

# Codeforces Online Judge

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spring 2020

**Valeo**



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# Codeforces Online Judge - Phase 3 GYM Contests



# Lecture Agenda

We will discuss in this lecture  
the following topics

- 1- Codeforces GYM Contests \*\*\* I [25 contests]
- 2- Codeforces GYM Contests \*\*\* II [15 contests]
- 3- GYM Codeforces Contests \*\*\* III [30 contests]
- 4- GYM Codeforces Contests \*\*\* IV [30 contests]
- 5- GYM Codeforces Contests \*\*\* V [30 contests]

A top-down view of a white desk. On the left, a person's hands are typing on a white Apple keyboard. Above the keyboard is a white Apple mouse. To the right of the mouse is a bright yellow wristwatch with a black face. In the bottom right corner, the top of a white smartphone is visible. The text "Let's STARTUP" is centered on the desk. "Let's" is in a small, grey, sans-serif font. "STARTUP" is in a large, bold, sans-serif font. "START" is black with a white speckled texture, and "UP" is solid red with a white speckled texture.

Let's  
**STARTUP**

# Lecture Agenda

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Section 1: Codeforces GYM Contests \*\*\* I

Section 2: Codeforces GYM Contests \*\*\* II

Section 3: Codeforces GYM Contests \*\*\* III

Section 4: Codeforces GYM Contests \*\*\* IV

Section 5: Codeforces GYM Contests \*\*\* V



# Codeforces GYM Contests \*\*\* I

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[01] 2011-2012 Wroclaw Short Training Contest (contest 7)	<a href="https://codeforces.com/gym/100048">https://codeforces.com/gym/100048</a>
[02] 2011-2012 Wroclaw Short Training Contest (contest 8)	<a href="https://codeforces.com/gym/100049">https://codeforces.com/gym/100049</a>
[03] Edinburgh Competition 2019	<a href="https://codeforces.com/gym/102416">https://codeforces.com/gym/102416</a>
[04] 2015 Facebook Hacker Cup, Round 1	<a href="https://codeforces.com/gym/100579">https://codeforces.com/gym/100579</a>
[05] 2010 Codeforces Beta Round #1 (training)	<a href="https://codeforces.com/gym/100001">https://codeforces.com/gym/100001</a>
[06] 2012-2013 Тренировка СПбГУ В #1	<a href="https://codeforces.com/gym/100070">https://codeforces.com/gym/100070</a>
[07] 2018 Facebook Hacker Cup, Qualification Round	<a href="https://codeforces.com/gym/101859">https://codeforces.com/gym/101859</a>
[08] 2017 Facebook Hacker Cup, Qualification Round	<a href="https://codeforces.com/gym/101222">https://codeforces.com/gym/101222</a>
[09] 2016 Facebook Hacker Cup, Qualification Round	<a href="https://codeforces.com/gym/100869">https://codeforces.com/gym/100869</a>
[10] A20J Code Battle Final	<a href="https://codeforces.com/gym/101604">https://codeforces.com/gym/101604</a>
[11] 2017 Spring Waterloo ACM Local Contest	<a href="https://codeforces.com/gym/101431">https://codeforces.com/gym/101431</a>
[12] 2017 PSUT Coding Marathon	<a href="https://codeforces.com/gym/101401">https://codeforces.com/gym/101401</a>
[13] 2017 Bangladesh National High School Programming Contest, NHSPC 2017	<a href="https://codeforces.com/gym/101353">https://codeforces.com/gym/101353</a>
[14] 2011-2012 Waterloo Local Contest, 19 June, 2011	<a href="https://codeforces.com/gym/100009">https://codeforces.com/gym/100009</a>
[15] 2012-2013 Waterloo Local Contest, 13 October, 2012	<a href="https://codeforces.com/gym/100169">https://codeforces.com/gym/100169</a>
[16] 2020 Ateneo de Manila University DISCS Pro HS Division	<a href="https://codeforces.com/gym/102556">https://codeforces.com/gym/102556</a>



