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 Contests

We will discuss in this lecture the following topics

- 1- Educational Codeforces Rounds
- 2- GYM Codeforces Contests I
- 3- GYM Codeforces Contests II
- 4- GYM Codeforces Contests III
- 5- GYM Codeforces Contests IV





Section 1: Educational Codeforces Rounds



Section 2: GYM Codeforces Contests I

Section 3: GYM Codeforces Contests II

Section 4: GYM Codeforces Contests III



Educational Codeforces Round 6:

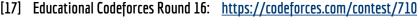
[02] Educational Codeforces Round 2: https://codeforces.com/contest/600
[03] Educational Codeforces Round 3: https://codeforces.com/contest/609
[04] Educational Codeforces Round 4: https://codeforces.com/contest/612
[05] Educational Codeforces Round 5: https://codeforces.com/contest/616

Educational Codeforces Round 1: https://codeforces.com/contest/598

- [07] Educational Codeforces Round 7: https://codeforces.com/contest/622
 [08] Educational Codeforces Round 8: https://codeforces.com/contest/628
- [09] Experimental Educational Round: https://codeforces.com/contest/630
- [10] Educational Codeforces Round 9: https://codeforces.com/contest/632
- [11] Educational Codeforces Round 10: https://codeforces.com/contest/652
- [12] Educational Codeforces Round 11: https://codeforces.com/contest/660
- [13] Educational Codeforces Round 12: https://codeforces.com/contest/665
- [14] Educational Codeforces Round 13: https://codeforces.com/contest/678
- [15] Educational Codeforces Round 14: https://codeforces.com/contest/691
- [16] Educational Codeforces Round 15: https://codeforces.com/contest/702



https://codeforces.com/contest/620



[18] Educational Codeforces Round 17: https://codeforces.com/contest/762

[19] Educational Codeforces Round 18: https://codeforces.com/contest/792

[20] Educational Codeforces Round 19: https://codeforces.com/contest/797

[21] Educational Codeforces Round 20: https://codeforces.com/contest/803

[22] Educational Codeforces Round 21: https://codeforces.com/contest/808

[23] Educational Codeforces Round 22: https://codeforces.com/contest/813

[24] Educational Codeforces Round 23: https://codeforces.com/contest/817

[25] Educational Codeforces Round 24: https://codeforces.com/contest/818

[26] Educational Codeforces Round 25: https://codeforces.com/contest/825

[27] Educational Codeforces Round 26: https://codeforces.com/contest/837

28] Educational Codeforces Round 27: https://codeforces.com/contest/845

[29] Educational Codeforces Round 28: https://codeforces.com/contest/846

[30] Educational Codeforces Round 29: https://codeforces.com/contest/863

[31] Educational Codeforces Round 30: https://codeforces.com/contest/873

[32] Educational Codeforces Round 31: https://codeforces.com/contest/884





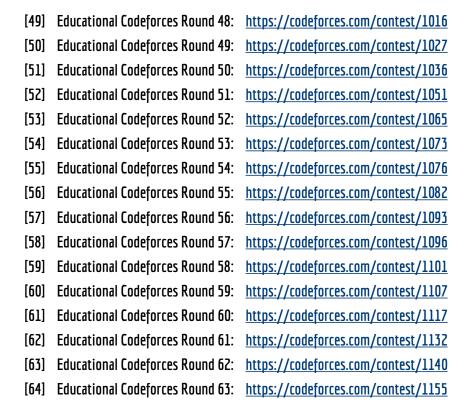
Educational Codeforces Round 42: https://codeforces.com/contest/962
Educational Codeforces Round 43: https://codeforces.com/contest/976
Educational Codeforces Round 44: https://codeforces.com/contest/985

Educational Codeforces Round 45: https://codeforces.com/contest/990
Educational Codeforces Round 46: https://codeforces.com/contest/1000
Educational Codeforces Round 47: https://codeforces.com/contest/1009

[46]

Educational Codeforces Round 32: https://codeforces.com/contest/888







| [65] | Educational Codeforces Round 64: | https://codeforces.com/contest/1156 |
|------|----------------------------------|-------------------------------------|
| [66] | Educational Codeforces Round 65: | https://codeforces.com/contest/1167 |
| [67] | Educational Codeforces Round 66: | https://codeforces.com/contest/1175 |
| [68] | Educational Codeforces Round 67: | https://codeforces.com/contest/1187 |
| [69] | Educational Codeforces Round 68: | https://codeforces.com/contest/1194 |
| [70] | Educational Codeforces Round 69: | https://codeforces.com/contest/1197 |
| [71] | Educational Codeforces Round 70: | https://codeforces.com/contest/1202 |







