Basic Level

1. Create a list and print it

Question: Create a list of 5 numbers and print it.

Solution:

```
nums = [1, 2, 3, 4, 5]
print(nums)
```

---

2. Find the length of a list

Question: Find the number of elements in a list.

Solution:

```
lst = [10, 20, 30, 40]
print(len(lst))
```

---

3. Access the first and last element

Question: Print the first and last element of a list.

Solution:

```
lst = [5, 10, 15, 20]
print(lst[0], lst[-1])
```

---

4. Add an element to a list

Question: Add 50 to the end of a list.

Solution:

```
lst = [10, 20, 30]
lst.append(50)
print(lst)
```

---

5. Remove an element

Question: Remove 20 from the list.

Solution:

```
lst = [10, 20, 30]
lst.remove(20)
print(lst)
```

Intermediate Level

6. Sum of list elements

Question: Find the sum of all elements in a list.

Solution:

```
lst = [5, 10, 15]
print(sum(lst))
```

---

7. Find maximum and minimum

Question: Find the maximum and minimum values in a list.

Solution:

```
lst = [4, 9, 2, 7]
print(max(lst), min(lst))
```

---

8. Check if element exists

Question: Check whether 25 exists in the list.

Solution:

```
lst = [10, 20, 25, 30]
print(25 in lst)
```

---

9. Reverse a list

Question: Reverse a list.

Solution:

```
lst = [1, 2, 3, 4]
```

```
lst.reverse()
print(lst)
```

---

10. Sort a list

Question: Sort a list in ascending order.

Solution:

```
lst = [5, 1, 4, 2]
lst.sort()
print(lst)
```

Logic-Based

11. Count occurrences

Question: Count how many times 2 appears in a list.

Solution:

```
lst = [1, 2, 2, 3, 2]
print(lst.count(2))
```

---

12. Remove duplicates

Question: Remove duplicates from a list.

Solution:

```
lst = [1, 2, 2, 3, 3]
unique = list(set(lst))
print(unique)
```

---

13. Find even numbers

Question: Extract all even numbers from a list.

Solution:

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

```
evens = [x for x in lst if x % 2 == 0]
print(evens)
```

---

14. Find odd numbers

Question: Extract all odd numbers from a list.

Solution:

```
lst = [1, 2, 3, 4, 5]
odds = [x for x in lst if x % 2 != 0]
print(odds)
```

---

15. Multiply all elements

Question: Multiply all elements in a list.

Solution:

```
lst = [1, 2, 3, 4]
result = 1
for i in lst:
  result *= i
print(result)
```

Advanced Practice

16. Find second largest number

Question: Find the second largest element in a list.

Solution:

```
lst = [10, 20, 4, 45, 99]
lst.sort()
print(lst[-2])
```

---

17. Swap first and last elements

Question: Swap the first and last elements.

Solution:

```
lst = [1, 2, 3, 4]
lst[0], lst[-1] = lst[-1], lst[0]
print(lst)
```

---

18. Check if list is empty

Question: Check whether a list is empty.

Solution:

```
lst = []
if not lst:
  print("List is empty")
```

---

19. Clone a list

Question: Create a copy of a list.

Solution:

```
lst = [1, 2, 3]
copy_lst = lst.copy()
print(copy_lst)
```

---

20. Find common elements

Question: Find common elements between two lists.

Solution:

```
lst1 = [1, 2, 3, 4]
lst2 = [3, 4, 5, 6]
common = list(set(lst1) & set(lst2))
print(common)
```