

Python Data Files

Duration: 2 Weeks

This lesson teaches the students to clean data in CSV files and do basic statistics on the data using Python programs that they create.

Learning Objectives

- Write Python programs that perform file input and output by opening files, reading from files, writing to files, and closing files.
- Write Python code to check data constraints in a CSV file:
 - *Data type constraints*, such as the value must be an integer
 - *Range constraints*, such as the value must be between 0 and 99
 - *Mandatory constraints* that certain data values must be present
- Write Python code to clean bad data in a CSV file in one of three ways:
 - Identify the bad data to the user
 - Fix the bad data field
 - Eliminate the record with the bad data field.

Course Material

- Read/Do: [Code Academy Unit 12: File Input and Output](#) all 9 lessons
- Read: [Wikibook Chapter on Python File Input/Output](#)
- Read: [Wikibook chapter on Data Cleaning With Python](#) through Section 3.3 only

Assessments

- Conceptual Quiz:
 - [Python Data Files](#) (requires access)
- Practical Assignment:
 - [Data Cleaning With Python](#) | [Grading Rubric](#) | [Answer Key](#) | [Teacher's Guide](#)