# **Codeforces Online Judge**

#### Prepared by: Mohamed Ayman

Algorithm Engineer at Valeo
Deep Learning Researcher and Teaching Assistant
at The American University in Cairo (AUC)
spring 2020





- G sw.eng.MohamedAyman@gmail.com
- f facebook.com/cs.MohamedAyman
- in linkedin.com/in/cs-MohamedAyman
- github.com/cs-MohamedAyman
  - codeforces.com/profile/Mohamed\_Ayman

## **Codeforces Online Judge - Phase 2.3**

We will discuss in this lecture the following topics

1- Data Structur	e Pro	blems
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- 2- Mathematical Problems
- **3- String Problems**
- 4- Greedy Problems
- 5- Brute Force Problems

[16 problems]

[27 problems]

[16 problems]

[27 problems]

[8 problems]









**Section 2: Mathematical Problems** 

Section 3: String Problems

**Section 4: Greedy Problems** 

**Section 5: Brute Force Problems** 



#### **Data Structure Problems**

[01]	CF-Round 333:	http://codeforces.com/problemset/problem/602/B
[02]	CF-Round 346:	http://codeforces.com/problemset/problem/659/B
[03]	CF-Round 369:	http://codeforces.com/problemset/problem/711/B
[04]	CF-Round 138:	http://codeforces.com/problemset/problem/224/B
[05]	CF-Round 147:	http://codeforces.com/problemset/problem/237/B
[06]	CF-Round 181:	http://codeforces.com/problemset/problem/300/B
[07]	CF-Round 193:	http://codeforces.com/problemset/problem/332/B
[80]	CF-Round 194:	http://codeforces.com/problemset/problem/334/B
[09]	CF-Round 216:	http://codeforces.com/problemset/problem/369/B
[10]	CF-Round 249:	http://codeforces.com/problemset/problem/435/B
[11]	CF-Round 254:	http://codeforces.com/problemset/problem/445/B
[12]	CF-Round 279:	http://codeforces.com/problemset/problem/490/B
[13]	CF-Round 286:	http://codeforces.com/problemset/problem/505/B
[14]	CF-Round 296:	http://codeforces.com/problemset/problem/527/B
[15]	CF-Round 297:	http://codeforces.com/problemset/problem/525/B
[16]	CF-Round 306:	http://codeforces.com/problemset/problem/550/B



#### **Data Structure Problems Solution**

[01] CF D. ... 4777. https://o.defenors.com/content/C02/cohected/cf2017070

[01]	CF-Round 333:	http://codeforces.com/contest/602/submission/53813039
[02]	CF-Round 346:	http://codeforces.com/contest/659/submission/53823305
[03]	CF-Round 369:	http://codeforces.com/contest/711/submission/53841947
[04]	CF-Round 138:	http://codeforces.com/contest/224/submission/54437485
[05]	CF-Round 147:	http://codeforces.com/contest/237/submission/54437777
[06]	CF-Round 181:	http://codeforces.com/contest/300/submission/54438438
[07]	CF-Round 193:	http://codeforces.com/contest/332/submission/54438739
[80]	CF-Round 194:	http://codeforces.com/contest/334/submission/54439030
[09]	CF-Round 216:	http://codeforces.com/contest/369/submission/54442230
[10]	CF-Round 249:	http://codeforces.com/contest/435/submission/53842185
[11]	CF-Round 254:	http://codeforces.com/contest/445/submission/53842629
[12]	CF-Round 279:	http://codeforces.com/contest/490/submission/53849398
[13]	CF-Round 286:	http://codeforces.com/contest/505/submission/53850402
[14]	CF-Round 296:	http://codeforces.com/contest/527/submission/53868739
[15]	CF-Round 297:	http://codeforces.com/contest/525/submission/53868869
[16]	CF-Round 306:	http://codeforces.com/contest/550/submission/53868971





#### **Data Structure Problems**

[17]	CF-Round 318:	http://codeforces.com/problemset/problem/574/B
[18]	CF-Round 324:	http://codeforces.com/problemset/problem/584/B
[19]	CF-Round 139:	http://codeforces.com/problemset/problem/225/B
[20]	CF-Round 338:	http://codeforces.com/problemset/problem/615/B
[21]	CF-Round 133:	http://codeforces.com/problemset/problem/216/B
[22]	CF-Round 178:	http://codeforces.com/problemset/problem/294/B
[23]	CF-Round 202:	http://codeforces.com/problemset/problem/349/B
[24]	CF-Round 100:	http://codeforces.com/problemset/problem/140/B



