FIT1013 – Digital Futures: IT for Business
Tutorial 4 – Developing an Excel Application

Objectives
- Create an Excel application
- Use defined names in formulas
- Create validation rules for data entry
- Learn about macro viruses and Excel security features
- Create and run a macro
- Edit a macro using the Visual Basic Editor
- Assign a macro to a keyboard shortcut and a button
- Save and open a workbook in macro-enabled format

Exercise 1
Download the Excel file Music.xlsx

- *You may check some of the screen shots (if that helps) in the corresponding pdf file while doing the following exercise.*

Music Inventory Christian Wirth has an extensive collection of music CDs. He wants to create a better way to organize the inventory of what he owns. Christian has started a workbook that he can use to enter each artist, CD, genre, and song in his collection. He asks you to finish it by incorporating input validation, cell protection, and macros to help ensure that the collected information is accurate. Complete the following:

1. Open the **Music** workbook, and then save the workbook as **Music Inventory**.

2. In the Documentation sheet, enter your name and the date, and then review all of the worksheets in the workbook.

3. In the Music Entry worksheet, create appropriate defined names for each cell in the ranges B2:B4 and B12:B14.

4. Create the following validation rules:
   a) Genre (cell B4): The list of genres is in the range D2:D11. Enter an appropriate input message and error alert.
   b) Artist (cell B12): The list of artists are in the range A2:A3 on the CDs worksheet. Enter an appropriate input message and error alert.
   c) CD (cell B13): The list of CDs is in the range B2:B3 on the CDs worksheet. Enter an appropriate input message and error alert.

5. Test the validation rules for cells B4, B12, and B13 to ensure that the correct data appears in the validation lists.

6. Insert a WordArt text box, and then enter Music Inventory as the text. Rotate the WordArt so that it is vertical in column E. Change the text fill to a colour complementing the shade of green in the headings. *(Hint:* On the INSERT tab, click the Insert WordArt button. Then use the DRAWING TOOLS FORMAT tab to format the WordArt.)

7. Create the following formulas for the specified cells in the CD Transfer Area:
   Cell A22: =**Artist_Name**
   Cell B22: =**CD_Name**
   Cell C22: =**Genre**

8. Create the following formulas for the specified cells in the Song Transfer Area:
   Cell A25: =**Artist**
   Cell B25: =**CD**
   Cell C25: =**Song**

9. In the Music Entry worksheet, unlock the input cells, which are in the ranges B2:B4 and B12:B14.

10. Protect the Documentation, Music Entry, CDs, and Songs worksheets.

11. Enter the following data as a new CD:
    Artist_Name: **Sam jones**
    CD Name: **Live Like You Were Having Fun**
    Genre: **Jazz**

12. Enter the following data as a new Song:
    Artist: **Josh Green**
    CD: **Darkness**
    Song: **Clouds of New York City**
    (Hint: The CD Darkness by josh Green was entered earlier. In order to enter a new Song, the CD must have been already added.)

13. Save the workbook to back it up before recording macros.

14. Make sure that the DEVELOPER tab is displayed on the menu.

15. Create a macro named **AddCD** with the shortcut key **Ctrl+c** that performs the following actions:
    a) Go to the CDs worksheet, and then remove the cell protection.
    b) Insert a blank line above row 3, and then make the blank cell A3 the active cell.
    c) Make the Music Entry worksheet the active sheet.
    d) Select the CD Transfer Area and copy it to the Clipboard.
    e) Return to the CDs worksheet.
    f) In row 3, paste the values from the Clipboard (Note: paste the contents as Values).
    g) Select cell A1, and then turn on cell protection.
    h) Go to the Music Entry worksheet, and then make cell B2 the active cell.
    i) Stop the macro.

16. Create a macro named **AddSong** with the shortcut key **Ctrl+s** that performs the following actions:
    a) Go to the Songs worksheet and remove the cell protection.
    b) Insert a blank line above row 3, and then make the blank cell A3 the active cell.
    c) Make the Music Entry worksheet the active sheet.
    d) Select the Song Transfer Area and copy it to the Clipboard.
    e) Return to the Songs worksheet.
    f) In row 3, paste the values from the Clipboard (Note: paste the contents as Values).
    g) Select cell A1, and then turn on cell protection.
    h) Go to the Music Entry worksheet, and then make cell B2 the active cell.
    i) Stop the macro.

17. Record a macro named **ClearCDinput** with no shortcut key to clear the range B2:B4 of the New CD input area. The last step should make cell B2 the active cell.

18. Record a macro named **ClearSongInput** with no shortcut key to clear the range B12:B14 of the New Song input area. The last step should make cell B2 the active cell.

19. Test all of the macros by selecting and running the macros on the DEVELOPER tab.

20. Remove the cell protection on the Music Entry worksheet. Create macro buttons for all four macros using either clip art or shapes. Make sure that you have used descriptive labels for each macro button. Set cell protection again for the Music Entry worksheet.

21. Test all of the macro buttons. Check the CDs and Songs worksheets to see how and where new records were added.

22. Save the workbook as **Music Inventory with Macros**, a macro-enabled workbook, and then close the workbook.