Tutorial to use the open.kattis.com website

Kattis (open.kattis.com)

First, go to the website and create a login (or use another supported login, like Google). After you do that, there are two ways to practice contest problems:

1. Register for a Practice Contest and compete.
2. Solve individual problems from the problem set.

Submitting Problems on Kattis

All Kattis problems use standard input and standard output. Thus, writing solutions to problems on Kattis is just like writing solutions to problems from Codeforces. To submit a problem, if you are on the problem description page, there is a green button labeled "Submit". Click on this button. Then, drag and drop your source file into the location indicated (or click and select the file to upload). Then, hit submit. There is a language tab, but the webpage automatically recognizes what language you used by the file extension. The feedback to a submission is a box that shows green check marks for each correct case and an x for the first incorrect case. Unlike USACO, where all test cases are always graded due to the partial credit grading system, Kattis will stop judging a response after it finds one case is incorrect. For each incorrect submission, the reason the first incorrect test case was so is provided.

1. Practice Contests on Kattis

Kattis doesn't host live contests for the general public. It just hosts official contests for some ACM ICPC regionals and a few other things. But, Kattis allows users to create practice contests and post them for anyone to participate in. A user can just log onto Kattis and create what's known as a mash up contest, where they choose a subset of problems from the Problem Set (labeled "Problems"). To compete in one of these practices, click on the menu item, "Contests". Then, look at the list titled "Upcoming". If there is a button "Join the contest", click it. Note the start time, and then when it's close to the start time, log in. Then go to the Contests page again and there should be a button to Enter the contest you signed up for. Once the contest begins, a page with a link to each problem description will show up. Typically in these contests, the problems are NOT necessarily in difficulty order, so it's good to read some of the descriptions without committing to a problem and look at the scoreboard (this is usually the best indicator of level of difficulty for contests where the problems aren't necessarily in order of difficulty). Kattis contests are scored using ICPC scoring. You get 1 point for each correct solution. You get penalty points associated with each problem you correctly solve. Specifically, for a single problem, the number of penalty points you get is the number of minutes after the contest has started plus 20 times the number of incorrect submissions. So a problem solved at minute 53, where there were two prior incorrect submissions would earn $53 + 2(20) = 93$ penalty points. Your total penalty is the sum of the penalty points on all problems solved correctly. Ties in score are broken by penalty points, with fewer # of penalty points earning a higher rank.

2. Solve Individual Problems on Kattis

Click on Problems. By default, they are in alphabetical order, but you can resort by difficulty, total or ratio, and then look at problems and do ones that seems interesting. Self-explanatory once you get the problem description up. This is probably the key weakness of Kattis - there is no very good system to search for particular types of problems.

3. Arup's Kattis Problem Suggestions

I have created a list of problem suggestions from Kattis, which is a Google Sheet that you can sort by my perceived difficulty and/or category. Feel free to check it out:

http://www.cs.ucf.edu/~dmarino/progcontests/kattisproblist/