#### **Data Structure Problems Solution**

[17]	CF-Round 318:	http://codeforces.com/contest/574/submission/53870856
[18]	CF-Round 324:	http://codeforces.com/contest/584/submission/53870612
[19]	CF-Round 139:	http://codeforces.com/contest/225/submission/54087748
[20]	CF-Round 338:	http://codeforces.com/contest/615/submission/54168051
[21]	CF-Round 133:	http://codeforces.com/contest/216/submission/54227213
[22]	CF-Round 178:	http://codeforces.com/contest/294/submission/54229588
[23]	CF-Round 202:	http://codeforces.com/contest/349/submission/54407793
[24]	CF-Round 100:	http://codeforces.com/contest/140/submission/54372082









✓ Section 1: Data Structure Problems



Section 3: String Problems

Section 4: Greedy Problems

**Section 5: Brute Force Problems** 



#### **Mathematical Problems**

CF-Round 295:	http://codeforces.com/problemset/problem/520/B
CF-Round 298:	http://codeforces.com/problemset/problem/534/B
CF-Round 300:	http://codeforces.com/problemset/problem/538/B
CF-Round 326:	http://codeforces.com/problemset/problem/588/B
CF-Round 355:	http://codeforces.com/problemset/problem/677/B
CF-Round 365:	http://codeforces.com/problemset/problem/703/B
CF-Round 391:	http://codeforces.com/problemset/problem/757/B
CF-Round 135:	http://codeforces.com/problemset/problem/219/B
CF-Round 237:	http://codeforces.com/problemset/problem/404/B
CF-Round 240:	http://codeforces.com/problemset/problem/415/B
CF-Round 250:	http://codeforces.com/problemset/problem/437/B
CF-Round 262:	http://codeforces.com/problemset/problem/460/B
CF-Round 353:	http://codeforces.com/problemset/problem/675/B
CF-Round 120:	http://codeforces.com/problemset/problem/190/B
CF-Round 184:	http://codeforces.com/problemset/problem/305/B
CF-Round 190:	http://codeforces.com/problemset/problem/322/B
	CF-Round 298: CF-Round 300: CF-Round 326: CF-Round 355: CF-Round 365: CF-Round 391: CF-Round 237: CF-Round 240: CF-Round 250: CF-Round 262: CF-Round 353: CF-Round 120: CF-Round 184:

[01] CE Dound 20E. http://codeferese.com/nychlomest/nychlom/E20/D



#### **Mathematical Problems Solution**

[01]	CF-Round 295:	http://codeforces.com/contest/520/submission/53811276
[02]	CF-Round 298:	http://codeforces.com/contest/534/submission/53811314
[03]	CF-Round 300:	http://codeforces.com/contest/538/submission/53811405
[04]	CF-Round 326:	http://codeforces.com/contest/588/submission/53812893
[05]	CF-Round 355:	http://codeforces.com/contest/677/submission/53840097
[06]	CF-Round 365:	http://codeforces.com/contest/703/submission/53840667
[07]	CF-Round 391:	http://codeforces.com/contest/757/submission/54436998
[80]	CF-Round 135:	http://codeforces.com/contest/219/submission/54437143
[09]	CF-Round 237:	http://codeforces.com/contest/404/submission/54444054
[10]	CF-Round 240:	http://codeforces.com/contest/415/submission/54444114
[11]	CF-Round 250:	http://codeforces.com/contest/437/submission/53842296
[12]	CF-Round 262:	http://codeforces.com/contest/460/submission/53849205
[13]	CF-Round 353:	http://codeforces.com/contest/675/submission/53871411
[14]	CF-Round 120:	http://codeforces.com/contest/190/submission/54087386
[15]	CF-Round 184:	http://codeforces.com/contest/305/submission/54160614
[16]	CF-Round 190:	http://codeforces.com/contest/322/submission/54160818