✓ Section 1: Educational Codeforces Rounds

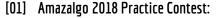




Section 3: GYM Codeforces Contests II

Section 4: GYM Codeforces Contests III





[02] II Simulado Ingressantes:

[03] ACM ICPC, JUST Collegiate Programming Contest (2018):

[04] 2015-2016 ACM-ICPC Pacific Northwest Regional Contest:

[05] 2005-2006 ACM-ICPC East Central North America Regional Contest:

[06] 2015 Syrian Private Universities Collegiate Programming Contest:

[07] 2017 JUST Programming Contest 4.0:

[08] 2017 JUST Programming Contest 3.0:

[09] III USP Freshmen Contest:

[10] II USP Freshmen Contest:

[11] Innopolis Open, Elimination round, 2016-2017:

[12] 2016 Al-Baath University Training Camp Contest-1:

[13] Litsey o`quvchilar uchun:

https://codeforces.com/gym/101883

https://codeforces.com/gym/101744

https://codeforces.com/gym/101853

https://codeforces.com/gym/100819

https://codeforces.com/gym/100650

https://codeforces.com/gym/101020

https://codeforces.com/gym/101532

https://codeforces.com/gym/101502

https://codeforces.com/gym/101375

https://codeforces.com/gym/100985

https://codeforces.com/gym/101182

https://codeforces.com/gym/101028





CODEFORCES Uva
Uva
Unline Judge
AtCoder

✓ Section 1: Educational Codeforces Rounds



- ✓ Section 2: GYM Codeforces Contests I
 - **Section 3: GYM Codeforces Contests II**

Section 4: GYM Codeforces Contests III





2017 Facebook Hacker Cup, Qualification Round:

2016 Facebook Hacker Cup, Qualification Round:

2015 Facebook Hacker Cup, Round 1:

2018 Battle of Brains:

A20| Code Battle Final:

2017 Spring Waterloo ACM Local Contest:

2017 PSUT Coding Marathon:

2017 Bangladesh National High School Programming Contest, NHSPC 2017:

Procon 2016:

2012-2013 Waterloo Local Contest, 13 October, 2012:

2011-2012 Wroclaw Short Training Contest (contest 8):

2011-2012 Wroclaw Short Training Contest (contest 7):

2011-2012 Waterloo Local Contest, 19 June, 2011:

Local Contest:

https://codeforces.com/gym/101859

https://codeforces.com/gym/101222

https://codeforces.com/gym/100869

https://codeforces.com/gym/100579

https://codeforces.com/gym/102062

https://codeforces.com/gym/101604

https://codeforces.com/gym/101431

https://codeforces.com/gym/101401

https://codeforces.com/gym/101353

https://codeforces.com/gym/101059

https://codeforces.com/gym/100169

https://codeforces.com/gym/100049

https://codeforces.com/gym/100048

https://codeforces.com/gym/100009







CODEFORCES UND DILING Judge

✓ Section 1: Educational Codeforces Rounds

H topcode

- ✓ Section 2: GYM Codeforces Contests I
- ✓ Section 3: GYM Codeforces Contests II

Section 4: GYM Codeforces Contests III





2017-2018 ACM-ICPC Pacific Northwest Regional Contest (Div. 2):

2017 ACM Amman Collegiate Programming Contest:

2015 ACM Arabella Collegiate Programming Contest:

IU Flash Contest:

Semana i 2018:

2018 PSUT Coding Marathon:

La Salle-Pui Ching Programming Challenge 培正喇沙編程挑戰賽 2017:

La Salle-Pui Ching Programming Challenge 培正喇沙編程挑戰賽 2016:

2017 JUST Programming Contest 2.0:

Bangladesh Olympiad in Informatics 2016:

2015 PSUT Coding Marathon:

2014 Winter Programming School, Kharkiv, day 4. Junior league:

https://codeforces.com/gym/101911

https://codeforces.com/gym/101652

https://codeforces.com/gym/101498

https://codeforces.com/gym/100676

https://codeforces.com/gym/102035

https://codeforces.com/gym/101917

https://codeforces.com/gym/101798

https://codeforces.com/gym/101522

https://codeforces.com/gym/101521

https://codeforces.com/gym/101343

https://codeforces.com/gym/101212

https://codeforces.com/gym/100687







- ✓ Section 1: Educational Codeforces Rounds
- ✓ Section 2: GYM Codeforces Contests I
- ✓ Section 3: GYM Codeforces Contests II
- ✓ Section 4: GYM Codeforces Contests III









