1. Pivot Tables in Excel
   1. Pivot Table- You know how to Pivot Table but to select data start with the upper most left cell and hold ctrl + shift right and then, down to select all DATA.
   2. When you choose fields to add to report: drag items under category umbrellas in the rows section, you can expand and collapse as needed.
   3. In the values section, we add information about the rows.
      1. These rows serve as columns.
      2. In the value fields settings, you “can show value as,” % Grand Total, %Column Total, % of Row Total, etc.
      3. By right-clicking on a value, you can sort from, say, largest to smallest, ect.
   4. If you want to change numbers to currency, you can use the dropdown menu under the home tab, in the numbers section.
      1. You can get rid of zeros after the decimal section with the decrease decimal button in the currency section.
      2. You can switch to different currencies with the money sign button under the currency.
   5. In king addition to rows and value (columns), we can create calculated fields based on multiple values by clicking on PivotTable Analyze, then Fields, Items, and Sets, then Calculated Fields
   6. For the Filters section of the Pivot Table, we normally would not filter by something we already have a row or column for. Instead, we would filter by an outside factor.
   7. You can add multiple pivot table based on the same data by clicking on existing worksheet instead of new worksheet.
2. Excel Formulas
   1. Max: =Max(Range)
   2. Min: =Min(Range)
   3. Len(Range)
   4. IF: =IF(Range Operator Statement, TRUE, FALSE)
   5. IFS: =IFS(Range Operator Statement, True)
   6. Left: =LEFT(Range, Char)
   7. Right: =RIGHT(Range, Char), useful for dates
   8. DateToText: =TEXT(Range, “dd/mm/yyyy”) Useful for operating on dates.
   9. Trim: =TRIM(range) Useful for cleaning data.
   10. Concatenate: =CONCATENATE(range, “ [“, range, “@gmail.com](mailto:“,%20range,%20“@gmail.com)”)
   11. Sum: =Sum(Range)
   12. SumIf: =SUM(Range, criteria)
   13. SumIFS: =SUMIFS(Range, criteria,…)
   14. Count: =Count(Range)
   15. CountIf: =CountIf(Range, criteria)
   16. CountIFS: =COUNTIFS(Range, criteria,…)
   17. Days: =DAYS(end date, start date)
   18. NetworkDays(start date, end date)
3. xLookup
   1. Searches an array and returns a corresponding item from a second array, or more. By default, an exact match is used.
   2. =xlookup(lookup value, array, return array, [if not found], match mode, search mode)
   3. xlookup multiple rows
      1. you can return multiple adjacent rows
   4. xlookup wildcard match
      1. =xlookup(“\*”&range, return array, default, 2)
      2. Or =xlookuo(range&”\*”, range, return array, default, 2)
   5. xlookup search order
      1. =XLOOKUP(lookup value, lookup array, return array,,1)
      2. You can reverse the search order like so, =xlookup(lookup value, lookup array, return array,,-1)
   6. Xlookup w SUM()
      1. This is a nested formula. It returns the sum xlookup formulas
      2. =SUM(xlookup(lookup value, lookup array, return array,[if not found], match mode, search mode) :xlookup(lookup value, lookup array, return array,[if not found], match mode, search mode))
4. Vlookup
   1. =vlookup(lookup value, lookup arrays, column#, true/false(as to exact match))
5. Conditional Formatting
   1. Easily spot trends and patterns in your data using bars, colors, and icons, to visually highlight important values.
6. Conditional Formatting
   1. Icon Sets
   2. Colors Scales
   3. Data Bars
   4. Top/Bottom Rules
   5. Highlight Cells Rules
   6. You can clear rules for selected items or entire worksheet.
   7. You can create new rules for selected items based on your own formulas.
      1. A when you selection item be sure to remove the dollar signs.
   8. Tou can manage cell rules for selected items for selected items or the entire worksheet.
7. Charts
   1. Select the entire dataset in a worksheet including column and rows headings
   2. Under the insert tab, select the chart type.
   3. You can select chart style.
   4. Something that is particularly useful is filtering out aggregate data from the chart as this tends to make the chart more useful, visually.
   5. You can always change the chart type.
8. Data Cleaning
   1. Removing Duplicates
      1. The end goal is standardization and formatting.
      2. You can select rows, columns, or entire datasets and remove duplicate values from the data tab and the remove duplicates button.
   2. Standardizing Capitalization
      1. Select value(s), apply either the upper(), lower(), or proper formula.
   3. Filters
      1. You can filter selected column data with the filter icon under the data tab.
   4. Trim
      1. You can format text and remove extra spaces with the trim formula.
   5. Currency Formatting
      1. You can change number format with number format tab in the data ribbon.
   6. Date Format
      1. You can change date format by selecting the range, right-clicking and selecting format cells.
9. Excel Data Project
   1. Created Extra Worksheets: Final Dashboard, Pivot Tables, and Working Sheet(Copy of Original Data)
   2. Put filters on data columns w/ the filter icon.
   3. If there are initials in the data, i.e. M and F for Male and Female, M and S for Married and Single and the audience maybe confused, it’s always best to spell it on out. Select the range and press ctrl-H, click options, search by column, input the find value, the replace value and click ok.
   4. Bracketized numbers in groups with nested IF statement and <,>,>=,<= operators.
   5. Created Pivot Tables based on the data from the working sheet straight from the pivot table dialog box, using categories for values, rows columns, and filters.
   6. Pasted Pivot Tables on to the dashboard and created a Dashboard Banner.
   7. Created Slicers for each pivot table.
   8. Reported connection for each slicer.