Sandy	Marketing	Domestic	3	1	$6,600	$264.00	$6,864.00		
24	Torres	Suzanne	Info Technology	Domestic	4	2.9	$6,400	$742.40	$7,142.40		
25	Park	Melanie	Accounting	Domestic	7	1.8	$7,700	$554.40	$8,254.40		
26	Haynes	Fannie	Info Technology	Domestic	7	2.1	$5,600	$470.40	$6,070.40		
27	Maldonado	Sylvia	Sales	International	7	2.2	$1,600	$140.80	$1,740.80		
28	Lee	Rick	Info Technology	International	3	2	$4,200	$336.00	$4,536.00		
29	Perry	Nina	Accounting	International	2	2.8	$900	$100.80	$1,000.80		
30	Patton	Rosemarie	Marketing	International	4	3.3	$1,000	$132.00	$1,132.00		
31	Campbell	Gilberto	Accounting	International	2	3.5	$1,300	$182.00	$1,482.00		
32	Newton	Iris	Accounting	FI Resident	6	3.5	$7,800	$1,092.00	$8,892.00		
33	Soto	Nettie	Sales	FI Resident	3	2.4	$900	$86.40	$986.40		
34	Collier	Mitchell	Marketing	International	5	3	$3,300	$396.00	$3,696.00		
35	Riley	Helen	Info Technology	FI Resident	5	1.8	$800	$57.60	$857.60		
36	Harper	Audrey	Marketing	Domestic	7	2	$800	$64.00	$864.00		
37	Townsend	Donna	Marketing	International	5	3.6	$2,900	$417.60	$3,317.60		
38	Oliver	Kerry	Sales	FI Resident	6	2.3	$4,700.00	$432.40	$5,132.40		
39	Sims	Adrienne	Sales	Domestic	8	3	$2,300	$276.00	$2,576.00		
40	Myers	Bessie	Accounting	Domestic	1	1.8	$3,100	$223.20	$3,323.20		
41	Valdez	Lela		Domestic	5	1.2	$3,100	$148.80	$3,248.80		

Update Percent Increase
Mac1 Sort by Last Name
Mac2 Sort by Status
Mac3 Add Name Plus
Mac4 Save As
Mac5 Add Fill
Mac6 Remove Fill
Mac7 Toggle Fill
Mac8 Find Formulas
Mac9 Formulas to Values
Mac10 Add Total

Part 3 Forms: Scholarship Request Form & Request List (20)

1) Create new worksheet called 'Scholarship Request Form'. Within it, create a nice-looking form to allow advisors to enter student information. The fields should include:
   - Last Name
   - First Name
   - Major (combo list with the majors you created in part 1). Note – create a separate worksheet for any named ranges, form control cells, etc.
   - Status (option buttons for the 3 status options from part 1)
   - Semesters (include data validation for a reasonable range, 0-8, with an input message and error alert)
   - GPA (option buttons)
   - Scholarship Needs (format appropriately and include data validation for a reasonable range, $0 to $5000, with an input message and error alert)



2) Create another worksheet / tab called 'Scholarship Request List'.

	A	B	C	D	E	F	G
1	Last	First	Degree	Status	Semesters Completed	Current GPA	Scholarship Needs
2	Barto	Celia	Marketing	International	7	<2	$2,000

The headings in row 1 should be the same as the fields from the form above

3) On the Scholarship Request Form, create a macro / button.
   - The "Add to Request Form" **button** should add the student information from the form *to the top of the worksheet* (right below the headings) and earlier requests should be below. Your macro name should start with P3_
   - **Optional Extra credit: Create an "Add to Request Form - Bottom" **button** that adds the student information from the form to the bottom of the worksheet (below any student information that is already in the worksheet). This macro name should start with P3b_ and the button should be on the Scholarship Request Form.

Part 4 Loops: Move data from a list to a table (15 pts)

1) Assume you were given a large Word document of contact information (see Student List.docx).
2) Copy and paste this data into a worksheet called Student List Table. Paste another copy into a worksheet called Student List Original.
3) Within the 'Student List Table' worksheet, create a macro(s) using loop(s) to move this list from the single column into the 6 columns below, sorted by student name, with headings in row 1. Your loop(s) should stop at the end of the data, so if there is more data added or some data removed, your loop(s) should still work. The results should look like this (partial view).

	A	B	C	D	E	F	G
1	Name:	Major:	GPA:	Address:	Address 2:	Phone:	Email:
2	Ackerman, Vance	Accounting	2.7	19 E. Abarr Drive	Pueblo West, FL	(900) 547-1717, (207) 699-1716	Ackerman@usf.edu
3	Alvarez, Maria	Marketing	2.6	3300 28th Street	Boulder, FL	(813) 449-5000, (207) 654-4788	Alvarez@usf.edu
4	Arnold, Darlene Jayce	Personal Financial Planning	3.9	5475 Tech Center Drive, Suite 300	Florida Springs, FL	(900) 593-1000, (207) 888-8208	Arnold@usf.edu

4) **Name your macro 'P4_CreateTable' and use Ctrl-Shift T as a short-cut key.
5) Once started, your macro should run automatically until all the data has been transferred to the table and should work with any number of rows in the original data worksheet. For the data given, you should have 59 rows when the macro ends (including the headings).

Part 5 – Your turn (50 pts)

Assume you are being hired for a job that requires extensive Excel experience. Consider this part of the project your interview. Create a masterpiece. Demonstrate what you have learned in the class and create a workbook for a business, hobby, life organization, anything that interests you. ***This should NOT be recycled work from past projects or classes. It should be original to this assignment.***

- Name your workbook to include your last name, first initial and _Mod3b (WarnerB_Mod3b.xlsm)
- On the first worksheet, include documentation explaining your project and all the skills demonstrated and where I can find them. You can write it in Excel or paste text from a Word document into a textbox or upload a Word document to the assignment instead.
- Create a YouTube video (unlisted, NOT private) walking us through the project, explaining what your workbook does and the techniques used.
- At a minimum, your workbook should include a data set of at least 10 columns by 50 rows. Use the techniques below, but these should not be the only techniques included.

macros	conditional formatting	a variety of charts	data validation
a scenario manager, goal seek or solver component	a form that populates a table	pivot tables with charts and slicers	a variety of formulas and techniques from the first module

You'll be graded on

- Your professional video
- The planning that went into your project
- If the project / techniques work
- If the skills demonstrated are advanced (not basic)
- **If the skills shown make sense for the project. Don't just throw skills in that are not relevant – this is where planning is important.

Submit to Canvas – 2 separate assignment submissions

✓ 3a: The YourName_Mod3A workbook

✓ 3b: The YourName_Mod3B workbook & the URL to your YouTube video (enter it in the comment section of the assignment)