CPS Level - 1 (Binary search Part)

Class - 15 :

Video Link : <https://youtu.be/byi0BqAV8Qc>

Discussed topics :

1) Binary search & its complexity analysis

2) lower bound

3) Upper bound

4) Binary Search(Leetcode)

Link : <https://leetcode.com/problems/binary-search/>

My Code : <https://paste.ubuntu.com/p/N55hRjWDJH/>

5) Intersection of Two Arrays (Leetcode)

Link : <https://leetcode.com/problems/intersection-of-two-arrays/>

My Code : <https://paste.ubuntu.com/p/Sm8gqh5kyB/>

Class Tasks :

All the problems discussed in class are class tasks.

Class - 16 :

Video Link : <https://youtu.be/dFsvBdKK3kg>

Discussed topics :

1) More practice problems on Upper bound & Lower bound

2) First and last occurrences of X (GFG)

Link : <https://practice.geeksforgeeks.org/problems/first-and-last-occurrences-of-x/0>

My Code : <https://paste.ubuntu.com/p/k9YDqNB5HM/>

3) BSEARCH1 - Binary search (Spoj)

Link : <https://www.spoj.com/problems/BSEARCH1/>

My Code : <https://paste.ubuntu.com/p/cz6B2JtkDj/>

4) Two Sum II - Input array is sorted (Leetcode)

Link : <https://leetcode.com/problems/two-sum-ii-input-array-is-sorted/>

My Code : <https://paste.ubuntu.com/p/cz6B2JtkDj/>

5) Search Insert Position (Leetcode)

Link :<https://leetcode.com/problems/search-insert-position/>

My Code : <https://paste.ubuntu.com/p/rkXSDTNwqM/>

6) Count Negative Numbers in a Sorted Matrix (Leetcode)

Link :<https://leetcode.com/problems/count-negative-numbers-in-a-sorted-matrix/>

My Code : <https://paste.ubuntu.com/p/hJyJHmWwtY/>

Class Tasks :

All the problems discussed in class are class tasks.

Class - 17 :

Video Link : <https://youtu.be/BE0iDoSFV9Y>

Discussed topics :

1) Binary search, integer bisection and Practice Problems

2) MATHLOVE - Math is Love (Spoj)

Link : <https://www.spoj.com/problems/MATHLOVE/>

My Code : <https://paste.ubuntu.com/p/NGjWMbQZCZ/>

3) Monk's Encounter with Polynomial (Hackerearth)

Link : <https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/monks-encounter-with-polynomial/>

My Code : <https://paste.ubuntu.com/p/ZwDXfjcP4B/>

4) RPLC - Coke madness (Spoj)

Link : <https://www.spoj.com/problems/RPLC/>

My Code : <https://paste.ubuntu.com/p/5cR5R4Gpz6/>

5) SABBIRGAME - Sabbir and Game (Spoj)

Link :<https://www.spoj.com/problems/SABBIRGAME>

My Code : <https://paste.ubuntu.com/p/2hXzXCCBHx/>

Class Tasks :

All the problems discussed in class are class tasks.

Class - 18 :

Class Link : <https://youtu.be/1sIZRGH034s>

Discussed topics :

1) More practice problems on Integer bisection

2) Worms (Codeforces)

Link : <https://codeforces.com/problemset/problem/474/B>

My Code : <https://codeforces.com/contest/474/submission/92141717>

3) Strange Island (IUBAT NCPC 2018)

Description Link :<https://drive.google.com/file/d/1LaA_0J-LsAwyBkdJ9EQbiKPZ-gFrk3bH/view?usp=sharing>

Online Judge Link : <https://algo.codemarshal.org/contests/ncpc18/problems/I>

My Code : <https://paste.ubuntu.com/p/zMKmKZbwVG/>

Class Tasks :

All the problems discussed in class are class tasks.

Class - 19 :

Class Link : <https://youtu.be/EwZh5KscMWY>

**Discussed topics :**

1) Fractional Bisection & Practice problems

2) Square root (GFG)

Link : <https://practice.geeksforgeeks.org/problems/square-root/1>

My Code : <https://paste.ubuntu.com/p/s2sWMQvrmt/>

3) Count Squares (GFG)

Link : <https://practice.geeksforgeeks.org/problems/count-squares/0>

My Code : <https://paste.ubuntu.com/p/Z2Xmv9JvdT/>

4) Triangle Partitioning (LightOj)

Link : <http://www.lightoj.com/volume_showproblem.php?problem=1043>

My Code : <https://paste.ubuntu.com/p/f3QDGNmDkz/>

Reference: <http://www.shafaetsplanet.com/?p=2295>

Geometry Resources : <https://docs.google.com/document/d/1FpJn5iUcsHhTqohtj6lHFz2gZefGCVslJtbMQcQPnks/edit?usp=sharing>

**Class Tasks :**

All the problems discussed in class are class tasks.

Class - 20 :

Class Link : <https://youtu.be/vt1GN-CLFsU>

**Discussed topics :**

1) Fractional bisection practice problems

2) Expanding Rods (LightOJ)

Link : http://www.lightoj.com/volume\_showproblem.php?problem=1137

My Code : <https://paste.ubuntu.com/p/ZtMjkg47YC/>

3) Crossed Ladders (LightOJ)

Link : http://www.lightoj.com/volume\_showproblem.php?problem=1062

My Code : <https://paste.ubuntu.com/p/ZT46rxkTsr/>

**Class Tasks :**

All the problems discussed in class are class tasks.