

## Project:4

```
package Assignmentpractiseproject;

public class LIS {
    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[])
    {
        int arr[] = { 10, 22, 9, 33, 21, 50, 41, 60 };
        int n = arr.length;
        System.out.println("Length of lis is " + lis(arr, n)
                           + "\n");
    }
}
```

OUTPUT:

Length of lis is 5