**Java Code of LongestIncreaseSubsequence---**

**Main:-**

**package** longestIncreaseSubsequence;

**import** java.util.\*;

**public** **class** Main {

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

ArrayList<Integer> myArray = **new** ArrayList<>();

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

System.***out***.println("Please enter the size of you list:");

**int** listSize = sc.nextInt();

**for** (**int** i = 0; i < listSize; i++) {

System.***out***.println("Enter value for index #" + i + " :");

**int** value = sc.nextInt();

myArray.add(value);

}

System.***out***.println("Your list of numbers is: " + myArray);

LongestArraySub lis = **new** LongestArraySub();

lis.lengthOfLIS(myArray);

}

}

**LongestArraySub:--**

**package** longestIncreaseSubsequence;

**import** java.util.ArrayList;

**public** **class** LongestArraySub {

**public** **int** lengthOfLIS(ArrayList arrayList) {

**if** (arrayList.size() == 0) {

System.***out***.println("Longest Increasing Subsequence is :" + 0);

**return** 0;

}

**int** size = arrayList.size();

ArrayList<Integer> newArraylist = **new** ArrayList<Integer>();

**for** (**int** x = 0; x < size; x++) {

newArraylist.add(0);

}

newArraylist.add(0, 1);

**int** maximum = 1;

**int** newsize = (newArraylist.size()) - 1;

**for** (**int** i = 1; i < newsize; i++) {

**int** newValueMax = 0;

**for** (**int** j = 0; j < i; j++) {

**if** ((**int**) arrayList.get(i) > (**int**) arrayList.get(j)) {

newValueMax = Math.*max*(newValueMax, newArraylist.get(j));

}

}

newArraylist.add(i, newValueMax + 1);

maximum = Math.*max*(maximum, newArraylist.get(i));

}

System.***out***.println("Longest Increasing Subsequence is :" + maximum);

**return** maximum;

}

}