Attendance Sheet

**Observations**

1. Rows are names of students FIRST LAST along with their major. Days of week doesn't make much sense here but I use the same format for classes which meet multiple days, so it helps me quickly see (M vs W vs F) or (T vs H)
2. Columns are for the days of class MM/DD/YYYY and day of the week. Nov 8 and 20, 22, 24 are missing because they were holidays

**Demonstration**

It's difficult to find names in the spreadsheet: Sort by name. Show the quick ways to do it and show how the header rows get sorted along with the actual data. Then fix the problem by selecting all rows that contain student names. Data→Sort Range→Sort Range by Column A.

**Improvements**

1. DEMO: Divide name into FIRST and LAST in two different columns so that I can sort by first name or last name. Use Data→Split Text To Columns. Remember to create a new column otherwise the new last name will overwrite the major.
2. TASK: Add new columns for Nov 8 and 20, 22, 24 and color them light gray background
3. DEMO: Change format of dates to be MM/DD (e.g., drop the year). Format→Number→Use Custom Date and Time.
4. TASK: Change width of columns so that more of them show up on the screen.
5. DEMO: Freeze the first two columns so that we always see the names & major.
6. TASK: Freeze the first two rows so that we always see dates and days.

**Next Level**

1. Create a new column on the right and make this the total days attended. Ask the class: how do we populate this row? Allow multiple people to answer.  
     
   Naive Technique: manually add a number during each class.  
     
   Basic Technique: 0s for absences and 1s for attendance. Use the =SUM() function.  
     
   Clever Technique: Define a mark to represent attendance (x) and a mark to represent absence (o) and use =COUNTIF(D4:R4, "=x"). Can define additional codes for sports absence, medical absence, etc.
2. Use the clever technique to fix the top row, then fill down… note that the rows change to stay consistent!
3. What is the value of the "total" column? The number loses meaning because it's not obvious how many classes have taken place…  
     
   Change the field from # classes attended to the percentage of classes attended. How do I know how many classes have taken place? Use the top row marked "TOTAL" to make an "x" for each day that has occurred.  
     
   Filling down has problems when we reference the total number of days because it gets auto moved down by one each time… use a $ to freeze row in formula  
     
   Multiply the result by 100 and ROUND the result to whole number  
     
   =ROUND(100\*COUNTIF(D5:AX5,"=x")/$AY$4,0)
4. Conditional formatting can help visualize data ranges. Select the cells that should be color formatted. Then choose Format→Conditional formatting and select the Color Scale tab. Choose a color scheme that you like (green→yellow→red).