**Source Code for Longest Increasing Subsequence :-**

**GitHub Reciprocity Link**:- <https://github.com/kapildavey/Phase1.git>

**Source Code:-**

**package** longestIncreasingSubsequence;

**public** **class** Liss

{

**public** **static** **int** LIS(**int**[] arr, **int** i, **int** n, **int** prev)

{

**if** (i == n)

{

**return** 0;

}

**int** excl = *LIS*(arr, i + 1, n, prev);

**int** incl = 0;

**if** (arr[i] > prev)

{

incl = 1 + *LIS*(arr, i + 1, n, arr[i]);

}

**return** Integer.*max*(incl, excl);

}

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

{

**int**[] arr = { 0, 8, 4, 12, 2, 10, 6, 14, 1, 9, 5, 13, 3, 11, 7, 15 };

System.***out***.println("The length of the longest Increasing Subsequence is "

+ *LIS*(arr, 0, arr.length, Integer.***MIN\_VALUE***));

}

}