# bit.ly/segment-trees

# Range Query + Point Updates

## Basics

Segment Trees Series | Basics of Segment Trees

***After watching the video, please try the problems yourself first before looking into solutions.***

### Practice Problems

1. [HackerEarth] Finding Range Minimum
2. [Codeforces] 339D Xenia and Bit Operations
3. [HackerEarth] Range MOD Query
4. [HackerEarth] Incremental queries
5. 

## Queries on Prefix of Array

Segment Trees Series | Queries on prefix of array | 57E Enemy is Weak

***After watching the video, please try the problems yourself first before looking into solutions.***

### Practice Problems

1. [Codeforces] 61E Enemy is Weak
2. [Codeforces] 459D Pashmak and Parmida's problem
3. [Leetcode] Longest Increasing Subsequence - NlogN
4. [Spoj] DOSA
5. [Spoj] HMLIS - How Many LIS
6. [Leetcode] 2736. Maximum Sum Queries
7. **[Leetcode] 2926. Maximum Balanced Subsequence Sum (Hard)**
8. [ICPC] BEAUTPAR - Beautiful Partitions
9. [Spoj] ONEXLIS - One X LIS

### Solutions

1. Segment Trees Series | Part 3 | Solving Codeforces problem "Enemy is Weak"
2. Segment Trees Series | Part 4 | Solving Codeforces problem "Pashmak and Pa…

3. Segment Trees Series | Part 5 | Longest Increasing Subsequence - LIS
4. [Exactly similar to 3]
5. Segment Trees Series | Part 6 | Solving Spoj problem "HMLIS - HowManyLis"
6. [Similar to above]
7. 2926. Maximum Balanced Subsequence Sum | Weekly Leetcode 370

# Binary Search

Segment Trees Series | Part 7 | Binary Search using Segment Trees

***After watching the video, please try the problems yourself first before looking into solutions.***

## Practice Problems

1. [Leetcode] Sliding Subarray Beauty
2. [Leetcode] Minimum Number of Operations to Make All Array Elements Equal to 1
3.

## Solutions

1. Segment Trees Series | Part 8 | Binary Search | 2653. Sliding Subarray Beauty
2.

# Merge Sort Tree

Segment Trees Series | Part 9 | Merge Sort Tree (Why, What and How)

***After watching the video, please try the problems yourself first before looking into solutions.***

## Practice Problems

1. [SPOJ] KQUERY - K-query
2. [SPOJ] GIVEAWAY - Give Away
3. [Leetcode] 2736. Maximum Sum Queries
4. [SPOJ] MKTHNUM - K-th Number
5. [Codeforces] 216E - Valera and Queries
6.

## Solutions

1. Segment Trees Series | Part 10 | Merge Sort Tree - Solving problems - KQUER…
2. Segment Trees Series | Part 10 | Merge Sort Tree - Solving problems - KQUER…
3. 6473. Maximum Sum Queries | Merge Sort Trees | Segment Tree | Leetcode W…
4. Segment Trees Series | Part 11 | Merge Sort Tree - MKTHNUM (K-th Number)
5.

# Persistent Segment Trees

Segment Trees Series | Part 12 | Persistent Segment Trees - Introduction

***After watching the video, please try the problems yourself first before looking into solutions.***

## Practice Problems

1. [SPOJ] KQUERY - K-query
2. ~~[SPOJ] GIVEAWAY - Give Away~~ (Not solvable using Persistence Segment Trees)
3. [SPOJ] MKTHNUM - K-th Number
4. [SPOJ] DQUERY - D-query
5. [SPOJ] COT - Count on a tree
6. [Codeforces] D. Persistent Bookcase
7. [SPOJ] TTM - To the moon
8. [Codeforces] 216E - Valera and Queries
9. [Codeforces] Problem - 762E - Codeforces
10. [HackerRank] Kth Number | Morgan Stanley Codeathon 2015 Question | Contests | HackerRank
11.

## Solutions

1. Segment Trees Series | Part 13 | Persistent Segment Trees - KQUERY
2.

# Lazy Propagation

Segment Trees Series | Part 14 | Range Updates | Lazy Propagation

***After watching the video, please try the problems yourself first before looking into solutions.***

## Practice Problems

1. [Codeforces] C. Circular RMQ
2. [Codechef] Multiples of 3
3. https://www.codechef.com/practice-old/tags/lazy-propagation

## Solutions

1.