



## Reno Technology Academy

Multnomah University Reno/Tahoe

CIS104: Coding in Python

## Lesson 7

### Readings:

*Learning Python*

Revisit

Chapter 5: Numeric Types pp.137-179

Chapter 7: String Fundamentals pp. 195-246

Chapter 8: Lists and Dictionaries pp. 247-282

Chapter 9: Tuples, Files, and Everything Else

Tuples pp. 284-291

Files pp. 291-305

## Lab/Homework (10 points)

### Exercise #1: Music Database Reloaded

In this project, we will be modifying your music database application from lab assignment #5 to add support for sorting the database by song title, artist, or release year.

1. Copy the files from Lab #5 into a folder named Lab 7. Rename H5.py to H7P1.py, if needed. Main.py can still be used.
2. Update your program to add a new menu item called ListBy. When the user enters this choice:
  - a. Ask the user how they want to list/sort the database:
    - i. Sort by song title
    - ii. Sort by artist
    - iii. Sort by release year
  - b. Print out the list of the user's preference (e.g. all song titles) sorted alphabetically.

### Exercise #2: Divide by Seven

1. Create a Python file called H7P2.py.
2. Create a list of integers and add to it every number from 1 to 1,000. Do this using a for loop.

3. Create an algorithm to count the numbers in the vector that are evenly divisible by 7. Display the count as a message to the user on the console.

### Extra Credit: Shazam!

1. Modify your music database program to add a new menu item called find. When the user enters this choice:
  - a. Ask the user to enter the song title to find
  - b. Create an algorithm to find the song
  - c. Make sure that the search ignores the case of the strings!
  - d. Display the first song that matches, and if none are found display a message saying "Song not found"