Assignment 1

Title: Store and Display Elements Using ArrayList

Problem Statement:
Create an ArrayList to store 5 student names and display all names.

Requirements:

- Use ArrayList
- Use add() and get() methods

Expected Outcome:
All student names should be printed one by one.

Assignment 2

Title: Add and Remove Elements from ArrayList

Problem Statement:
Create an ArrayList of integers. Add 5 numbers and remove one number.

Requirements:

- Use add()
- Use remove()

Expected Outcome:
Updated list should be displayed after removal.

Assignment 3

Title: Find Size of Collection

Problem Statement:
Create an ArrayList of city names and find how many cities are stored.

Requirements:

- Use size() method

Expected Outcome:
Total number of cities should be displayed.

Assignment 4

Title: Iterate Collection Using for-each Loop

Problem Statement:
Store 5 course names in an ArrayList and display them using a for-each loop.

Requirements:

- Use enhanced for loop

Expected Outcome:
All course names printed successfully.

Assignment 5

Title: Check Element Exists in List

Problem Statement:
Create an ArrayList of fruits and check whether "Apple" exists.

Requirements:

- Use contains() method

Expected Outcome:
Program should print whether Apple is present or not.

Assignment 6

Title: Store Unique Elements Using HashSet

Problem Statement:
Create a HashSet and add duplicate numbers.

Requirements:

- Use HashSet
- Add duplicate values

Expected Outcome:
Duplicates should not be stored.

Assignment 7

Title: Display HashSet Elements

Problem Statement:
Store 5 colors in a HashSet and display them.

Requirements:

- Use for-each loop

Expected Outcome:
All colors printed (order not important).

Assignment 8

Title: Basic Key-Value Storage Using HashMap

Problem Statement:
Create a HashMap to store employee ID and employee name.

Requirements:

- Use put() and get()

Expected Outcome:
Employee details printed correctly.

Assignment 9

Title: Display All Keys and Values from HashMap

Problem Statement:
Store 3 country codes and country names in a HashMap.

Requirements:

- Use keySet() or entrySet()

Expected Outcome:
All keys and values printed.

Assignment 10

Title: Remove Entry from HashMap

Problem Statement:
Remove one employee entry from a HashMap.

Requirements:

- Use remove() method

Expected Outcome:
Remaining entries printed.

Assignment 11

Title: Use LinkedList to Store Elements

Problem Statement:
Store 5 numbers using LinkedList and display them.

Requirements:

- Use add() method

Expected Outcome:
All elements printed.

Assignment 12

Title: Check Collection Is Empty

Problem Statement:
Create an ArrayList and check whether it is empty.

Requirements:

- Use isEmpty()

Expected Outcome:
Program should print true or false.

Assignment 13

Title: Clear All Elements from Collection

Problem Statement:
Add elements to an ArrayList and remove all elements.

Requirements:

- Use clear() method

Expected Outcome:
List should be empty.

Assignment 14

Title: Store Different Data Types Using Wrapper Classes

Problem Statement:
Store integer values using wrapper class in an ArrayList.

Requirements:

- Use Integer wrapper class

Expected Outcome:
Values stored and printed successfully.

Assignment 15

Title: Convert Collection to Array

Problem Statement:
Convert an ArrayList of strings to an array.

Requirements:

- Use toArray()

Expected Outcome:
Array elements printed.