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▪ Defining a List

-A list of lists in Python is a list where each element of the outer list is itself a list. This creates a two-dimensional structure, often referred to as a matrix or a 2D list. Each inner list can have a different length, allowing for irregular or jagged structures.

▪ List Syntax

-The syntax for lists is an opening parentheses, then all the elements of the list (seperated by whitespace) and finally a closing parentheses

▪ Accessing List Elements

-Python list elements are ordered by index, a number referring to their placement in the list. List indices start at 0 and increment by one. To access a list element by index, square bracket notation is used: list[index] .

▪ Loop through a List

-You can loop through the list items by using a while loop use the len() function to determine the length of the list, then start at 0 and loop your way through the list items by referring to their indexes. Remember to increase the index by 1 after each iteration.

▪ List Length

-The length of a list is the number of elements in the list. To get the length of a list in Python, the most common way to do so is to use the len() method as it's the most efficient and is a built-in function. Since a list is an object, the size of the list if already stored in memory for quick retrieval.

▪ Add Items in the List

-You can use the insert() method to insert an item to a list at a specified index. Each item in a list has an index. The first item has an index of zero (0), the second has an index of one (1), and so on.

▪ Remove Item from a List

-Using the remove() method.
Using the list object's pop() method.
Using the del operator.

▪ The List () Constructor

-The list() python is a built-in function that works as a constructor. Lists are data structures in Python that are defined as dynamic arrays. These store similar types of data types such as integers, strings, objects, etc. They are mutable and ordered, with each element recognized with a unique index.

• List Methods

-Python lists come with several built-in methods that allow you to manipulate and work with your data effectively. These methods include append() , extend() , insert() , remove() , pop() , index() , count() , sort() , reverse() , and clear() .

▪ Nested Lists

-A nested list is a list that appears as an element within another list.