

# Codeforces Online Judge

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# Codeforces Online Judge - Phase 2.1

# Lecture Agenda

We will discuss in this lecture  
the following topics

- |                            |               |
|----------------------------|---------------|
| 1- Data Structure Problems | [16 problems] |
| 2- Mathematical Problems   | [27 problems] |
| 3- String Problems         | [16 problems] |
| 4- Greedy Problems         | [27 problems] |
| 5- Brute Force Problems    | [8 problems]  |

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Let's  
**STARTUP**

# Lecture Agenda

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**Section 1: Data Structure Problems**

Section 2: Mathematical Problems

Section 3: String Problems

Section 4: Greedy Problems

Section 5: Brute Force Problems



# Data Structure Problems

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- [01] CF-Round 215: <http://codeforces.com/problemset/problem/368/B>
- [02] CF-Round 367: <http://codeforces.com/problemset/problem/706/B>
- [03] CF-Round 377: <http://codeforces.com/problemset/problem/732/B>
- [04] CF-Round 211: <http://codeforces.com/problemset/problem/363/B>
- [05] CF-Round 227: <http://codeforces.com/problemset/problem/387/B>
- [06] CF-Round 246: <http://codeforces.com/problemset/problem/432/B>
- [07] CF-Round 251: <http://codeforces.com/problemset/problem/439/B>
- [08] CF-Round 315: <http://codeforces.com/problemset/problem/569/B>
- [09] CF-Round 345: <http://codeforces.com/problemset/problem/651/B>
- [10] CF-Round 140: <http://codeforces.com/problemset/problem/227/B>
- [11] CF-Round 149: <http://codeforces.com/problemset/problem/242/B>
- [12] CF-Round 111: <http://codeforces.com/problemset/problem/160/B>
- [13] CF-Round 187: <http://codeforces.com/problemset/problem/315/B>
- [14] CF-Round 248: <http://codeforces.com/problemset/problem/433/B>
- [15] CF-Round 359: <http://codeforces.com/problemset/problem/686/B>
- [16] CF-Round 364: <http://codeforces.com/problemset/problem/701/B>



# Data Structure Problems Solution

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- [01] CF-Round 215: <http://codeforces.com/contest/368/submission/50229325>
- [02] CF-Round 367: <http://codeforces.com/contest/706/submission/50278457>
- [03] CF-Round 377: <http://codeforces.com/contest/732/submission/50280027>
- [04] CF-Round 211: <http://codeforces.com/contest/363/submission/50426531>
- [05] CF-Round 227: <http://codeforces.com/contest/387/submission/50428321>
- [06] CF-Round 246: <http://codeforces.com/contest/432/submission/50430011>
- [07] CF-Round 251: <http://codeforces.com/contest/439/submission/50440130>
- [08] CF-Round 315: <http://codeforces.com/contest/569/submission/50456000>
- [09] CF-Round 345: <http://codeforces.com/contest/651/submission/50478213>
- [10] CF-Round 140: <http://codeforces.com/contest/227/submission/49468183>
- [11] CF-Round 149: <http://codeforces.com/contest/242/submission/50225836>
- [12] CF-Round 111: <http://codeforces.com/contest/160/submission/50284800>
- [13] CF-Round 187: <http://codeforces.com/contest/315/submission/50425975>
- [14] CF-Round 248: <http://codeforces.com/contest/433/submission/50438684>
- [15] CF-Round 359: <http://codeforces.com/contest/686/submission/50478577>
- [16] CF-Round 364: <http://codeforces.com/contest/701/submission/50478927>







# Lecture Agenda

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✓ Section 1: Data Structure Problems

**Section 2: Mathematical Problems**

Section 3: String Problems

Section 4: Greedy Problems

Section 5: Brute Force Problems



# Mathematical Problems

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- [01] CF-Round 126: <http://codeforces.com/problemset/problem/200/B>
- [02] CF-Round 379: <http://codeforces.com/problemset/problem/734/B>
- [03] CF-Round 117: <http://codeforces.com/problemset/problem/182/B>
- [04] CF-Round 162: <http://codeforces.com/problemset/problem/265/B>
- [05] CF-Round 164: <http://codeforces.com/problemset/problem/268/B>
- [06] CF-Round 255: <http://codeforces.com/problemset/problem/447/B>
- [07] CF-Round 299: <http://codeforces.com/problemset/problem/535/B>
- [08] CF-Round 349: <http://codeforces.com/problemset/problem/667/B>
- [09] CF-Round 350: <http://codeforces.com/problemset/problem/670/B>
- [10] CF-Round 378: <http://codeforces.com/problemset/problem/733/B>
- [11] CF-Round 118: <http://codeforces.com/problemset/problem/186/B>
- [12] CF-Round 235: <http://codeforces.com/problemset/problem/401/B>
- [13] CF-Round 242: <http://codeforces.com/problemset/problem/424/B>
- [14] CF-Round 247: <http://codeforces.com/problemset/problem/431/B>
- [15] CF-Round 260: <http://codeforces.com/problemset/problem/456/B>
- [16] CF-Round 264: <http://codeforces.com/problemset/problem/463/B>