#### **Mathematical Problems**

[17]	CF-Round 219:	http://codeforces.com/problemset/problem/373/B
[18]	CF-Round 282:	http://codeforces.com/problemset/problem/495/B
[19]	CF-Round 329:	http://codeforces.com/problemset/problem/593/B
[20]	CF-Round 330:	http://codeforces.com/problemset/problem/595/B
[21]	CF-Round 172:	http://codeforces.com/problemset/problem/281/B
[22]	CF-Round 266:	http://codeforces.com/problemset/problem/466/B
[23]	CF-Round 275:	http://codeforces.com/problemset/problem/483/B
[24]	CF-Round 125:	http://codeforces.com/problemset/problem/199/B
[25]	CF-Round 195:	http://codeforces.com/problemset/problem/336/B
[26]	CF-Round 113:	http://codeforces.com/problemset/problem/166/B
[27]	CF-Round 198:	http://codeforces.com/problemset/problem/340/B
[28]	CF-Round 224:	http://codeforces.com/problemset/problem/382/B
[29]	CF-Round 116:	http://codeforces.com/problemset/problem/180/B



#### **Mathematical Problems Solution**

[17]	CF-Round 219:	http://codeforces.com/contest/373/submission/54164599
[18]	CF-Round 282:	http://codeforces.com/contest/495/submission/54165383
[19]	CF-Round 329:	http://codeforces.com/contest/593/submission/54165754
[20]	CF-Round 330:	http://codeforces.com/contest/595/submission/54167684
[21]	CF-Round 172:	http://codeforces.com/contest/281/submission/54229138
[22]	CF-Round 266:	http://codeforces.com/contest/466/submission/54372703
[23]	CF-Round 275:	http://codeforces.com/contest/483/submission/54372838
[24]	CF-Round 125:	http://codeforces.com/contest/199/submission/53896765
[25]	CF-Round 195:	http://codeforces.com/contest/336/submission/53897172
[26]	CF-Round 113:	http://codeforces.com/contest/166/submission/53899529
[27]	CF-Round 198:	http://codeforces.com/contest/340/submission/54457824
[28]	CF-Round 224:	http://codeforces.com/contest/382/submission/53908869
[29]	CF-Round 116:	http://codeforces.com/contest/180/submission/54016248







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✓ Section 2: Mathematical Problems

**Section 3: String Problems** 

**Section 4: Greedy Problems** 

**Section 5: Brute Force Problems** 



## **String Problems**

[01]	CF-Round 256:	http://codeforces.com/problemset/problem/448/B
[02]	CF-Round 362:	http://codeforces.com/problemset/problem/697/B
[03]	CF-Round 372:	http://codeforces.com/problemset/problem/716/B
[04]	CF-Round 373:	http://codeforces.com/problemset/problem/719/B
[05]	CF-Round 148:	http://codeforces.com/problemset/problem/239/B
[06]	CF-Round 170:	http://codeforces.com/problemset/problem/278/B
[07]	CF-Round 173:	http://codeforces.com/problemset/problem/282/B
[80]	CF-Round 199:	http://codeforces.com/problemset/problem/342/B
[09]	CF-Round 208:	http://codeforces.com/problemset/problem/358/B
[10]	CF-Round 253:	http://codeforces.com/problemset/problem/443/B
[11]	CF-Round 293:	http://codeforces.com/problemset/problem/518/B
[12]	CF-Round 336:	http://codeforces.com/problemset/problem/608/B
[13]	CF-Round 389:	http://codeforces.com/problemset/problem/752/B
[14]	CF-Round 106:	http://codeforces.com/problemset/problem/149/B
[15]	CF-Round 158:	http://codeforces.com/problemset/problem/260/B
[16]	CF-Round 168:	http://codeforces.com/problemset/problem/275/B



