

```
MAX_SIZE = 100
```

```
def inputArray(arr, size):  
    print(f"Enter {size} elements:")  
    for i in range(size):  
        arr[i] = int(input())
```

```
def displayArray(arr, size):  
    print("Array elements:", end=" ")  
    for i in range(size):  
        print(arr[i], end=" ")  
    print()
```

```
def linearSearch(arr, size, key):  
    found = False  
    print("Linear Search Results:")  
    for i in range(size):  
        if arr[i] == key:  
            print(f"Element {key} found at index {i}")  
            found = True  
    if not found:  
        print(f"Element {key} not found in the array.")
```

```
def insertElement(arr, size, element, position):  
    if size >= MAX_SIZE:  
        print("Array is full. Cannot insert more elements.")  
        return  
    if position < 0 or position > size:  
        print("Invalid position for insertion.")  
        return  
    for i in range(size, position, -1):  
        arr[i] = arr[i - 1]  
    arr[position] = element  
    size += 1  
    print(f"Element {element} inserted at position {position}.")
```

```
# Define other functions similarly
```

```
if __name__ == "__main__":  
    choice = -1  
    size = int(input("Enter size of the array: "))  
    arr = [0] * MAX_SIZE
```

```
    inputArray(arr, size)
```

```
    while choice != 0:  
        print("\nMenu:")  
        print("1. Display Array")  
        print("2. Linear Search")  
        print("3. Insert Element")  
        print("4. Delete Element")  
        print("5. Reverse Array")  
        print("6. Update Array (Multiply odd-indexed elements by 2)")  
        print("7. Update Array (Add 5 to even-indexed elements)")  
        print("0. Exit")  
        choice = int(input("Enter your choice: "))
```

```
if choice == 1:
    displayArray(arr, size)
elif choice == 2:
    key = int(input("Enter element to search: "))
    linearSearch(arr, size, key)
elif choice == 3:
    element = int(input("Enter element to insert: "))
    position = int(input("Enter position to insert: "))
    insertElement(arr, size, element, position)
# Define other cases similarly
elif choice == 0:
    print("Exiting program.")
else:
    print("Invalid choice! Please enter a number between 0 and 7.")
```