# Mathematical Problems Solution

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- [01] CF-Round 126: <http://codeforces.com/contest/200/submission/49268805>
- [02] CF-Round 379: <http://codeforces.com/contest/734/submission/49269520>
- [03] CF-Round 117: <http://codeforces.com/contest/182/submission/49273736>
- [04] CF-Round 162: <http://codeforces.com/contest/265/submission/49453883>
- [05] CF-Round 164: <http://codeforces.com/contest/268/submission/49453935>
- [06] CF-Round 255: <http://codeforces.com/contest/447/submission/49454469>
- [07] CF-Round 299: <http://codeforces.com/contest/535/submission/50275264>
- [08] CF-Round 349: <http://codeforces.com/contest/667/submission/50276316>
- [09] CF-Round 350: <http://codeforces.com/contest/670/submission/50276772>
- [10] CF-Round 378: <http://codeforces.com/contest/733/submission/50280349>
- [11] CF-Round 118: <http://codeforces.com/contest/186/submission/50285926>
- [12] CF-Round 235: <http://codeforces.com/contest/401/submission/50429068>
- [13] CF-Round 242: <http://codeforces.com/contest/424/submission/50429566>
- [14] CF-Round 247: <http://codeforces.com/contest/431/submission/50431630>
- [15] CF-Round 260: <http://codeforces.com/contest/456/submission/50444466>
- [16] CF-Round 264: <http://codeforces.com/contest/463/submission/50445164>



# Mathematical Problems

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- [17] CF-Round 267: <http://codeforces.com/problemset/problem/467/B>
- [18] CF-Round 280: <http://codeforces.com/problemset/problem/492/B>
- [19] CF-Round 294: <http://codeforces.com/problemset/problem/519/B>
- [20] CF-Round 322: <http://codeforces.com/problemset/problem/581/B>
- [21] CF-Round 328: <http://codeforces.com/problemset/problem/592/B>
- [22] CF-Round 374: <http://codeforces.com/problemset/problem/721/B>
- [23] CF-Round 376: <http://codeforces.com/problemset/problem/731/B>
- [24] CF-Round 381: <http://codeforces.com/problemset/problem/740/B>
- [25] CF-Round 384: <http://codeforces.com/problemset/problem/743/B>
- [26] CF-Round 400: <http://codeforces.com/problemset/problem/776/B>
- [27] CF-Round 110: <http://codeforces.com/problemset/problem/157/B>



# Mathematical Problems Solution

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- [17] CF-Round 267: <http://codeforces.com/contest/467/submission/50446103>
- [18] CF-Round 280: <http://codeforces.com/contest/492/submission/50450317>
- [19] CF-Round 294: <http://codeforces.com/contest/519/submission/50451035>
- [20] CF-Round 322: <http://codeforces.com/contest/581/submission/50457691>
- [21] CF-Round 328: <http://codeforces.com/contest/592/submission/50477591>
- [22] CF-Round 374: <http://codeforces.com/contest/721/submission/50479584>
- [23] CF-Round 376: <http://codeforces.com/contest/731/submission/50479691>
- [24] CF-Round 381: <http://codeforces.com/contest/740/submission/50479776>
- [25] CF-Round 384: <http://codeforces.com/contest/743/submission/50481211>
- [26] CF-Round 400: <http://codeforces.com/contest/776/submission/50482542>
- [27] CF-Round 110: <http://codeforces.com/contest/157/submission/49456302>





# Lecture Agenda

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✓ Section 1: Data Structure Problems