## **String Problems Solution**

[01]	CF-Round 256:	http://codeforces.com/contest/448/submission/53673230
[02]	CF-Round 362:	http://codeforces.com/contest/697/submission/53840185
[03]	CF-Round 372:	http://codeforces.com/contest/716/submission/53842011
[04]	CF-Round 373:	http://codeforces.com/contest/719/submission/53842083
[05]	CF-Round 148:	http://codeforces.com/contest/239/submission/54437876
[06]	CF-Round 170:	http://codeforces.com/contest/278/submission/54438145
[07]	CF-Round 173:	http://codeforces.com/contest/282/submission/54438195
[08]	CF-Round 199:	http://codeforces.com/contest/342/submission/54442087
[09]	CF-Round 208:	http://codeforces.com/contest/358/submission/54442160
[10]	CF-Round 253:	http://codeforces.com/contest/443/submission/53842681
[11]	CF-Round 293:	http://codeforces.com/contest/518/submission/53852962
[12]	CF-Round 336:	http://codeforces.com/contest/608/submission/53871126
[13]	CF-Round 389:	http://codeforces.com/contest/752/submission/54084953
[14]	CF-Round 106:	http://codeforces.com/contest/149/submission/54087310
[15]	CF-Round 158:	http://codeforces.com/contest/260/submission/54089422
[16]	CF-Round 168:	http://codeforces.com/contest/275/submission/54090690





## **String Problems**

[17]	CF-Round 335:	http://codeforces.com/problemset/problem/606/B
[18]	CF-Round 114:	http://codeforces.com/problemset/problem/168/B
[19]	CF-Round 127:	http://codeforces.com/problemset/problem/202/B
[20]	CF-Round 130:	http://codeforces.com/problemset/problem/208/B
[21]	CF-Round 307:	http://codeforces.com/problemset/problem/551/B
[22]	CF-Round 347:	http://codeforces.com/problemset/problem/664/B
[23]	CF-Round 233:	http://codeforces.com/problemset/problem/399/B
[24]	CF-Round 179:	http://codeforces.com/problemset/problem/296/B



### **String Problems Solution**

[17]	CF-Round 335:	http://codeforces.com/contest/606/submission/54167951
[18]	CF-Round 114:	http://codeforces.com/contest/168/submission/54174211
[19]	CF-Round 127:	http://codeforces.com/contest/202/submission/54227212
[20]	CF-Round 130:	http://codeforces.com/contest/208/submission/54372241
[21]	CF-Round 307:	http://codeforces.com/contest/551/submission/54407016
[22]	CF-Round 347:	http://codeforces.com/contest/664/submission/54407235
[23]	CF-Round 233:	http://codeforces.com/contest/399/submission/53897469
[24]	CF-Round 179:	http://codeforces.com/contest/296/submission/53899830







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✓ Section 1: Data Structure Problems

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- ✓ Section 2: Mathematical Problems
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**Section 5: Brute Force Problems** 



## **Greedy Problems**

[01]	CF-Round 339:	http://codeforces.com/problemset/problem/614/B
[02]	CF-Round 351:	http://codeforces.com/problemset/problem/673/B
[03]	CF-Round 363:	http://codeforces.com/problemset/problem/699/B
[04]	CF-Round 385:	http://codeforces.com/problemset/problem/745/B
[05]	CF-Round 105:	http://codeforces.com/problemset/problem/148/B
[06]	CF-Round 112:	http://codeforces.com/problemset/problem/165/B
[07]	CF-Round 189:	http://codeforces.com/problemset/problem/320/B
[80]	CF-Round 225:	http://codeforces.com/problemset/problem/384/B
[09]	CF-Round 281:	http://codeforces.com/problemset/problem/493/B
[10]	CF-Round 290:	http://codeforces.com/problemset/problem/510/B
[11]	CF-Round 311:	http://codeforces.com/problemset/problem/557/B
[12]	CF-Round 321:	http://codeforces.com/problemset/problem/580/B
[13]	CF-Round 332:	http://codeforces.com/problemset/problem/599/B
[14]	CF-Round 354:	http://codeforces.com/problemset/problem/676/B
[15]	CF-Round 383:	http://codeforces.com/problemset/problem/742/B
[16]	CF-Round 393:	http://codeforces.com/problemset/problem/760/B



