cs002 Homework 1
Excel

How to Hand in Homework Assignments

Before you get started, please make sure you acquaint yourself with how to hand in your homework assignments for this course! This is standard protocol that'll be in place for the rest of the semester so it's important that you understand this section.

Zipping files is a way to compress one or more files into a single file that is often smaller than the source files; you'll submit all homework assignments through Canvas by uploading one zipped file containing all of your work. To do this:

1. Navigate to the course Canvas page and click on the assignment you want to hand in.

2. Rename your source files so they **do not contain your name**. This is especially important in order to maintain the course's anonymous grading policy that ensures your assignment are graded fairly.

3. Create a .zip file:

    a. *Windows:*

        i. In Windows Explorer, go to the folder containing the files you want to zip.

        ii. Select the files, then right-click on any of the selected files and select **Send To... -> Compressed (zipped) Folder**.

    b. *Mac (Graphical):*

        i. In Mac Finder, go to the folder containing the files you want to zip.

        ii. Select the files, then right-click on any of the selected files and select **Compress Items**.

    c. *Mac (Terminal):*

        i. Make sure all of the files you want to zip are in one folder.

        ii. In the Terminal, navigate to the folder containing that folder (the parent directory).

        iii. Use the *zip* command as follows: **zip -r -X result_name.zip folder_name**, substituting the name you want the resulting .zip file to have for **result_name** and the name of the folder containing the files you want to zip for **folder_name**.

4. Rename the .zip file in the format **firstname_lastname_assignmentname.zip**, replacing firstname with your first name, lastname with your last name, and

cs002 Homework 1
Excel

assignmentname with the assignment name, as will be indicated in the *Submission* section of each homework assignment. For John Smith's first CS2 homework assignment, he would hand in a .zip file named John_Smith_01excel.zip. Make sure you don't confuse this step with the naming of your source files (the files within the .zip file); your source files should **not have your name** but your .zip file should.

5. Upload the single .zip file on Canvas and submit your homework assignment.

Introduction
Business has shot up for Edna Mode, the renowned fashion designer who created the Incredibles' superhero outfits, ever since the family saved the world from Syndrome. While this is good news, she's simultaneously become overwhelmed and unable to keep track of everything. She's consequently hired you to create an Excel spreadsheet that will allow her to better manage her business.

Goals
- Synthesize data in cells across sheets of a workbook using Excel functions
- Organize and format said data into visually accessible tables and charts

This homework must be completed by yourself, without the help of any other students or outside resources. If you have questions, please stop by office hours.

Tasks
Edna would like you to create two sheets titled *Expenses* and *Summary*.

Expenses
In the past couple of months, Edna received orders from 6 superheroes asking her to redesign their entire outfit. She's gleaned bits and pieces of information that have been lying around on her messy desk concerning outfit budgets and expenses, but her disorganized lifestyle has unfortunately gotten the better of her.

1) Here's what Edna has so far. Add it to the *Expenses* sheet (all values in dollars):

	Expected Expenses	Actual Expenses	Profit Gained/Lost
Mr. Incredible		10,732	-1275
Elastigirl	12,364	9,441	

cs002 Homework 1
Excel

Frozone	5,261		-3,638
Gazerbeam	15,903		-5,666
Captain America (shh, don't tell Marvel...)	38,907	26,488	
Apogee		11,756	4384

2) Format the table to make it readable and aesthetically pleasing.
3) Fill in the empty cells using dynamic formulas.

Outfit Design

Being the talented and picky designer she is, Edna has maintained a table of superhero outfit components for each superhero's outfit:

	Mask	Symbol/Logo	Weapon	Cape
Mr. Incredible	✓	✓		NO
Elastigirl	✓			
Frozone	✓			
Gazerbeam	✓	✓	✓	
Captain America	✓	✓	✓	
Apogee	✓		✓	

1) We all know how Edna feels about capes: a very hard no. Explain on the *Expenses* sheet how she could easily populate the entire *Cape* column in the table with 'NO.'

Fashion Week

Edna's designs are legendary, and her outfits for these 6 superheroes have made it to 5 famous fashion week locations:

	Paris	New York	Milan	London	Tokyo
Mr. Incredible			✓	✓	✓
Elastigirl	✓	✓	✓	✓	✓

cs002 Homework 1
Excel

Frozone	✓	✓	✓	✓	
Gazerbeam		✓			✓
Captain America		✓			
Apogee			✓	✓	

Summary

In the *Summary* sheet:
1) Create a table based on the *Expenses* worksheet with column labels denoting the following information:
   a) Average Outfit Expense (use numbers from actual expenses)
      i) **Bonus**: Use one button to round this value to only 2 decimal places and explain on the spreadsheet where this button is located within Excel.
   b) Median Expected Outfit Expense
   c) Overall Profit: did Edna lose money or make profit? By how much?
   d) A logical summary statistic of your choice using any of the formulas listed under *fx*.
2) Create 2 logical charts that address the correlations below **and** explain the correlations. Remember to name your charts and label your axes!
   a) Actual expense of creating an outfit vs. number of design components in an outfit (including the cape)
   b) Number of design components in an outfit (including the cape) vs. number of fashion week locations an outfit made it to

Note: Cells should update automatically; when we play with your spreadsheet and mess with the numbers, these numbers should change accordingly. Also, remember that all of the above (tables and charts!) should be formatted in such a way that the information is *readable and aesthetically pleasing*. You will be graded on the content as well as style of tables and graphs.

Submission
All homeworks should be submitted on Canvas. Place all your source files into a .zip file and save it as **firstname_lastname_01excel.zip**. Within your zip file, be sure to name each document in a way that clearly indicates what it is. If you need an extension for this assignment due to sickness, injury, or etc. please contact BOTH Don and the cs002 TAs via email. Please contact the cs002 TA's if you have any further questions.

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