

B&E 105: TECHNOLOGY FOR BUSINESS SOLUTIONS
EXAM 4 CHECKLIST & OUTLINE

Strategy for doing well: Work along with the videos, filling out your Excel file(s) step by step. Do this until you can comfortably complete the file without any help from these notes or the videos themselves. By the time you sit for the exam, you should have been able to complete the Excel practice file(s) perfectly *several times* without assistance.

Checklist: These topics may appear on the exam. Check them off as you learn them. Anything covered in the videos can be tested. The format of the exam is like that of the practice file(s).

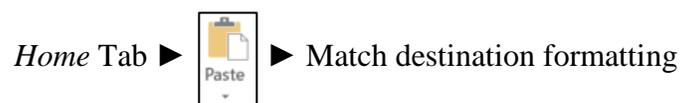
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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <input type="checkbox"/> VALUE <input type="checkbox"/> COUNTIF <input type="checkbox"/> WEBSERVICE <input type="checkbox"/> FILTERXML <input type="checkbox"/> Copy and pasting from the web <input type="checkbox"/> Insert data from the web <input type="checkbox"/> PivotTable <input type="checkbox"/> Pie chart | <ul style="list-style-type: none"> <input type="checkbox"/> Hi, Lo, Close stock chart <input type="checkbox"/> Open, Hi, Lo, Close stock chart <input type="checkbox"/> Reordering tabs <input type="checkbox"/> VLOOKUP <input type="checkbox"/> The value by stock of a portfolio <input type="checkbox"/> The value by sector of a portfolio <input type="checkbox"/> General formatting (previous sections) <input type="checkbox"/> All previous exam material |
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1. Tools, Part 1 (~18:25)

Function	Definition
=VALUE(<i>text</i>)	Converts a number stored as text in Excel to a number.
=COUNTIF(<i>range, criteria</i>)	Counts the number of cells that meet a given condition. Note that <i>criteria</i> needs to be in quotes or refer to a cell. Items that meet this criterion will be counted.
=WEBSERVICE(<i>url</i>)	Returns data from the given URL, if that URL supports Excel's webservice function.
=FILTERXML(<i>xml, xpath</i>)	For the purposes of this course, filters the output of the WEBSERVICE function. The <i>xml</i> input will refer to the WEBSERVICE cell, and the <i>xpath</i> will be from a table of codes.

- VALUE
 - Numbers stored as text cannot be recognized by Excel to perform actions such as MAX, MIN, or AVERAGE.
 - Numbers may be stored as text when pasting from the web.

- Excel may indicate which numbers are stored as text with a small green triangle at the top left corner of the cell.
- Use the VALUE function (see above chart) to convert to a number from text.
- COUNTIF
 - Used when you'd like to count the number of items in a table that are greater than, less than, or equal to a certain number (or equal to a certain word or phrase).
 - See the description in the table above.
 - Note that if you want to know the number of times the range includes a number greater than 100, you'd have to type ">100" *including the quotation marks* as the criteria.
 - If, however, you use a cell reference that contains >100 *without quotation marks*, you do not need to insert them.
- WEBSERVICE
 - From the table above, note that the URL needs to be in quotes.
 - Recall how to concatenate:
 - If you'd like to refer to a cell before the .xml at the end of the WEBSERVICE function, insert "& &" *including the quotes* in front of .xml
 - Click the cursor between the & signs and then select the appropriate cell as a reference.
- FILTERXML
 - From the table above, the cell reference is the cell with the WEBSERVICE output.
 - The xpath will be "//code" *including the quotes* where code is from a list.
 - In the video example, the code was weather or temp_f or temp_c to provide a weather description, the temperature in Fahrenheit, or the temperature in Celsius.
 - A table of codes will be provided on the exam. No need to memorize the list, but you must be able to know how to use the codes.
- Copying and pasting from the web
 - Drag and drop the cursor across a table online, starting outside the box if necessary.
 - Pasting directly may paste all the source formatting.
 - To paste just the text:



2. Tools Part 2 (~18:33)

- Insert data from the web
 - WEBSERVICE is useful, but requires the website to have the data in a format Excel understands.
 - Copy/paste from the web is simple, but is more difficult to update.

