

3rd Virginia Tech High School Programming Competition

Virginia Tech

Coach: Dr. Godmar Back

Outline

- What is Computer Science at Virginia Tech?
- What is the ACM ICPC?
- Rules for today's contest
- Schedule:
 - 10:15am – 10:45 practice
 - 11:00am – 4:00pm contest

Computer Science at Virginia Tech

- AY 2016/17: ~39 full-time faculty + instructors, ~755 undergraduate majors, ~230 graduate students
- Research-active, award-winning faculty
- Strong undergraduate program in College of Engineering (ranked #15)
- Graduate program ranked #40 by USNW
- Highly regarded by recruiters and companies nationwide
- Passion for Computer Science and teaching it!

ICPC FACTS (2016)

The ACM International Collegiate Programming Contest (ICPC) is the

premiere global programming competition conducted by and for the world's universities. The competition operates under the auspices of ACM, is sponsored by IBM, and is headquartered at Baylor University. For nearly four decades, the ICPC has grown to be a game-changing global competitive educational program that has raised aspirations and performance of generations of the world's problem solvers in the computing sciences and engineering.

Teams of three students represent their universities in multiple levels of regional competition.

Virginia Tech competes within the MidAtlantic Region against universities in Virginia, Maryland, North Carolina, West Virginia, Eastern Pennsylvania, Delaware, and Southern NJ.

Virginia Tech's has sent a team to the World Finals in 2014, 2015, 2016, and will be in 2017.



Rules for Today's Contest

- Full Set of Rules published on site
- Teams may not:
 - Communicate with any human outside their team about the problems, including their coaches
 - Use more than 1 computer during the contest
- Teams may:
 - Use the Internet for reference (e.g. programming language documentation)
 - Refer to any documentation prepared by themselves before the contest
 - Use a non-programmable calculator
 - Ask their on-site coaches for assistance with technical matters, e.g. workstation internet access or computer setup.
 - Use a printer (if available)
 - Submit clarifications to the organizers

Hints for Today's Contest

- # 1 mistake for Java Programmers is adding a package statement. Don't.
- Most common causes of Runtime Error judgment:
 - `ArrayIndexOutOfBoundsException`
 - `StringIndexOutOfBoundsException`
 - `StackOverflowError` (infinite recursion)
- Always check your program on the provided test data **before** you submit it!

Today's Problem Set

- We expect a wide range of teams (freshman to seniors, ...)
- Will contain 10 problems to increase variety
- Problems are not sorted by difficulty.
- You will not have failed if you don't solve all problems!
- Hint: Keep an eye on the scoreboard to spot problems that many teams were able to solve!

Getting Help

- Use Clarification system only for problem-related doubts
- For contest-related issues unrelated to problems, ask your coach to use the WebEx chat

Last but not least

- Thanks to our volunteers from the ACM ICPC team
 - 5 student problem setters
- Thanks to our sponsors
 - Department of Computer Science
 - stack@cs Center for Systems Research
 - Eastman Chemicals
- The top 3 teams will be listed on our website
- Prizes: Amazon Gift Certificates
 - #1 - \$180
 - #2 - \$120
 - #3 - \$60