Q.1) Accept 10 number in an array. Display all even number at the beginning and all Odd at the end. Use only one loop

```
import java.util.Scanner;

public class test2 {

	public static void evenodd(int arr[]) {

		int narr[]=new int[arr.length];
		int l=0,r=arr.length-1;
		for(int i=0;i<arr.length;i++) {
			if(arr[i]%2==0) {
				narr[l++]=arr[i];
			}
			else {
				narr[r--]=arr[i];
			}
		}

		System.out.println("new Array : ");
		for(int a:narr) {
			System.out.print(a);
		}
	}

	public static void main(String[] args) {
```

```
		Scanner sc = new Scanner(System.in);

		int arr[] = new int[10];

		for (int i = 0; i < arr.length; i++) {
			System.out.print("Enter " + i + " : ");
			arr[i] = sc.nextInt();
		}

		evenodd(arr);

	}
}
```

Q.2) Accept 5 number in an array and sort it. Accept a number from user and check if it is there in an array or not use binary search.

```
import java.lang.reflect.Array;
import java.util.Scanner;

public class test2 {

	public static void sort(int arr[]) {

		for (int i = 0; i < arr.length - 1; i++) {
			for (int j = 0; j < arr.length - 1 - i; j++) {
				if (arr[j] > arr[j + 1]) {
					int temp = arr[j];
					arr[j] = arr[j + 1];
```

```
                    arr[j + 1] = temp;
                }
            }
        }
}

public static void binarysearch(int arr[], int key) {

        sort(arr);

        int left = 0, right = arr.length - 1;
        boolean found = false;
        while (left <= right) {
            int mid = (left + right) / 2;

            if (arr[mid] == key) {
                System.out.println("Found at index " + mid);
                found = true;
                break;
            } else if (arr[mid] < key) {
                left = mid + 1;
            } else {
                right = mid - 1;
            }
        }
        if (!found)
            System.out.println("Not found");
```

```
	}

	public static void main(String[] args) {

		Scanner sc = new Scanner(System.in);

		int arr[] = new int[5];

		for (int i = 0; i < arr.length; i++) {
			System.out.print("Enter " + i + " : ");
			arr[i] = sc.nextInt();
		}

		System.out.println("Enter no to search: ");

		int key = sc.nextInt();

		binarysearch(arr, key);

	}
}
```