# **Python Data Structures**

## ANI\_106d | On-Demand | Automation and Insights | Express Course Duration: 1 hour

This self-paced on-demand course is a light-hearted introduction to Python data structures. Students will delve a little deeper into data structures and become familiar with ways to organize and access data collections in Python.

### **Intended Audience**

Those with some programming experience who are interested in implementing advanced data structures in Python.

### **Objectives**

After completing this course, the learner will be able to:

- Use the dictionary structure to organize information into key value pairs
- Explain the significance of an immutable data type
- Explain the differences between tuples and lists
- Pack and unpack tuples to hold value pairs
- Demonstrate uses for ordered and unordered collections
- Define and perform set operations

### **Course Prerequisites**

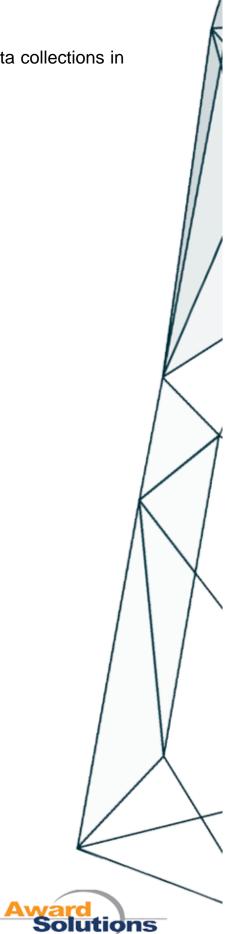
No Prerequisites

### Outline

Lists Overview
 1.1 Creating a List

- 2. Tuples
  2.1 Tuples Packing
  2.2 Tuples Unpacking
  2.3 Nested Tuples
  2.4 Working with Tuples
  Exercise: Code Challenge
- 3. Dictionaries
- 3.1 Looping through Keys, Values, Key-Value Pairs
- 4. Set Operations
- 4.1 Union, Intersection, Difference
- 4.2 Symmetric Difference
- 4.3 Set Operations Summary
- 4.4 Working with Set Operations
- 4.5 Organizing with Set Operations
- 5. Data Structures Overview
- 6. Common Characteristics
- 6.1 Indexed
- 6.2 Mutable
- 6.3 Duplicates allowed
- 6.4 Heterogenous

**Final Assessment** 



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