100 DAYS 100 PYTHON PROBLEMS

[Day 6: List and List operations]

LISTS :-

- A List is a fundamental data structure in Python that allow you to store a collection of items in an ordered sequence.
- List can contain elements of different data types, and each element is indexed stating from 0.
- You can create a list by enclosing items in "[ ]" and separating them with commas.

Common List Operations :-

- **Accessing Elements** : You can access elements by index.
  e.g. **my_list[0]** retrieves first element of list.
- **Slicing** : Slicing allows you to extract a portion of list using **[start : stop]** notation.
- **Modifying Elements** : You can change the value of an element by assignment.
  e.g. **my_list[1] = 42** changes first element to 42.
- **Appending:** You can add an element to the end of the list using the **append()** method.
- **Inserting:** You can insert an element at a specific position using the **insert()** method.
- **Removing Elements:** You can remove elements by value using the **remove()** method or by index using the **pop()** method.
- **List Length:** You can get the number of elements in a list using the **len()** function.

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PRACTICE QUESTIONS :-

1. Create a list called **fruits** with three of your favorite fruits and print the list.
2. Add a new fruit to the list and print the updated list.
3. Access and print the second fruit in the list.
4. Remove the first fruit from the list and print the updated list.
5. Create a new list called **numbers** with five integers. Print the length of the list.
6. Slice the **numbers** list to extract the last three elements and print the result.