[02] ACM ICPC, Arabella Collegiate Programming Contest (2018):

[03] NEERC, ACM-ICPC 2018-2019:

[04] ACM ICPC, Tishreen Collegiate Programming Contest (2017):

[05] 2018 ACM-ICPC, Universidad Nacional de Colombia Programming Contest:

[06] ACM ICPC, Amman Collegiate Programming Contest (2018):

[07] ACM ICPC, Damascus University Collegiate Programming Contest(2018):

[08] 2014-2015 ACM-ICPC Pacific Northwest Regional Contest (Div. 2):

[09] 2013-2014 ACM-ICPC Brazil Subregional Programming Contest:

[10] 2017 ACM-ICPC, Universidad Nacional de Colombia Programming Contest:

[11] 2017 ACM Arabella Collegiate Programming Contest:

[12] 2016-2017 ACM-ICPC, Egyptian Collegiate Programming Contest (ECPC 16):

[13] 2015-2016 ACM-ICPC Southwestern Europe Regional Contest (SWERC 15):

[14] 2016 ACM Amman Collegiate Programming Contest:

[15] 2015 ACM Syrian Collegiate Programming Contest:

[16] 2015-2016 ACM ICPC Baltic Selection Contest:

https://codeforces.com/gym/101982

https://codeforces.com/gym/101972

https://codeforces.com/gym/101931

https://codeforces.com/gym/101915

https://codeforces.com/gym/101845

https://codeforces.com/gym/101810

https://codeforces.com/gym/101808

https://codeforces.com/gym/101653

https://codeforces.com/gym/101473

https://codeforces.com/gym/101466

https://codeforces.com/gym/101350

https://codeforces.com/gym/101147

https://codeforces.com/gym/101128

https://codeforces.com/gym/101102

https://codeforces.com/gym/101086





| [17] | 2014-2015 ACM-ICPC Southwestern Euro | ne Regional Contest (| (SWERC 14): |
|-------|--------------------------------------------|-----------------------|-------------|
| L-/ J | LUI I LUIJ MEN I CO C DUGUNIU COCCINI LUNG | pe negional concest | |

[18] 2015 ACM Amman Collegiate Programming Contest:

19] 2004-2005 ACM-ICPC East Central North America Regional Contest (ECNA 2004):

[20] 2008-2009 ACM-ICPC, NEERC, Northern Subregional Contest:

[21] 2010-2011 ACM-ICPC, NEERC, Northern Subregional Contest:

[22] 2014 KTU ACM ICPC Qualification Round:

[23] 2014 Nordic Collegiate Programming Contest:

[24] 2014 Syrian Collegiate Programming Contest (SCPC 14):

[25] 2013 KTU ACM ICPC Qualification Round:

[26] 2013-2014 CT S01E10: 2013 ACM-ICPC (ECPC 2013):

[27] 2018 BACS Contest Replay:

[28] 2018 ECNU Campus Invitational Contest:

[29] 2015 HIAST Collegiate Programming Contest:

[30] 2015 AlBaath Collegiate Programming Contest:

[31] 2015 Tishreen Collegiate Programming Contest:

[32] 2019, XII Samara Regional Intercollegiate Programming Contest:

https://codeforces.com/gym/100783

https://codeforces.com/gym/100712

https://codeforces.com/gym/100651

https://codeforces.com/gym/100623

https://codeforces.com/gym/100610

https://codeforces.com/gym/100495

https://codeforces.com/gym/100502

https://codeforces.com/gym/100500

https://codeforces.com/gym/100482

https://codeforces.com/gym/100283

https://codeforces.com/gym/101864

https://codeforces.com/gym/101848

https://codeforces.com/gym/100952

https://codeforces.com/gym/100947

https://codeforces.com/gym/100935



[34] 2017, X Samara Regional Intercollegiate Programming Contest:

[35] 2016, Samara University ACM ICPC Quarterfinal Qualification Contest:

[36] 2016, IX Samara Regional Intercollegiate Programming Contest:

[37] 2015, Samara SAU ACM ICPC Quarterfinal Qualification Contest:

[38] 2015, VIII Samara Regional Intercollegiate Programming Contest:

[39] 2014, VII Samara Regional Intercollegiate Programming Contest:

[40] 2014, Samara SAU ACM ICPC Quarterfinal Qualification Contest:

[41] 2013, VI Samara Regional Intercollegiate Programming Contest:

[42] 2013, Samara SAU ACM ICPC Quarterfinal Qualification Contest:

[43] 2012, Samara SAU ACM ICPC Quarterfinal Qualification Contest:

[44] 2012, V Samara Regional Intercollegiate Programming Contest:

[45] Innopolis Open, Second elimination round, 2018-2019:

[46] Innopolis Open, First elimination round, 2018-2019:

[47] Innopolis Open, Elimination round 2, 2017-2018:

[48] Innopolis Open, Elimination round 1, 2017-2018:

https://codeforces.com/gym/101755

https://codeforces.com/gym/101341

https://codeforces.com/gym/101149

https://codeforces.com/gym/100971

https://codeforces.com/gym/100812

https://codeforces.com/gym/100694

https://codeforces.com/gym/100460

https://codeforces.com/gym/100488

https://codeforces.com/gym/100187

https://codeforces.com/gym/100247

https://codeforces.com/gym/100090

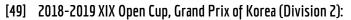
https://codeforces.com/gym/100030

https://codeforces.com/gym/102052

https://codeforces.com/gym/102032

https://codeforces.com/gym/101640





[50] UFPE Starters Final Try-Outs 2019:

51] UFBA Practice Session for Brazilian ICPC Regionals - 2018:

[52] 2018 USP-ICMC:

[53] 2018 IME Tryouts:

[54] IME Starters Try-outs 2018:

[55] Tishreen-CPC 2018:

[56] 2018 Southern Russia Open Championship - XII SFU Olympiad:

[57] UFPE Starters Final Try-Outs 2018:

[58] 2017 United Kingdom and Ireland Programming Contest (UKIEPC 2017):

[59] 2017 Hackatari Codeathon:

[60] Higher Institute for Applied Sciences and Technology CPC 2016:

[61] ICL 2016 (GP of Tatarstan):

[62] Innopolis Open, Final round, 2015-2016:

[63] VIII Open Programming Championship of Kazan Federal University 2015:

[64] KTU Programming Camp (Day 5):

https://codeforces.com/gym/102058

https://codeforces.com/gym/102020

https://codeforces.com/gym/101962

https://codeforces.com/gym/101875

https://codeforces.com/gym/101858

https://codeforces.com/gym/101804

https://codeforces.com/gym/101801

https://codeforces.com/gym/101790

https://codeforces.com/gym/101628

https://codeforces.com/gym/101606

https://codeforces.com/gym/101257

https://codeforces.com/gym/101061

https://codeforces.com/gym/100942

https://codeforces.com/gym/100905

https://codeforces.com/gym/100834





[66] KTU Programming Camp (Day 2):

[67] KTU Programming Camp (Day 1):

[68] 2015 USP-ICMC:

[69] 2015 Google Code Jam Qualification Round (GC) 15 Qualification):

[70] 2015 ICL, Finals, Div. 2:

[71] 2014 Winter Programming School, Kharkiv, day 9 (V. Nespirtny). Junior league:

[72] 2014 Winter Programming School, Kharkiv, day 8 (Team Akai). Junior league:

[73] 2014 Winter Programming School, Kharkiv, day 3 (A. Shmelev). Junior league:

[74] 2010-2011 VII International Zhautykov Olympiad:

[75] 2009-2010 VI International Zhautykov Olympiad:

[76] 2008-2009 V International Zhautykov Olympiad:

[77] 2011-2012 Waterloo Local Contest, 24 September, 2011:

https://codeforces.com/gym/100739

https://codeforces.com/gym/100738

https://codeforces.com/gym/100735

https://codeforces.com/gym/100733

https://codeforces.com/gym/100662

https://codeforces.com/gym/100637

https://codeforces.com/gym/100384

https://codeforces.com/gym/100382

https://codeforces.com/gym/100374

https://codeforces.com/gym/100147

https://codeforces.com/gym/100143

https://codeforces.com/gym/100142



- ✓ Section 1: Educational Codeforces Rounds
- ✓ Section 2: GYM Codeforces Contests I
- ✓ Section 3: GYM Codeforces Contests II
- Section 4: GYM Codeforces Contests III
- Section 5: GYM Codeforces Contests IV