✓ Section 2: Mathematical Problems

**Section 3: String Problems**

Section 4: Greedy Problems

Section 5: Brute Force Problems



# String Problems

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- [01] CF-Round 163: <http://codeforces.com/problemset/problem/266/B>
- [02] CF-Round 386: <http://codeforces.com/problemset/problem/746/B>
- [03] CF-Round 284: <http://codeforces.com/problemset/problem/499/B>
- [04] CF-Round 352: <http://codeforces.com/problemset/problem/672/B>
- [05] CF-Round 360: <http://codeforces.com/problemset/problem/688/B>
- [06] CF-Round 387: <http://codeforces.com/problemset/problem/747/B>
- [07] CF-Round 174: <http://codeforces.com/problemset/problem/284/B>
- [08] CF-Round 285: <http://codeforces.com/problemset/problem/501/B>
- [09] CF-Round 348: <http://codeforces.com/problemset/problem/669/B>
- [10] CF-Round 375: <http://codeforces.com/problemset/problem/723/B>
- [11] CF-Round 397: <http://codeforces.com/problemset/problem/765/B>
- [12] CF-Round 102: <http://codeforces.com/problemset/problem/143/B>
- [13] CF-Round 156: <http://codeforces.com/problemset/problem/255/B>
- [14] CF-Round 186: <http://codeforces.com/problemset/problem/313/B>
- [15] CF-Round 228: <http://codeforces.com/problemset/problem/389/B>
- [16] CF-Round 238: <http://codeforces.com/problemset/problem/405/B>





# String Problems Solution

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- [01] CF-Round 163: <http://codeforces.com/contest/266/submission/49270406>
- [02] CF-Round 386: <http://codeforces.com/contest/746/submission/49271154>
- [03] CF-Round 284: <http://codeforces.com/contest/499/submission/49454705>
- [04] CF-Round 352: <http://codeforces.com/contest/672/submission/49454795>
- [05] CF-Round 360: <http://codeforces.com/contest/688/submission/49455379>
- [06] CF-Round 387: <http://codeforces.com/contest/747/submission/49455500>
- [07] CF-Round 174: <http://codeforces.com/contest/284/submission/50228057>
- [08] CF-Round 285: <http://codeforces.com/contest/501/submission/50273506>
- [09] CF-Round 348: <http://codeforces.com/contest/669/submission/50276186>
- [10] CF-Round 375: <http://codeforces.com/contest/723/submission/50278978>
- [11] CF-Round 397: <http://codeforces.com/contest/765/submission/50281373>
- [12] CF-Round 102: <http://codeforces.com/contest/143/submission/50283226>
- [13] CF-Round 156: <http://codeforces.com/contest/255/submission/50286444>
- [14] CF-Round 186: <http://codeforces.com/contest/313/submission/50425696>
- [15] CF-Round 228: <http://codeforces.com/contest/389/submission/50428607>
- [16] CF-Round 238: <http://codeforces.com/contest/405/submission/50429204>





# Lecture Agenda

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✓ Section 1: Data Structure Problems

✓ Section 2: Mathematical Problems

✓ Section 3: String Problems

**Section 4: Greedy Problems**

Section 5: Brute Force Problems



# Greedy Problems

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- [01] CF-Round 145: <http://codeforces.com/problemset/problem/234/B>
- [02] CF-Round 161: <http://codeforces.com/problemset/problem/263/B>
- [03] CF-Round 265: <http://codeforces.com/problemset/problem/465/B>
- [04] CF-Round 356: <http://codeforces.com/problemset/problem/680/B>
- [05] CF-Round 395: <http://codeforces.com/problemset/problem/764/B>
- [06] CF-Round 134: <http://codeforces.com/problemset/problem/218/B>
- [07] CF-Round 197: <http://codeforces.com/problemset/problem/339/B>
- [08] CF-Round 223: <http://codeforces.com/problemset/problem/381/B>
- [09] CF-Round 244: <http://codeforces.com/problemset/problem/427/B>
- [10] CF-Round 109: <http://codeforces.com/problemset/problem/155/B>
- [11] CF-Round 182: <http://codeforces.com/problemset/problem/302/B>
- [12] CF-Round 201: <http://codeforces.com/problemset/problem/347/B>
- [13] CF-Round 206: <http://codeforces.com/problemset/problem/355/B>
- [14] CF-Round 210: <http://codeforces.com/problemset/problem/361/B>
- [15] CF-Round 212: <http://codeforces.com/problemset/problem/362/B>
- [16] CF-Round 213: <http://codeforces.com/problemset/problem/365/B>



