```
import java.util.Scanner;

public class Main {
    public static void inputArray(int[] arr, int size) {
        Scanner scanner = new Scanner(System.in);
        System.out.println("Enter " + size + " elements:");
        for (int i = 0; i < size; i++) {
            arr[i] = scanner.nextInt();
        }
    }

    public static void displayArray(int[] arr, int size) {
        System.out.print("Array elements: ");
        for (int i = 0; i < size; i++) {
            System.out.print(arr[i] + " ");
        }
        System.out.println();
    }

    public static void linearSearch(int[] arr, int size, int key) {
        boolean found = false;
        System.out.println("Linear Search Results:");
        for (int i = 0; i < size; i++) {
            if (arr[i] == key) {
                System.out.println("Element " + key + " found at index " + i);
                found = true;
            }
        }
        if (!found) {
            System.out.println("Element " + key + " not found in the array.");
        }
    }

    public static void insertElement(int[] arr, int[] size, int element, int position) {
        if (*size >= MAX_SIZE) {
            System.out.println("Array is full. Cannot insert more elements.");
            return;
        }
        if (position < 0 || position > *size) {
            System.out.println("Invalid position for insertion.");
            return;
        }
        for (int i = *size; i > position; i--) {
            arr[i] = arr[i - 1];
        }
        arr[position] = element;
        (*size)++;
        System.out.println("Element " + element + " inserted at position " + position + ".");
    }

    // Define other functions similarly

    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        int choice, size, element, position, key;
        System.out.print("Enter size of the array: ");
```

```
        size = scanner.nextInt();
        int[] arr = new int[MAX_SIZE];

        inputArray(arr, size);

        do {
            System.out.println("\nMenu:");
            System.out.println("1. Display Array");
            System.out.println("2. Linear Search");
            System.out.println("3. Insert Element");
            System.out.println("4. Delete Element");
            System.out.println("5. Reverse Array");
            System.out.println("6. Update Array (Multiply odd-indexed elements by 2)");
            System.out.println("7. Update Array (Add 5 to even-indexed elements)");
            System.out.println("0. Exit");
            System.out.print("Enter your choice: ");
            choice = scanner.nextInt();

            switch (choice) {
                case 1:
                    displayArray(arr, size);
                    break;
                case 2:
                    System.out.print("Enter element to search: ");
                    key = scanner.nextInt();
                    linearSearch(arr, size, key);
                    break;
                case 3:
                    System.out.print("Enter element to insert: ");
                    element = scanner.nextInt();
                    System.out.print("Enter position to insert: ");
                    position = scanner.nextInt();
                    insertElement(arr, size, element, position);
                    break;
                // Define other cases similarly
                case 0:
                    System.out.println("Exiting program.");
                    break;
                default:
                    System.out.println("Invalid choice! Please enter a number between 0 and 7.");
            }
        } while (choice != 0);
    }
}
```