CSE 2522 Data Structure Sessional

Lab 1: Introduction to Arrays

** Recall Structured and Object-Oriented Programming Concepts

Exercise 1:

Use **Object-Oriented Programming** (classes & methods) to solve the following problems. Define appropriate classes to encapsulate array data and operations.

  a. **Find the Largest & Smallest Element**
     Create a class with methods to input an array and find the largest and smallest elements.

  b. **Find Second Largest & Second Smallest Element**
     Extend the class to include methods to find the second largest and second smallest values.

  c. **Remove Duplicates from Array**
     Add a method to remove duplicate elements and display the updated array.

  d. **Merge Two Arrays**
     Create a separate class or method to merge two array objects and show the result.

  e. **Find Sum & Product of Elements**
     Add methods to compute the sum and product of all elements in the array.

  f. **Print Element at Given Position**
     Add a method to print the element at a specific index, with proper bounds checking.