**LONGEST INCREASING SUBSEQUENCE**

**CODE:**

package com.bhanu.project;

public class LongestIncreasingSubsequence {

static int max\_ref; // stores the LIS

static int \_lis(int arr[], int n)

{

if (n == 1)

return 1;

int res, max\_ending\_here = 1;

for (int i = 1; i < n; i++) {

res = \_lis(arr, i);

if (arr[i - 1] < arr[n - 1]

&& res + 1 > max\_ending\_here)

max\_ending\_here = res + 1;

}

if (max\_ref < max\_ending\_here)

max\_ref = max\_ending\_here;

return max\_ending\_here;

}

static int lis(int arr[], int n)

{

max\_ref = 1;

\_lis(arr, n);

return max\_ref;

}

public static void main(String[] args) {

// TODO Auto-generated method stub

int arr[] = { 10, 22, 9, 33, 21, 50, 41, 60 };

int n = arr.length;

System.out.println("Length of list is " + lis(arr, n)

+ "\n");

}

}