Lists

Overview

- In this part we will learn the basics of very important data type – lists. We will learn how to:
  - Define a list and access specific elements of a list
  - Index a list properly
  - Dynamically build lists
  - Add elements to a list at the end of the list or at the specific position in the list
  - Remove elements of a list based on the name or position in the list
  - Organize lists in reverse order
  - Sort lists of string alphabetically and reverse alphabetically
  - Sort list of integers or float numerically or reverse numerically
  - Import the datetime library to access information about the current date and time

Data Types

- Strings: A collection of characters
- Integers: Whole numbers
- Float: Decimal numbers
- Lists: A mutable collection
- Tuples: An immutable collection

Control Structures

- if

Operators

Assignment Operators

- = Assignment
- += Compound Assignment
- -+ Compound Assignment
- + Concatenation (strings)

Algebraic Operators

- + Addition
- - Subtraction
- * Multiplication
- / Division
- ** Exponentiation
- // Absolute Division

Built in Functions

- print()
- type()
- str()
- int()
- float()
- input()
- round()
- sorted()
- len()

Methods

Strings

- .upper()
- .lower()
- .title()
- .strip()
- .count()

Lists

- .append()
- .insert()
- .pop()
- .remove()
- .sort()
- .reverse()

External Libraries

- Math
- datetime

Challenges (Assignments)

- Grade Sorter App
- Different Types of Lists Program
- Grocery List App
- Basketball Roster App
- Favorite Teachers Program