



EXCEL POWER QUERY: HALF-DAY WORKSHOP

Lesson 1: Power Query and ETL technologies

Lesson 2: Getting to tidy in Power Query

Lesson 3: Transforming rows

Lesson 4: Transforming columns

Lesson 5: Transforming columns, continued

Lesson 6: Joining data sources

Learning Objectives

- Student can identify the traits and use cases of an extract, transform, load methodology
- Student can use principles of "tidy" data to systematically clean data
- Student can perform row-wise data cleaning
- Student can perform basic column-wise data cleaning
- Student can perform intermediate column-wise data cleaning
- Student can join two datasets together

Lesson plan developed by George Mount.
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Lesson 1: Power Query and ETL technologies

Objective: Student can identify the traits and use cases of an extract, transform, load methodology

Description:

- Why extract, transform, load?
- Power Query and "Modern Excel"
- Exercises: Examine a messy dataset

Assets needed: Wholecase customers dataset

Time: 40 minutes

Lesson 2: Getting to tidy in Power Query

Objective: Student can use principles of "tidy" data to systematically clean data

Description:

- Reshaping data to tidy standards
- Connecting to data in Power Query
- Using the data profiler

Exercises: Form a plan for data cleaning, inspect a dataset

Assets needed: Dirty data, computer sales dataset

Time: 40 minutes

Lesson 3: Transforming rows

Objective: Student can perform row-wise data cleaning

Description:

- Sorting
- Removing duplicates
- Aggregating
- Filtering
- Filling

Exercises: Drills

Assets needed: Census dataset

Time: 40 minutes

Lesson 4: Transforming columns

Objective: Student can perform basic column-wise data cleaning

Description:

- Splitting columns
- Re-formatting text
- Changing data types

Exercises: Drills

Lesson 5: Transforming columns, continued

Objective: Student can perform intermediate column-wise data cleaning

Description:

- Concatenating columns
- Un-pivoting tables
- Creating calculated fields
- Appending tables

Exercises: Drills

Assets needed: Retail orders dataset, baseball dataset

Time: 40 minutes

Lesson 6: Joining data sources

Objective: Student can join two datasets together

Description:

- VLOOKUP() versus joins
- Inner joins
- Left outer joins

Exercises: Drills

Assets needed: Baseball dataset

Time: 50 minutes



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