- Inserting data from the web by this method allows for data to be easily updated:
- Data Tab ► Get Data ► From Other Sources ► From Web ► paste in URL ► select a table ► select down arrow next to the Load button ► Load to... ► Existing worksheet ► OK*
- In some versions, you select *New Query* from the Data tab
 - To refresh the table, right click the table and select Refresh
- PivotTable
 - Select a table, including the headers:

Insert Tab ► Tables ► PivotTable ► select where you'd like the table
 - Click the PivotTable, then select the fields you'd like displayed in the pane that appears on the right of the screen.
 - To delete a PivotTable, select the entire table and then press the Delete key on your keyboard.
 - Pie Chart
 - Select the column headers

Insert tab ► Charts ► Insert Pie or Doughnut Chart ► select Pie under "2D Pie"
 - COUNTIF
 - Remember to use relative, mixed, and absolute references as needed

3. Make the Table (~17:38)

- Reorder tabs by dragging and dropping to the desired location
- Formatting from previous videos
 - Background colors
 - Text colors
 - Wrapping text
 - Column width
 - Centering
 - Double click between columns to autofit
- Borders
 - To add borders around cells or selection:

Home tab ► Alignment  ► Border tab ► select color of border and where you'd like the border

- VLOOKUP
 - As in previous examples, be sure to use absolute references when appropriate
 - Be sure to only make the necessary clicks when you need to select a range on a different worksheet.
- Open-High-Low-Close and High-Low-Close

- Select the Date column, hold the CTRL key, then select the columns *Open, High, Low, Close* or *High, Low, Close*.
- Select Insert ► Charts ► Waterfall or Stock Chart ► High-Low-Close or Open-High-Low-Close
- For the High-Low-Close, the bars show the range of the stock for the day (high and low), the dash shows the Close. For the Open-High-Low-Close, the bars present the range for the stock price over the day. The rectangles represent the open and close, with dark shading meaning the top value is the open and the bottom is the close (the stock went down on the day). White rectangles mean the top value is the close and the bottom is the open (the stock went up on the day).

4. PivotTable (~13:43)

- Conditional Formatting and Cell Rules

- First, select the data you want to apply the rules to, then:

Home tab ► Styles ► Conditional Formatting ► Highlight Cell Rules ► Greater Than (Less Than)

- Choose the value above or below which you want to have the rule apply.
- Select the formatting you'd like from the drop-down list.
- Custom options for formatting can be selected from the drop-down list as well.
- Manage rules by selecting *Manage rules* under the *Conditional Formatting* drop down list that appears.
 - You must have selected the data where you have conditional formatting applied to manage rules.
 - Select the rule, then select the *Edit Rule* button.

- Conditional Formatting and Arrows

- First select the data you want to apply the rules to, then:

Home tab ► Styles ► Conditional Formatting ► Icon Sets

- Once you add arrows, you will need to *Manage rules* by the above procedure to set the values above and below which you'd like to have the icon appear. You can also change the icon as appropriate.

- Refresh PivotTable by right clicking anywhere in the table and selecting *Refresh*
- Remember to use the appropriate relative, mixed, and absolute references for COUNTIF functions

5. Pie Chart (~6:12)

- Recall that the value of a position is the number of shares you hold multiplied by the share price. If you are asked to present a pie chart showing the value in each stock, you would want to select the name (or ticker) column and the *value* column.
- If you are asked for the value held in each sector, you'd select the sector column and the *value* column of the *PivotTable*.

- For the purposes of a pie chart, the share price and the number of shares aren't very important. The value in each stock or in each sector is what matters.
- Move the legend of a pie chart by selecting the pie chart, clicking the plus sign at the top right, and selecting the right arrow next to the *Legend* button (be sure *Legend* is checked).
- Remember formatting methods from previous sections
 - Remove gridlines/headings
 - Collapse the ribbon