

```
package phasel.practiceProjects;
import java.util.ArrayList;
import java.util.Arrays;
import java.util.Collections;
import java.util.List;
public class LongestIncreasingSubsequence
{
    public static void main(String[] args)
    {
        int[] arr = {9,21,8,32,20,49,40,59,61,8};

        System.out.println("Given array :");
        for (int a : arr)
        {
            System.out.print(a + " ");
        }
        System.out.println();

        int n = arr.length;
        int[] liss = new int[n];
        Arrays.fill(liss, 1);

        for (int i = 1; i < n; i++)
        {
            for (int j = 0; j < i; j++)
            {
                if(arr[i]>arr[j] && liss[i]<=liss[j])
                {
                    liss[i]=liss[j]+1;
                }
            }
        }

        int maxLength = 0;
        int maxIndex = 0;
        for(int i=0; i<n;i++)
        {
            if(liss[i]>maxLength)
            {
                maxLength=liss[i];
                maxIndex=i;
            }
        }
    }
}
```

```
List<Integer> lss = new ArrayList<>();
int current=maxLength;
for(int i = maxIndex; i>=0; i--)
{
    if(lss[i]==current)
    {
        lss.add(arr[i]);
        current--;
    }
}

Collections.reverse(lss);

System.out.println("Longest increasing subsequence:");
for (int a : lss)
{
    System.out.print(a + " ");
}
}
```