Illustrated Course Guide Microsoft Office 365 and Excel 2016 Intermediate Spiral bound Version 1st edition Wermers Solutions Manual

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Excel Module 7: Managing Data Using Tables

A Guide to this Instructor's Manual:

We have designed this Instructor's Manual to supplement and enhance your teaching experience through classroom activities and a cohesive module summary.

This document is organized chronologically, using the same heading in **blue** that you see in the textbook. Under each heading you will find (in order): Lecture Notes that summarize the section, Teacher Tips, Classroom Activities, and Lab Activities. Pay special attention to teaching tips, and activities geared towards quizzing your students, enhancing their critical thinking skills, and encouraging experimentation within the software.

In addition to this Instructor's Manual, our Instructor's Resources Site also contains PowerPoint Presentations, Test Banks, and other supplements to aid in your teaching experience.

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Module Objectives

Students will have mastered the material in Excel Module 7 when they can:

- Plan a table
- Create and format a table
- Add table data
- Find and replace table data
- Delete table data
- Sort table data
- Use formulas in a table
- Print a table

Excel 154: Plan a Table

LECTURE NOTES

- Define the terms: table, record, fields, field name, and header row.
- Explain differences between creating an Excel worksheet and an Excel table.
- Discuss the advantages of using Excel tables over another database program.
- Use Figure 7-1 to illustrate a table plan.
- Use Table 7-1 to discuss the importance of table documentation.

CLASSROOM ACTIVITIES

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1. Class Discussion: Discuss the guidelines for planning a table. Why is it important to form a plan before beginning to build the table? What problems might arise with a poorly planned table?

   Quick Quiz:
   1. True or False: A field is a table row that contains data. (Answer: False; a record.)
   2. Tables usually have a _____ row as the first row. (Answer: header)

LAB ACTIVITY
Have students plan (on paper) a table that they can create to organize their collection of music. Discuss what a record in this table should be and what fields they will need.

Excel 156: Create and Format a Table

LECTURE NOTES
- Show students the features in the Tables group.
- Show students the different table styles available.
- Explain how Excel uses the same theme colors as the workbook in the table.
- Discuss how to change table style options.

TEACHER TIP
Point out that the field/column names are the header row and that if the "My table has headers" box is not checked a row will be added with names such as Column 1, Column 2, etc.

CLASSROOM ACTIVITIES
1. Quick Quiz:
   1. _____ _____ allow you to easily add formatting to your table. (Answer: Table styles)
   2. True/False: The available table styles match the workbook theme colors.(Answer: True)

2. Critical Thinking: You have a Word document with related table data and a table in Excel. Why would you want to use the same theme for both tables?

Excel 158: Add Table Data

LECTURE NOTES
- Discuss how to add records to a table.
- Demonstrate how to expand a table using the sizing handle.
- Point out the methods for selecting table elements. Knowing how to select table elements, improves accuracy and efficiency.

TEACHER TIP
Remind students that it is important to not have blank rows within tables. If extra space between rows would improve readability, row height can be adjusted.

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CLASSROM ACTIVITIES

1. Quick Quiz:
    1. True or False: You can add records to a table by typing data directly below the last row of the table. (Answer: True)
    2. True or False: You can insert rows only in certain locations in a table. (Answer: False; you can insert them in any table location.)

2. Class Discussion: How does the AutoCorrect menu allow you to undo or stop the automatic table expansion. When would this be helpful? When would it be an inconvenience?

LAB ACTIVITY

Have students practice selecting a table column. Be sure they aren't selecting the entire worksheet column. Next, have them practice selecting a table row. Be sure they aren't selecting the entire worksheet row.

Excel 160: Find and Replace Table Data

LECTURE NOTES

- Define wildcards.
- Review the concept of finding and replacing data.
- Demonstrate the Go to Special commands.

TEACHER TIP

Remind students that if they are replacing commonly used characters, such as "th" or "ing", they should use the Options>> button in the Find and Replace Dialog Box and set the correct search parameters, so they don't accidentally replace these characters in words in which they belong.

CLASSROOM ACTIVITIES

1. Class Discussion: Engage your class in a discussion on ways they can use Find and Replace to increase their productivity.

2. Quick Quiz:

_____ are special symbols that substitute for unknown characters to help locate records. (Answer: Wildcards)

LAB ACTIVITY

Have students open an Excel table and use Find and Replace to search for a term or value that appears in the table. Have them experiment with wildcards and other options.

Excel 162: Delete Table Data

LECTURE NOTES

- Explain reasons for needing to delete table data.
- Explain the two methods for deleting data from a table.
- Using Figure 7-13, discuss the Remove Duplicates dialog box.

