Data Structures and Algorithms

Department of Computer Science

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Assessment #1

Questions	CLO's	Marks
Q1: A music streaming app stores track titles in an unsorted array. Write a program to take a track title as input and perform **Linear Search** to find it. Print the position if found, otherwise print "Track not available." Extend the program to count the number of comparisons made.	CLO1, CLO2	5
Q2: An airline stores available flight numbers in a sorted array. Write a program where the user enters a flight number, and the system applies **Binary Search** to check availability. If found, print "Flight Booked." Otherwise, print "Flight Not Found." Also, display all mid values checked.	CLO1, CLO2	5
Q3: A class stores students' assignment marks in an unsorted array. Write a program to **Bubble Sort** these marks into ascending order. Then, allow the teacher to search for a specific mark using **Linear Search**. Display the sorted list, searched mark position, total swaps, and total comparisons.	CLO1, CLO2, CLO3	5
Q4: A cafeteria system records the cost of items being ordered. Use **Insertion Sort** to keep the list sorted dynamically. After every new entry, display the updated list. If more than 8 items are recorded, print the 2 cheapest and 2 most expensive items.	CLO1, CLO3, CLO4	5