Assignment 02

1. You are given an **ArrayList** containing a sequence of elements. try to reverse the order of elements in the **ArrayList** in-place(in the same arrayList) without using the built-in **Reverse**. Implement a function that takes the **ArrayList** as input and modifies it to have the reversed order of elements.

2. You are given a list of integers. Your task is to find and return a new list containing only the even numbers from the given list.

3. implement a custom list called **FixedSizeList<T>** with a predetermined capacity. This list should not allow more elements than its capacity and should provide clear messages if one tries to exceed it or access invalid indices.

   Requirements:

   1. Create a generic class named **FixedSizeList<T>**.
   2. Implement a constructor that takes the fixed capacity of the list as a parameter.
   3. Implement an **Add** method that adds an element to the list, but throws an exception if the list is already full.
   4. Implement a **Get** method that retrieves an element at a specific index in the list but throws an exception for invalid indices.

4. Given an array consists of numbers with size N and number of queries, in each query you will be given an integer X, and you should print how many numbers in array that is greater than X.

   Ex:
   Input

3 3 //Size of array , number of queries
11 5 3 //Array
1 //Query1
5 //Query2
13 //Query 3
Output
3 //11,5,3
1 //11
0

5. Given a number N and an array of N numbers. Determine if it's palindrome or not.

   Ex:
   Input:
   5
   1 3 2 3 1
   Output:
   YES

6. Given an array, implement a function to remove duplicate elements from an array.

7. Given an array list , implement a function to remove all odd numbers from it.