Course: Data Structure   Class: BSE-4D
Instructor: N a u m a n Khan   Marks: 20 marks

Instructions:
1. Must be submitted at CUOnline only.
2. Last date of submission is **17-09-2025**. Must be submitted inside lab
3. Copying other's assignments will leave a negative impression. Students are advised not to copy material from others.

Lab Task 03 – Data structure concept (Array Implementation)

Objective:
- Learn to apply array operations dynamically.
- Use switch-case menus for interactive programming.
- Understand shifting elements during insertion and deletion.
- Practice searching techniques in arrays.

Q1: Array data structure

Instruction
Write a Java program to implement a menu-driven system for the following operations on an integer array and also design algorithm:

1**. Traversal:**
- Display all elements in the array taken from the user.

2**. Insertion:**
  Insert an element:
- At Beginning
- At Given Position (take position from user)
- At End

3. **Deletion:**
  Delete an element:
- From Beginning
- From Given Position (take position from user)
- From End

4. Searching:
- Linear Search (take value of key from user)

5. Exit

Sample Menu Structure

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   ARRAY OPERATIONS MENU

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1. Traversal
2. Insert Element
3. Delete Element
4. Search Element
5. Exit
Enter your choice: