



Assignment: List in Python



Objective:

To understand how to create, access, modify, and manipulate lists in Python through a variety of practical tasks.



Level 1 – Basic Operations



Task 1: Create a List

Create a list named `fruits` containing `["apple", "banana", "cherry"]` and print it.



Task 2: Access List Items

Print the first and last element of the `fruits` list using indexing.



Task 3: Update List Item

Change "banana" to "mango" in the `fruits` list and print the updated list.



Task 4: Append and Insert

- Append "orange" to the list.
- Insert "grape" at the second position.



Task 5: Remove Items

- Remove "cherry" from the list using `remove()`.
- Remove the last item using `pop()`.



Level 2 – Intermediate Tasks



Task 6: Slicing

Print the first three elements from the list using slicing.



Task 7: Loop Through a List

Use a `for` loop to print each fruit in the list on a new line.



Task 8: List Length

Print the total number of elements in the list using `len()`.



Assignment: List in Python



Task 9: Sort and Reverse

- Sort the list in ascending order.
- Then reverse the list.



Task 10: List Comprehension

Create a list of squares for numbers 1 to 10 using list comprehension.



Level 3 – Advanced Tasks



Task 11: Remove Duplicates

Create a list with duplicates, remove them, and print the unique list.



Task 12: Merge Two Lists

Merge two lists:

```
list1 = [1, 2, 3]
```

```
list2 = [4, 5, 6]
```

into a single list using + operator and print it.



Task 13: Nested Lists

Create a nested list:

```
matrix = [[1, 2], [3, 4], [5, 6]]
```

Access the number 4 and print it.



Task 14: List of Even Numbers

Write a program to find all even numbers from a list:

```
nums = [1, 4, 7, 10, 13, 16, 19]
```