LONGEST INCREASING SUBSEQUENCE

```
package subsequence;

public class longest_increasing_subsequence {

	public static void main(String[] args) {

  int arr[] = { 3,5,9,12,13,14,16,22};
  int arr_length = arr.length;
 System.out.println("The length of longest Increasing subsequence is: "+
incre_subseq(arr, arr_length));
                }
               static int incre_subseq(int my_arr[], int arr_length){
                   int seq_arr[] = new int[arr_length];
                   int i, j, max = 0;

                   for (i = 0; i < arr_length; i++)
                   {
                      seq_arr[i] = 1;
                   }

                   for (i = 1; i < arr_length; i++)
                   {
                     for (j = 0; j < i; j++)
                     {
                           if (my_arr[i] > my_arr[j] && seq_arr[i] < seq_arr[j] + 1)
                            {
                                  seq_arr[i] = seq_arr[j] + 1;
                            }
                     }
                   }
                   for (i = 0; i < arr_length; i++)
                   {
                   if (max < seq_arr[i])
                   {
                   max = seq_arr[i];
                   }
                   }
                   return max;

               }

      }
```