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TEACHER TIP
Remind students about the difference between clearing cell contents and deleting rows or columns.

CLASSROOM ACTIVITIES

1. Quick Quiz:
    1. True/False: The Remove Duplicates button is found in the Tables group. (Answer: False)
    2. True/False: One reason for removing a field from a table is because the field is no longer necessary. (Answer: True)

2. Class Discussion: Ask students why they think it is important to remove data from tables? How can unneeded data decrease a table's usefulness?

Excel 164: Sort Table Data

LECTURE NOTES

- Explain how using the Excel sort feature, you can sort records in your table in either ascending or descending order.
- Explain that in a sort, if a field contains numbers and labels, numbers appear first.
- Mention that if cells are conditionally format with color, you can sort on Cell Color.
- Use Table 7-2 to illustrate sort options.
- Discuss custom sort orders.

TEACHER TIP
Remind students that sorting within the table relocates entire records/rows and not just the contents of a single column.

CLASSROOM ACTIVITIES

1. Class Discussion: Talk about creating a custom sort order with the students. Then, in pairs, have them think of different custom sorts they might want to use for the music collection table they brainstormed earlier in the lesson.

2. Quick Quiz:
    1. True or False: In descending order, the lowest value (the beginning of the alphabet or the earliest date) appears at the top of the table. (Answer: False, ascending order.)
    2. If _____ have been applied to a table, you can sort the table using conditional formatting to arrange the rows. (Answer: conditional formats)

Excel 166: Use Formulas in a Table

LECTURE NOTES

- Explain the difference between a worksheet formula and a table formula.
- Explain the terms calculated columns, structured reference, and table total row.
- Use Figure 7-18 to show the table total row and the dropdown list of functions.

TEACHER TIP
Make sure that students understand that they must use the bracket [ ] characters around their table formulas and not the parentheses ( ) used in regular Excel worksheet formulas.

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CLASSROOM ACTIVITIES

1. Quick Quiz:
    1. True/False: Excel table calculation features help you summarize table data so you can see important trends. (Answer: True)
    2. True/False: The table total row contains dropdown lists of functions that can be used in column calculations. (Answer: True)

2. Class Discussion: Discuss structured references and challenge students to come up with scenarios in which they would be useful.

Excel 168: Print a Table

LECTURE NOTES

- Discuss the steps for printing a table.
- Review the concept of setting a print area.

TEACHER TIP
Point out the difference between adding borders and printing gridlines.

CLASSROOM ACTIVITIES

1. Quick Quiz:

1. True or False: Most tables do not have any descriptive information above the field names on the worksheet. (Answer: True)
2. You can determine the way a table will print using the _____ tab. (Answer: PAGE LAYOUT)

2. Class Discussion: Discuss print area and ask students when defining a print area would be useful.

LAB ACTIVITY

Have students practice setting row 1 as the print title in the Page Setup dialog box for their music collection table. Then have students add a footer with their name and the current date to their table.

End of *Module* Material

- **Concepts Reviews** consist of multiple choice, matching, and screen identification questions.
- **Skills Reviews** provide additional hands-on, step-by-step reinforcement.
- **Independent Challenges** are case projects requiring critical thinking and application of the module skills. The Independent Challenges increase in difficulty, with the first one in each module being the easiest. Independent Challenges 2 and 3 become increasingly open-ended, requiring more independent problem solving.
- **Independent Challenge 4: Explore** contain practical exercises to help students with their everyday lives by focusing on important and useful essential skills, including creating photo montages for scrapbooks and photo albums, retouching and color-correcting family photos, applying layer styles and getting Help online.
- **Visual Workshops** are practical, self-graded capstone projects that require independent problem solving.

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Module 7
Using Tables

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Module 7: Using Tables

Concepts Review

Screen Matching	Matching Items	Multiple Choice
1. a	6. b	11. d
2. e	7. c	12. d
3. d	8. a	13. b
4. c	9. e	14. a
5. b	10. d	

Skills Review

1. Students will work with Data File EX 7-2.xlsx. They will create a table and work with the table data.
2. Students will add records to the table.
3. Students will find and replace data in the table.
4. Students will delete table data.
5. Students will sort the table in both ascending and descending order.
6. Students will add a formula and a total row to the table.
7. Students will add a header and print the table.