# Greedy Problems Solution

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- [01] CF-Round 145: <http://codeforces.com/contest/234/submission/49453646>
- [02] CF-Round 161: <http://codeforces.com/contest/263/submission/49453813>
- [03] CF-Round 265: <http://codeforces.com/contest/465/submission/49454608>
- [04] CF-Round 356: <http://codeforces.com/contest/680/submission/49455128>
- [05] CF-Round 395: <http://codeforces.com/contest/764/submission/49456208>
- [06] CF-Round 134: <http://codeforces.com/contest/218/submission/49467770>
- [07] CF-Round 197: <http://codeforces.com/contest/339/submission/50228947>
- [08] CF-Round 223: <http://codeforces.com/contest/381/submission/50230991>
- [09] CF-Round 244: <http://codeforces.com/contest/427/submission/50273109>
- [10] CF-Round 109: <http://codeforces.com/contest/155/submission/50284211>
- [11] CF-Round 182: <http://codeforces.com/contest/302/submission/50292013>
- [12] CF-Round 201: <http://codeforces.com/contest/347/submission/50426224>
- [13] CF-Round 206: <http://codeforces.com/contest/355/submission/50426337>
- [14] CF-Round 210: <http://codeforces.com/contest/361/submission/50426409>
- [15] CF-Round 212: <http://codeforces.com/contest/362/submission/50427748>
- [16] CF-Round 213: <http://codeforces.com/contest/365/submission/50427887>



# Greedy Problems

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- [17] CF-Round 323: <http://codeforces.com/problemset/problem/583/B>
- [18] CF-Round 331: <http://codeforces.com/problemset/problem/596/B>
- [19] CF-Round 358: <http://codeforces.com/problemset/problem/682/B>
- [20] CF-Round 366: <http://codeforces.com/problemset/problem/705/B>
- [21] CF-Round 371: <http://codeforces.com/problemset/problem/714/B>
- [22] CF-Round 382: <http://codeforces.com/problemset/problem/735/B>
- [23] CF-Round 103: <http://codeforces.com/problemset/problem/144/B>
- [24] CF-Round 151: <http://codeforces.com/problemset/problem/246/B>
- [25] CF-Round 160: <http://codeforces.com/problemset/problem/262/B>
- [26] CF-Round 175: <http://codeforces.com/problemset/problem/285/B>
- [27] CF-Round 191: <http://codeforces.com/problemset/problem/327/B>



# Greedy Problems Solution

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- [17] CF-Round 323: <http://codeforces.com/contest/583/submission/50477277>
- [18] CF-Round 331: <http://codeforces.com/contest/596/submission/50477792>
- [19] CF-Round 358: <http://codeforces.com/contest/682/submission/50478452>
- [20] CF-Round 366: <http://codeforces.com/contest/705/submission/50479146>
- [21] CF-Round 371: <http://codeforces.com/contest/714/submission/50479340>
- [22] CF-Round 382: <http://codeforces.com/contest/735/submission/50480020>
- [23] CF-Round 103: <http://codeforces.com/contest/144/submission/54016458>
- [24] CF-Round 151: <http://codeforces.com/contest/246/submission/54024327>
- [25] CF-Round 160: <http://codeforces.com/contest/262/submission/54053529>
- [26] CF-Round 175: <http://codeforces.com/contest/285/submission/54053581>
- [27] CF-Round 191: <http://codeforces.com/contest/327/submission/54053926>









# Lecture Agenda

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- ✓ Section 1: Data Structure Problems
- ✓ Section 2: Mathematical Problems
- ✓ Section 3: String Problems
- ✓ Section 4: Greedy Problems

**Section 5: Brute Force Problems**



# Brute Force Problems

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- [01] CF-Round 121: <http://codeforces.com/problemset/problem/192/B>
- [02] CF-Round 157: <http://codeforces.com/problemset/problem/259/B>
- [03] CF-Round 310: <http://codeforces.com/problemset/problem/556/B>
- [04] CF-Round 214: <http://codeforces.com/problemset/problem/366/B>
- [05] CF-Round 343: <http://codeforces.com/problemset/problem/629/B>
- [06] CF-Round 241: <http://codeforces.com/problemset/problem/416/B>
- [07] CF-Round 276: <http://codeforces.com/problemset/problem/485/B>
- [08] CF-Round 304: <http://codeforces.com/problemset/problem/546/B>



# Brute Force Problems Solution

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- [01] CF-Round 121: <http://codeforces.com/contest/192/submission/49456459>
- [02] CF-Round 157: <http://codeforces.com/contest/259/submission/50227918>
- [03] CF-Round 310: <http://codeforces.com/contest/556/submission/50275734>
- [04] CF-Round 214: <http://codeforces.com/contest/366/submission/50428131>
- [05] CF-Round 343: <http://codeforces.com/contest/629/submission/50478029>
- [06] CF-Round 241: <http://codeforces.com/contest/416/submission/53181753>
- [07] CF-Round 276: <http://codeforces.com/contest/485/submission/53560715>
- [08] CF-Round 304: <http://codeforces.com/contest/546/submission/53563016>



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- ✓ Section 1: Data Structure Problems
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DO  
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