# Codeforces GYM Contests \*\*\* I

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- [17] Hanoi final contest
- [18] Fall 2019 ICPC-style Waterloo Local Contest
- [19] 2018 Battle of Brains
- [20] 2019 DISCS PrO High School Division
- [21] Procon 2016
- [22] Hello 2015 (Div.2)
- [23] Local Contest
- [24] 2016-2017 ACM-ICPC Pacific Northwest Regional Contest (Div. 2)

<https://codeforces.com/gym/102458>

<https://codeforces.com/gym/102367>

<https://codeforces.com/gym/102062>

<https://codeforces.com/gym/102051>

<https://codeforces.com/gym/101059>

<https://codeforces.com/gym/100571>

<https://codeforces.com/gym/100004>

<https://codeforces.com/gym/101291>







# Lecture Agenda

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Section 5: Codeforces GYM Contests \*\*\* V



# Codeforces GYM Contests \*\*\* II

[01] 2017-2018 ACM-ICPC Pacific Northwest Regional Contest (Div. 2)	<a href="https://codeforces.com/gym/101652">https://codeforces.com/gym/101652</a>
[02] 2017 ACM Amman Collegiate Programming Contest	<a href="https://codeforces.com/gym/101498">https://codeforces.com/gym/101498</a>
[03] 2015 ACM Arabella Collegiate Programming Contest	<a href="https://codeforces.com/gym/100676">https://codeforces.com/gym/100676</a>
[04] JU Flash Contest	<a href="https://codeforces.com/gym/102035">https://codeforces.com/gym/102035</a>
[05] 2018 PSUT Coding Marathon	<a href="https://codeforces.com/gym/101798">https://codeforces.com/gym/101798</a>
[06] La Salle-PuiChingProgramming Challenge 培正喇沙編程挑戰賽2017	<a href="https://codeforces.com/gym/101522">https://codeforces.com/gym/101522</a>
[07] La Salle-PuiChingProgramming Challenge 培正喇沙編程挑戰賽2016	<a href="https://codeforces.com/gym/101521">https://codeforces.com/gym/101521</a>
[08] 2017 JUST Programming Contest 2.0	<a href="https://codeforces.com/gym/101343">https://codeforces.com/gym/101343</a>
[09] Bangladesh Olympiad in Informatics 2016	<a href="https://codeforces.com/gym/101212">https://codeforces.com/gym/101212</a>
[10] 2015 PSUT Coding Marathon	<a href="https://codeforces.com/gym/100687">https://codeforces.com/gym/100687</a>
[11] 2014 Winter Programming School, Kharkiv, day 4. Junior league	<a href="https://codeforces.com/gym/100376">https://codeforces.com/gym/100376</a>
[12] UBC Programming Contest 2019 (UBCPC 2019)	<a href="https://codeforces.com/gym/102365">https://codeforces.com/gym/102365</a>
[13] Southern and Volga Russia Qualifier 2019-2020	<a href="https://codeforces.com/gym/102348">https://codeforces.com/gym/102348</a>
[14] Semana i 2018	<a href="https://codeforces.com/gym/101917">https://codeforces.com/gym/101917</a>
[15] 2018-2019 ACM-ICPC, NEERC, Southern Subregional Contest, Qualification Stage	<a href="https://codeforces.com/gym/101911">https://codeforces.com/gym/101911</a>
[16] 2018 JUST Programming Contest 1.0	<a href="https://codeforces.com/gym/101778">https://codeforces.com/gym/101778</a>
[17] 2016 PSUT Coding Marathon	<a href="https://codeforces.com/gym/100989">https://codeforces.com/gym/100989</a>





# Lecture Agenda

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✓ Section 1: Codeforces GYM Contests \*\*\* I

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**Section 3: Codeforces GYM Contests \*\*\* III**

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Section 5: Codeforces GYM Contests \*\*\* V