Solution file: EX 7-Employees:

Last Name	First Name	Years Employed	Department	Full/Part Time	Training Completed	Weeks Vacation
Alden	Sally	2	Sales	F	N	2
Green	Jane	1	Service	F	N	2
Kosby	Julie	4	Sales	F	Y	3
Mendez	Darryl	3	Sales	F	N	2
Ropes	Mark	1	Sales	P	Y	2
Wallace	Holly	5	Service	P	Y	3
Maximum						**3**

Independent Challenge 1

Students will work with the Data File EX 7-3. Students will add data to the table, replace table data, and remove duplicate data. They also sort the table.
Estimated completion time: 25 minutes

Solution file: EX 7-Clients:

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Last Name	First Name	Street Address	City	State	Zip	Area Code	Survey Source
Graham	Shelley	989 26th St.	Chicago	IL	60611	773	Education Website
Hogan	Andy	32 William St.	Concord	MA	01742	508	Education Website
Kelly	Shawn	22 Kendall St.	Cambridge	MA	02138	617	Education Website
Masters	Latrice	88 Las Puntas Rd.	Boston	MA	02205	617	Education Website
Nelson	Michael	229 Rally Rd.	Kansas City	MO	64105	816	Education Website
Dickenson	Tonia	883 E. 34th St.	New York	NY	10044	212	Education Website
Gonzales	Fred	5532 West St.	Houston	TX	77098	281	Education Website
Chelly	Yvonne	900 Sola St.	San Diego	CA	92106	619	Health Center
Worthen	Sally	2120 Central St.	San Francisco	CA	93772	415	Health Center
Malone	Kris	1 South St.	San Francisco	CA	94177	415	Health Center
Ross	Kim	4 Ridge Rd.	San Francisco	CA	94177	415	Health Center
Roberts	Bob	56 Water St.	Chicago	IL	60618	771	Health Center
Kim	Janie	9 First St.	San Francisco	CA	94177	415	Health Website
Oren	Scott	72 Yankee St.	Brookfield	CT	06830	203	Health Website
Duran	Maria	Galvin St.	Chicago	IL	60614	773	Health Website
Smith	Carolyn	921 Lopez St.	San Diego	CA	92104	619	Newspaper
Herbert	Greg	1192 Dome St.	San Diego	CA	93303	619	Newspaper
Kelly	Janie	9 First St.	San Francisco	CA	94177	415	Newspaper
Roberts	Bob	56 Water St.	Chicago	IL	60614	312	Newspaper
Miller	Hope	111 Stratton St.	Chicago	IL	60614	773	Newspaper
Warner	Salvatore	100 Westside St.	Chicago	IL	60620	312	Newspaper
Paxton	Gail	100 Main St.	Woburn	MA	01801	508	Newspaper
Ichikawa	Pam	232 Shore Rd.	Boston	MA	01801	617	Newspaper
Baily	Jeanne	34 Kensington St.	Boston	MA	01810	617	Newspaper
Frei	Carol	123 Elm St.	Salem	MA	01970	978	Newspaper
Juarez	Manuel	544 Cameo St.	Belmont	MA	02483	617	Newspaper
Johnson	Mel	17 Henley St.	Reading	MA	03882	413	Newspaper
Williams	Tasha	1 Spring St.	Reading	MA	03882	413	Newspaper
Branca	Keith	14 Bailey Rd.	Santa Fe	NM	87505	505	Newspaper
Khalsa	Pip	1100 Vista St.	Santa Fe	NM	87505	505	Newspaper
Montano	Nicole	443 W. 73rd St.	New York	NY	10024	212	Newspaper
Alderson	Bert	12 Shore St.	White Plains	NY	10288	914	Newspaper
Black	John	11 River Rd.	Larchmont	NY	10329	914	Newspaper
Stephens	Elizabeth	214 Adams St.	Brooklyn	NY	11201	718	Newspaper
Dewey	Evan	823 Northside Rd.	Houston	TX	77092	281	Newspaper
Ballard	Allen	3 West Rd.	Seattle	WA	98103	206	Newspaper
Spencer	Robin	293 Serenity Dr.	Concord	MA	01742	508	Radio
Innis	Joe	17 Ferncroft Rd.	Danvers	MA	01923	978	Radio
Lally	James	15 York St.	Danvers	MA	01923	978	Radio
Stevens	Crystal	14 Waterford St.	Salem	MA	01970	508	Radio
Rodriguez	Virginia	123 Main St.	Boston	MA	02007	617	Radio
Lee	Ginny	3 Way St.	Kansas City	MO	64102	816	Radio
Splint	K. C.	221 Walnut St.	Houston	TX	77098	281	Radio
Whitney	John	67 Main St.	Houston	TX	77098	281	Radio
Jones	Kathy	512 17th St.	Seattle	WA	98001	206	Radio
Chavez	Jane	11 Northern St.	San Diego	CA	92208	619	Social Media
Kahil	Kathy	14 South St.	San Francisco	CA	94177	415	Social Media