#### **Greedy Problems Solution**

[01]	CF-Round 339:	http://codeforces.com/contest/614/submission/53823238
[02]	CF-Round 351:	http://codeforces.com/contest/673/submission/53839900
[03]	CF-Round 363:	http://codeforces.com/contest/699/submission/53840315
[04]	CF-Round 385:	http://codeforces.com/contest/745/submission/54436945
[05]	CF-Round 105:	http://codeforces.com/contest/148/submission/54437051
[06]	CF-Round 112:	http://codeforces.com/contest/165/submission/54437113
[07]	CF-Round 189:	http://codeforces.com/contest/320/submission/54438607
[80]	CF-Round 225:	http://codeforces.com/contest/384/submission/54444003
[09]	CF-Round 281:	http://codeforces.com/contest/493/submission/53849602
[10]	CF-Round 290:	http://codeforces.com/contest/510/submission/53850936
[11]	CF-Round 311:	http://codeforces.com/contest/557/submission/53868996
[12]	CF-Round 321:	http://codeforces.com/contest/580/submission/53870571
[13]	CF-Round 332:	http://codeforces.com/contest/599/submission/53870969
[14]	CF-Round 354:	http://codeforces.com/contest/676/submission/53871560
[15]	CF-Round 383:	http://codeforces.com/contest/742/submission/54084812
[16]	CF-Round 393:	http://codeforces.com/contest/760/submission/54086841





## **Greedy Problems**

[17]	CF-Round 143:	http://codeforces.com/problemset/problem/231/B
[18]	CF-Round 203:	http://codeforces.com/problemset/problem/350/B
[19]	CF-Round 220:	http://codeforces.com/problemset/problem/374/B
[20]	CF-Round 230:	http://codeforces.com/problemset/problem/393/B
[21]	CF-Round 361:	http://codeforces.com/problemset/problem/689/B
[22]	CF-Round 399:	http://codeforces.com/problemset/problem/768/B
[23]	CF-Round 176:	http://codeforces.com/problemset/problem/287/B
[24]	CF-Round 301:	http://codeforces.com/problemset/problem/540/B
[25]	CF-Round 205:	http://codeforces.com/problemset/problem/353/B
[26]	CF-Round 229:	http://codeforces.com/problemset/problem/390/B
[27]	CF-Round 319:	http://codeforces.com/problemset/problem/577/B



## **Greedy Problems Solution**

CF-Round 143:	http://codeforces.com/contest/231/submission/54088968
CF-Round 203:	http://codeforces.com/contest/350/submission/54161000
CF-Round 220:	http://codeforces.com/contest/374/submission/54164728
CF-Round 230:	http://codeforces.com/contest/393/submission/54165081
CF-Round 361:	http://codeforces.com/contest/689/submission/54170258
CF-Round 399:	http://codeforces.com/contest/768/submission/54170508
CF-Round 176:	http://codeforces.com/contest/287/submission/54229471
CF-Round 301:	http://codeforces.com/contest/540/submission/54407326
CF-Round 205:	http://codeforces.com/contest/353/submission/54372401
CF-Round 229:	http://codeforces.com/contest/390/submission/54372466
CF-Round 319:	http://codeforces.com/contest/577/submission/54407091
	CF-Round 203: CF-Round 230: CF-Round 361: CF-Round 399: CF-Round 176: CF-Round 301: CF-Round 205: CF-Round 229:







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**Section 5: Brute Force Problems** 



#### **Brute Force Problems**

[01]	CF-Round 144:	http://codeforces.com/problemset/problem/233/B
[02]	CF-Round 155:	http://codeforces.com/problemset/problem/254/B
[03]	CF-Round 283:	http://codeforces.com/problemset/problem/496/B
[04]	CF-Round 131:	http://codeforces.com/problemset/problem/214/B
[05]	CF-Round 150:	http://codeforces.com/problemset/problem/244/B
[06]	CF-Round 153:	http://codeforces.com/problemset/problem/252/B
[07]	CF-Round 278:	http://codeforces.com/problemset/problem/488/B
[80]	CF-Round 398:	http://codeforces.com/problemset/problem/767/B



#### **Brute Force Problems Solution**

[01]	CF-Round 144:	http://codeforces.com/contest/233/submission/54437596
[02]	CF-Round 155:	http://codeforces.com/contest/254/submission/54438049
[03]	CF-Round 283:	http://codeforces.com/contest/496/submission/53849760
[04]	CF-Round 131:	http://codeforces.com/contest/214/submission/54087676
[05]	CF-Round 150:	http://codeforces.com/contest/244/submission/54089071
[06]	CF-Round 153:	http://codeforces.com/contest/252/submission/54227354
[07]	CF-Round 278:	http://codeforces.com/contest/488/submission/54373011
[80]	CF-Round 398:	http://codeforces.com/contest/767/submission/54016134





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