1. Create a list of 5 integers and print them.

nums = [10, 20, 30, 40, 50]

print(nums)

2. Create a list of strings and print each element using a for loop.

fruits = ['apple', 'banana', 'cherry']

for fruit in fruits:

print(fruit)

1. Find the length of a given list using len().

items = [1, 2, 3, 4, 5]

print(len(items))

1. Access the 2nd and 4th elements from a list.

colors = ['red', 'blue', 'green', 'yellow', 'purple']

print(colors[1], colors[3])

1. Create a list of numbers and print a sublist from index 1 to 3.

nums = [5, 10, 15, 20, 25]

print(nums[1:4])

1. Add a new element at the end of a list using append().

names = ['Alice', 'Bob']

names.append('Charlie')

print(names)

1. Insert an element at the 2nd position using insert().

letters = ['a', 'b', 'd']

letters.insert(1, 'c')

print(letters)

1. Add multiple elements to a list using extend().

nums = [1, 2]

nums.extend([3, 4, 5])

print(nums)

1. Remove a specific element from a list using remove().

animals = ['cat', 'dog', 'rabbit']

animals.remove('dog')

print(animals)

1. Remove the last element of a list using pop().

numbers = [100, 200, 300]

numbers.pop()

print(numbers)

1. Sort a list of numbers in ascending order using sort().

nums = [40, 10, 30, 20]

nums.sort()

print(nums)

1. Reverse a list using reverse().

letters = ['a', 'b', 'c']

letters.reverse()

print(letters)

1. Count how many times a specific element appears in a list using count().

nums = [1, 2, 2, 3, 2]

print(nums.count(2))

1. Find the index of an element using index().

colors = ['red', 'green', 'blue']

print(colors.index('green'))

1. Copy a list into another list using copy().

a = [5, 6, 7]

b = a.copy()

print(b)

1. Clear all elements from a list using clear().

items = [1, 2, 3]

items.clear()

print(items)

1. Use list comprehension to create a list of squares from 1 to 10.

squares = [x\*x for x in range(1, 11)]

print(squares)

1. Create a nested list (list inside a list) and access an element from the inner list.

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nested = [[1, 2], [3, 4], [5, 6]]

print(nested[1][0]) # prints 3

1. Check if a particular element exists in a list using the 'in' operator.

nums = [10, 20, 30]

print(20 in nums)

1. Write a program to take 5 numbers from the user, store them in a list, and print the sum of all numbers.

nums = []

for i in range(5):

nums.append(int(input("Enter a number: ")))

print("Sum:", sum(nums))