# Codeforces GYM Contests \*\*\* III

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- [01] 2018-2019 ACM-ICPC Pacific Northwest Regional Contest (Div. 1)
- [02] ACM ICPC, Arabella Collegiate Programming Contest (2018)
- [03] ACM ICPC, Amman Collegiate Programming Contest (2018)
- [04] ACM ICPC, Damascus University Collegiate Programming Contest(2018)
- [05] 2017 ACM Arabella Collegiate Programming Contest
- [06] 2016-2017 ACM-ICPC, Egyptian Collegiate Programming Contest (ECPC 16)
- [07] 2015-2016 ACM-ICPC Southwestern Europe Regional Contest (SWERC 15)
- [08] 2016 ACM Amman Collegiate Programming Contest
- [09] 2015 ACM Syrian Collegiate Programming Contest
- [10] 2015-2016 ACM ICPC Baltic Selection Contest
- [11] 2014-2015 ACM-ICPC Southwestern Europe Regional Contest (SWERC 14)
- [12] 2015 ACM Amman Collegiate Programming Contest
- [13] 2004-2005 ACM-ICPC East Central North America Regional Contest (ECNA 2004)
- [14] 2014 KTU ACM ICPC Qualification Round
- [15] ACM ICPC, Tishreen Collegiate Programming Contest (2017)
- [16] 2018 ACM-ICPC, Universidad Nacional de Colombia Programming Contest

<https://codeforces.com/gym/101982>  
<https://codeforces.com/gym/101972>  
<https://codeforces.com/gym/101810>  
<https://codeforces.com/gym/101808>  
<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>  
<https://codeforces.com/gym/100796>  
<https://codeforces.com/gym/100783>  
<https://codeforces.com/gym/100712>  
<https://codeforces.com/gym/100651>  
<https://codeforces.com/gym/100495>  
<https://codeforces.com/gym/101915>  
<https://codeforces.com/gym/101845>



# Codeforces GYM Contests \*\*\* III

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- [17] 2008-2009 ACM-ICPC, NEERC, Northern Subregional Contest
- [18] 2010-2011 ACM-ICPC, NEERC, Northern Subregional Contest
- [19] 2013-2014 ACM-ICPC Brazil Subregional Programming Contest
- [20] 2017 ACM-ICPC, Universidad Nacional de Colombia Programming Contest
- [21] 2013-2014 CT S01E10: 2013 ACM-ICPC ECPC (ECPC 2013)
- [22] 2014-2015 ACM-ICPC Pacific Northwest Regional Contest (Div. 2)
- [23] 2014 Nordic Collegiate Programming Contest
- [24] 2014 Syrian Collegiate Programming Contest (SCPC 14)
- [25] 2009-2010 ACM ICPC Southwestern European Regional Programming Contest
- [26] 2013 KTU ACM ICPC Qualification Round
- [27] UFBA Practice Session for Brazilian ICPC Regionals -2018
- [28] 2015 AlBaath Collegiate Programming Contest
- [29] 2015 Tishreen Collegiate Programming Contest
- [30] 2019 ICPC Malaysia National

<https://codeforces.com/gym/100623>

<https://codeforces.com/gym/100610>

<https://codeforces.com/gym/101473>

<https://codeforces.com/gym/101466>

<https://codeforces.com/gym/100283>

<https://codeforces.com/gym/101653>

<https://codeforces.com/gym/100502>

<https://codeforces.com/gym/100500>

<https://codeforces.com/gym/102470>

<https://codeforces.com/gym/100482>

<https://codeforces.com/gym/101962>

<https://codeforces.com/gym/100947>

<https://codeforces.com/gym/100935>

<https://codeforces.com/gym/102219>







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# Codeforces GYM Contests \*\*\* IV

