Training for ICPC

Final Brasileira da Maratona de Programação
ACM ICPC Latin American Regional Contest 2013

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- Individual training tips (or "how to become Russian")

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- Team training tips

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- Group training tips

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- Group training tips

- Hint for tomorrow (or "why to wait till the end")

Individual training

Do...

- get to know your programming language inside out
- practice with problems available in online judges (ICPCArchive, SPOJ, UVA, Timus, ZJU, TJU, ZOJ, COJ, ...)
- take part in **timed** online contests (TopCoder, CodeForces, CodeJam, etc.)
- read code for solutions to problems you find hard
- ask for help to other contestants or your coach, in forums or mailing lists, etc.

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Don't...

- only solve problems you are confident with
- forget about problems for which you don't know the solution
- be lazy and skip problems you know how to solve

Group training

Simulate as closely as possible the competition environment:

- take 5 hours with no breaks
- use a real problemset
- only one keyboard
- write code with pen and paper
- use a printer to debug offline

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Rinse and repeat <u>at least</u> once a week...

Group training (cont.)

Work on your strategy:

- $0h \rightarrow 1h$:
    - Divide the problems to read them and quickly identify easy, medium and hard problems.
    - Build a table to keep track of your progress
    - Define a tentative order and set your goals

- $1h \rightarrow 3.5/4h$:
    - Rotate in using the computer
    - Correct your mistakes soon
    - Parallelize as much as possible
    - Start early on hard problems, or don't start at all

- $3.5/4h \rightarrow 5h$:
    - Take a break to consider your situation
    - Concentrate on one (exceptionally two) problems you are close to finishing

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- **Symptom:** Nothing to do with $> 1h$ to go
  Possible solution: Practice with harder problems, learn new algorithms and techniques

Analyze your performance (cont.)

And then some more...

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- **Symptom:** You come up with many solutions soon after the contest has finished
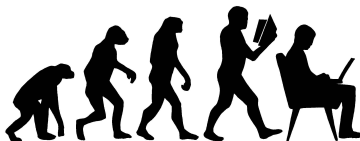 **Possible solution:** Take more time to read and think thoroughly on all the problems

Group training

Fact: We learn faster watching and imitating...
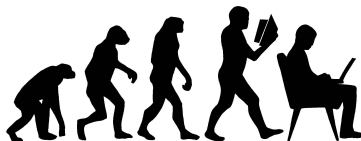
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Training camps

- There's one for everyone: beginner, intermediate and advanced versions are held annually
- Provide a great environment for intensive training through direct interaction
- Allow you to discover your strengths and weaknesses
- Get you used to the pressure of competing against other (better?) teams

Some examples

- Beginner's training camp in FPUNA, Asunción, Paraguay (July 2012)

- Intermediate training camps held every year in Argentina (Buenos Aires 2010/11, Córdoba 2012, La Plata 2013):

- Advanced training camps before World Finals every year (Campinas, São Paulo)

- Many more in Brazil, Bolivia, Cuba, Peru, ...

And now one final hint for tomorrow...

have fun, enjoy what you do...

results will come your way!