Module 14) Python – Collections, functions and Modules

Accessing List

Theory:

• Understanding how to create and access elements in a list.

• Indexing in lists (positive and negative indexing).

• Slicing a list: accessing a range of elements.

**1. Creating a List**

A **list** is an ordered collection of elements, where each element can be of any data type. Lists are defined using square brackets ([]), and elements are separated by commas.

**2. Indexing in Lists**

* **Positive Indexing**: Starts from 0, with the first element having an index of 0, the second element an index of 1, and so on.
* **Negative Indexing**: Starts from -1, with the last element having an index of -1, the second-to-last an index of -2, and so on.

Indexing allows direct access to individual elements based on their position within the list.

**3. Slicing a List**

Slicing is the process of extracting a portion of a list.

* It allows selecting a range of elements using the start and end positions.
* The slicing operation uses the format start:end, where the start is inclusive, and the end is exclusive.

Slicing can also include an optional step, which determines the interval between elements in the range.