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[01] 2015 HIAST Collegiate Programming Contest	<a href="https://codeforces.com/gym/100952">https://codeforces.com/gym/100952</a>
[02] 2019, XII Samara Regional Intercollegiate Programming Contest	<a href="https://codeforces.com/gym/102215">https://codeforces.com/gym/102215</a>
[03] 2018, XI Samara Regional Intercollegiate Programming Contest	<a href="https://codeforces.com/gym/101755">https://codeforces.com/gym/101755</a>
[04] 2017, X Samara Regional Intercollegiate Programming Contest	<a href="https://codeforces.com/gym/101341">https://codeforces.com/gym/101341</a>
[05] 2016, IX Samara Regional Intercollegiate Programming Contest	<a href="https://codeforces.com/gym/100971">https://codeforces.com/gym/100971</a>
[06] 2015, Samara SAU ACM ICPC Quarterfinal Qualification Contest	<a href="https://codeforces.com/gym/100812">https://codeforces.com/gym/100812</a>
[07] 2015, VIII Samara Regional Intercollegiate Programming Contest	<a href="https://codeforces.com/gym/100694">https://codeforces.com/gym/100694</a>
[08] 2014, VII Samara Regional Intercollegiate Programming Contest	<a href="https://codeforces.com/gym/100460">https://codeforces.com/gym/100460</a>
[09] 2014, Samara SAU ACM ICPC Quarterfinal Qualification Contest	<a href="https://codeforces.com/gym/100488">https://codeforces.com/gym/100488</a>
[10] 2013, VI Samara Regional Intercollegiate Programming Contest	<a href="https://codeforces.com/gym/100187">https://codeforces.com/gym/100187</a>
[11] 2013, Samara SAU ACM ICPC Quarterfinal Qualification Contest	<a href="https://codeforces.com/gym/100247">https://codeforces.com/gym/100247</a>
[12] 2012, Samara SAU ACM ICPC Quarterfinal Qualification Contest	<a href="https://codeforces.com/gym/100090">https://codeforces.com/gym/100090</a>
[13] 2012, V Samara Regional Intercollegiate Programming Contest	<a href="https://codeforces.com/gym/100030">https://codeforces.com/gym/100030</a>
[14] 2016, Samara University ACM ICPC Quarterfinal Qualification Contest	<a href="https://codeforces.com/gym/101149">https://codeforces.com/gym/101149</a>
[15] 2018 ECNU Campus Invitational Contest	<a href="https://codeforces.com/gym/101848">https://codeforces.com/gym/101848</a>
[16] 2018 BACS Contest Replay	<a href="https://codeforces.com/gym/101864">https://codeforces.com/gym/101864</a>



# Codeforces GYM Contests \*\*\* IV

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- [17] 2018-2019 XIX Open Cup, Grand Prix of Korea (Division 2)
- [18] UFPE Starters Final Try-Outs 2019
- [19] 2018 USP-ICMC
- [20] 2018 IME Tryouts
- [21] IME Starters Try-outs 2018
- [22] Tishreen-CPC 2018
- [23] 2018 Southern Russia Open Championship -XII SFU Olympiad
- [24] UFPE Starters Final Try-Outs 2018
- [25] 2017 United Kingdom and Ireland Programming Contest (UKIEPC 2017)
- [26] Higher Institute for Applied Sciences and Technology CPC 2016
- [27] ICL 2016 (GP of Tatarstan)
- [28] VIII Open Programming Championship of Kazan Federal University 2015
- [29] 2015 USP-ICMC
- [30] 2015 ICL, Finals, Div. 2

<https://codeforces.com/gym/102058>  
<https://codeforces.com/gym/102020>  
<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/101061>  
<https://codeforces.com/gym/100942>  
<https://codeforces.com/gym/100834>  
<https://codeforces.com/gym/100733>  
<https://codeforces.com/gym/100637>





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# Codeforces GYM Contests \*\*\* V

