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Software Testing

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Test Plan

The plan for testing the contest website is to develop a test suite which will find confidence that the code will work in as many cases as possible. The goal is to push the limits with various inputs to force all the code which can be run to be run and tested.

First I will test that under the three user types work, which are

* Judge
* Contestant
* Not Logged In

Each of these should be tested to verify that they are or are not allowed to view a page as per following the guidelines

|  |  |  |  |
| --- | --- | --- | --- |
| Pages | Contestant | Judge | Logged\_Out |
| Documentation Pages | Y | Y | Y |
| Home | Y | Y | Y |
| Rules | Y | Y | Y |
| Standings | Y | Y | Y |
| Login | Y | Y | Y |
| Problems | Y | Y | N |
| Individual Problem Pages | Y | Y | N |
| Submit solution page(s) | Y | Y | N |
| View attempts | N | Y | N |
| View prints | N | Y | N |
| Edit problems | N | Y | N |
| Edit notes | N | Y | N |
| Edit contestants | N | Y | N |
| Edit contests | N | Y | N |

Each of those those individual tests should be of similar structure to each other so the overall time it would take per test will not be much longer than 5-10 minutes, but the first few would take possible up to 30 minutes to make sure they work as expected, adjusting cookies, adjusting file locations, and other relevant details.

Some other tests to perform will be

* Submitting Problem
  + It would be good to submit problems of varying Correctness as well as to multiple problems to ensure it works and covers all potential code ares. This would likely mean around 5 tests involved with about an hour of time to implement.
* Sorting of Attempts on View\_attempts page
  + This should take around 20-30 minutes to make sure is working correctly
* Verify rankings on view\_standings page
  + This would also require about 30 minutes to verify what the rankings show matches what they ought to be.
* Links on page work as expected
  + Home → Rules, Problems, Standings, Docs, Contest Home, View Attempts, view standings, view prints, view problems, edit problems, edit notes, edit contestants, edit contests
  + Problems → a specific problem page, Home+(the home, standings and problems), Judge Menu (all the links to the appropriate pages for judges), Submit solution page
  + Standings → Home, Judge menu
  + Judge Menu Pages → Judge Menu
  + Each of these tests will be similar in nature, so after the time to get the first few working, say an hour, each one will likely only add around 5 minutes.