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Kooper	Peter	671 Main St.	Cambridge	MA	02138	617	Social Media
Lopez	Luis	1212 City St.	Kansas City	MO	64105	816	Social Media
Green	Latrell	343 3rd St.	Brooklyn	NY	11201	718	Social Media
Dobbins	Camilla	486 Intel St.	Seattle	WA	98102	206	Social Media

Independent Challenge 2

Students use field names shown in the exercise to create a table using their own data. They will add a field, add a formula, and sort the table data.
Estimated completion time: 20 minutes

Solution file: EX 7-LED:

Customer Last	Customer First	Item	Quantity	Cost	Total
Lyons	Jane	60W Soft White	30	$ 6.97	$ 209.10
Johnson	Jean	60W Soft White	10	$ 6.97	$ 69.70
Welch	Frank	60W Soft White	15	$ 6.97	$ 104.55
Allen	Carl	65W Daylight	30	$ 7.39	$ 221.70
Smith	Elvis	60W Daylight	25	$ 7.49	$ 187.25
Warren	Chris	60W Daylight	26	$ 7.49	$ 194.74
Witz	Alice	65W Soft White	40	$ 7.85	$ 314.00
Jones	Fred	65W Soft White	30	$ 7.85	$ 235.50
Franks	Connie	100W Daylight	20	$ 18.54	$ 370.80
Donovan	Connie	100W Daylight	20	$ 18.54	$ 370.80

Independent Challenge 3

Students use the table supplied in Data File EX 7-4. Students sort the table on one field, two fields, replace table data, and then add a formula.
Solution file: EX 7-Accounts

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	A	B	C	D	E
1	Account Number	Budget	Expenses	Contact	Balance
2	1084	$ 275,000	$ 215,000	Cindy Boil	$ 60,000
3	5431	$ 375,000	$ 250,000	Cindy Boil	$ 125,000
4	9624	$ 650,000	$ 550,000	Cindy Boil	$ 100,000
5	2117	$ 550,000	$ 525,000	Kathy Jenkins	$ 25,000
6	5647	$ 750,000	$ 600,000	Kathy Jenkins	$ 150,000
7	6671	$ 175,000	$ 150,000	Maureen Lang	$ 25,000
8	1097	$ 250,000	$ 210,000	Maureen Lang	$ 40,000
9	4301	$ 350,000	$ 210,000	Maureen Lang	$ 140,000
10	7814	$ 410,000	$ 320,000	Maureen Lang	$ 90,000
11	4113	$ 550,000	$ 400,000	Maureen Lang	$ 150,000
12	**Total**	**$ 4,335,000**	**$ 3,430,000**		**$ 905,000**

Independent Challenge 4: Explore

Students will work with the Data File EX 7-5. Students will use conditional formatting to format cells with negative balances and then sort the table on the color of the cells. They also work with table style options. Students will research how to create a print area with nonadjacent areas on a single page and then create that type of print area.
Estimated completion time: 25 minutes

Solution file: EX 7-Sales:

Employee Number	Associate	Balance
6547	Larry Makay	**$ (5,000)**
2984	George Well	**$ (10,000)**
4874	George Well	**$ (73,126)**
6647	Kris Lowe	**$ (95,000)**
5512	Nancy Alden	**$ 108,357**
3004	Lou Colby	**$ 95,000**
4257	Bob Allen	**$ 50,000**
9821	Joe Wood	**$ 45,000**
8624	Judy Smith	**$ 25,000**
1005	Janet Casey	**$ 17,790**

Hide the columns you don't want to print.
Set the print area to contain all of the columns, including the hidden columns.

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Visual Workshop

Students will work with the Data File EX 7-6.
Solution file: EX 7-Tecnicians.xlsx

Job Number	Employee Number	Amount Billed	Location	Technician Name
2257	69741	$ 109.88	Main	Eric Mallon
1032	65418	$ 158.32	Satellite	Eric Mallon
1587	10057	$ 986.34	Main	Jerry Thomas
1533	66997	$ 112.98	Satellite	Jerry Thomas
2187	58814	$ 521.77	Satellite	Jerry Thomas
2588	69784	$ 630.55	Main	Joan Rand
2001	48779	$ 478.24	Satellite	Joan Rand
1251	69847	$ 324.87	Main	Kathy Green
2113	36697	$ 163.88	Main	Kathy Green
2357	10087	$ 268.24	Main	Mark Eaton
1111	13987	$ 658.30	Satellite	Mark Eaton

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