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- [01] KTU Programming Camp (Day 1)
- [02] KTU Programming Camp (Day 2)
- [03] KTU Programming Camp (Day 3)
- [04] KTU Programming Camp (Day 5)
- [05] 2015 Google Code Jam Qualification Round (GCJ 15 Qualification)
- [06] 2014 Winter Programming School, Kharkiv, day 3 (A. Shmelev). Junior league
- [07] 2014 Winter Programming School, Kharkiv, day 8 (Team Akai). Junior league
- [08] 2014 Winter Programming School, Kharkiv, day 9 (V. Nespirtny). Junior league
- [09] 2011-2012 Waterloo Local Contest, 24 September, 2011
- [10] Innopolis Open, Final round, 2015-2016
- [11] Innopolis Open 2019-2020, qualification, contest 1
- [12] Innopolis Open 2019-2020, qualification, contest 2
- [13] Innopolis Open, Elimination round 1, 2017-2018
- [14] Innopolis Open, Elimination round 2, 2017-2018
- [15] Innopolis Open, Second elimination round, 2018-2019
- [16] Innopolis Open, First elimination round, 2018-2019

<https://codeforces.com/gym/100735>  
<https://codeforces.com/gym/100738>  
<https://codeforces.com/gym/100739>  
<https://codeforces.com/gym/100741>  
<https://codeforces.com/gym/100662>  
<https://codeforces.com/gym/100374>  
<https://codeforces.com/gym/100382>  
<https://codeforces.com/gym/100384>  
<https://codeforces.com/gym/100008>  
<https://codeforces.com/gym/100905>  
<https://codeforces.com/gym/102436>  
<https://codeforces.com/gym/102461>  
<https://codeforces.com/gym/101627>  
<https://codeforces.com/gym/101640>  
<https://codeforces.com/gym/102052>  
<https://codeforces.com/gym/102032>



# Codeforces GYM Contests \*\*\* V

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|---|---|
| [17] UFPE Starters Final Try-Outs 2020                | <a href="https://codeforces.com/gym/102448">https://codeforces.com/gym/102448</a> |
| [18] The 2019 “Orz Panda” Cup Programming Contest     | <a href="https://codeforces.com/gym/102309">https://codeforces.com/gym/102309</a> |
| [19] 2019 USP-ICMC                                    | <a href="https://codeforces.com/gym/102302">https://codeforces.com/gym/102302</a> |
| [20] HCW 19 Team Round (ICPC format)                  | <a href="https://codeforces.com/gym/102279">https://codeforces.com/gym/102279</a> |
| [21] 2019 Facebook Hacker Cup, Qualification Round    | <a href="https://codeforces.com/gym/102249">https://codeforces.com/gym/102249</a> |
| [22] 2019, XI Annual Programming Contest by ESCOM-IPN | <a href="https://codeforces.com/gym/102218">https://codeforces.com/gym/102218</a> |
| [23] 2019 ECNU Campus Invitational Contest            | <a href="https://codeforces.com/gym/102190">https://codeforces.com/gym/102190</a> |
| [24] The 14-th BIT Campus Programming Contest         | <a href="https://codeforces.com/gym/102174">https://codeforces.com/gym/102174</a> |
| [25] NCD 2019   | <a href="https://codeforces.com/gym/102163">https://codeforces.com/gym/102163</a> |
| [26] 2017 Hackatari Codeathon                         | <a href="https://codeforces.com/gym/101257">https://codeforces.com/gym/101257</a> |
| [27] 2010-2011 VII International Zhautykov Olympiad   | <a href="https://codeforces.com/gym/100147">https://codeforces.com/gym/100147</a> |
| [28] 2009-2010 VI International Zhautykov Olympiad    | <a href="https://codeforces.com/gym/100143">https://codeforces.com/gym/100143</a> |
| [29] 2008-2009 V International Zhautykov Olympiad     | <a href="https://codeforces.com/gym/100142">https://codeforces.com/gym/100142</a> |
| [30] 2016 USP-ICMC                                    | <a href="https://codeforces.com/gym/101063">https://codeforces.com/gym/101063</a> |
| [31] Crypto Cup 1.0                                   | <a href="https://codeforces.com/gym/100514">https://codeforces.com/gym/100514</a> |
| [32] 2020 UP ACM Algolympics Elimination Round        | <a href="https://codeforces.com/gym/102535">https://codeforces.com/gym/102535</a> |



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DO  
MORE.