COP 4516 Tutorial to use the usaco.org website

First, go to the website usaco.org and create a login. After you do that, there are two ways to practice contest problems:

1. Register for a real contest and compete.
2. Solve individual problems from an old contest.

Submitting Problems on USACO

In the 2020-2021 season, USACO has changed to use standard input/standard output. In the past, USACO used file input/file output. This means that if you are running a live contest in 2021 or later, please use standard input and output. If you are practicing on an old problem prior to the 2020-2021 school year, please use file input and file output. The directions for using files is below:

Old File Input/Output Directions

For each individual problem, a filename is specified. The input file you read from must be the filename.in and the output you produce must go to the file filename.out. For example, in class, I went over a problem where the filename was greetings. Thus, my solution reads from greetings.in and writes output to greetings.out. Read up on File Input and File Output in your preferred language. My solution to greetings (which is available outside of this document on the course web page), shows one way to do File Input and Output in Java. When you are on the page of a USACO problem, there's a pull down menu at the bottom of the problem description for the language of your solution and a second button where you click to upload your source file. After you do that, just it the "Submit Solution" button. When you do, you'll see your results on each test case at the top of the problem description window. A test case your program solves correctly will be a green box with a '*' character and the amount of memory and time your program took on that case. All incorrect test cases are indicated with a red box, and the character in the box indicates whether the response is a Wrong Answer ('x'), Time Limit Exceeded ('t'), or Run Time Error ('!').

1. Live Contests on USACO

On the main USACO page there's a schedule on the top right. That shows four contests and the window of days for the contest. Each contest has a 4 day window. To compete in a contest, you must login during that four day window and then hit a button at the top of the page that says, "Compete in January 2021 Contest" (or something of that nature). Once you click on that, there will be another page that comes up with the contest rules, and if you scroll to the bottom, you can just hit the button "Start my 4 hour contest window now" (or something to that effect). Once you do that, three problems will pop up in your main browser window and you can click on any problem and read it. During contest, you can see your results as previously described. USACO does partial credit, so if you get some test cases green, you do get some points (not true on Codeforces). So, you may either choose to move on, or edit your program to see if you get more test cases correct. Your score will be based on your best submission to each problem. ***I strongly recommend these for the course credit due to the flexibility of the four day window.*** But to do these, you have to plan, since they are ONLY once a month for the next three months.

2. Solving Individual Problems from Old Contests

On the main USACO page, click on the menu for Contests. This brings up a list in reverse chronological order. Click on any of the contest links you like. When you do this, you'll see a summary of the contest and if you scroll down enough, you'll see the problems at each level, Platinum, Gold, Silver and Bronze. (If you look at a contest at or before the 2015 US Open, there will be no Platinum level.) For our class, I recommend you start with Bronze problems for practice until you feel they are too easy. Basically, you just click on a problem on any of these contests pages, and you can submit like previously discussed and see your results.