

Assignment 4
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Random Testing:

Using random testing, I was able to guide the players random generation to a usable number, while keeping it random. Seed was also randomly generated. This would allow for random generations of the game and using the cards.

Code Coverage:

I was able to have 100% line and branch coverage with these randomized tests. I have the tests running 10,000 times and it is finished almost immediately.

Unit vs. Random:

Village:

Unit testing: 83.33% line coverage and 100% branch execution
I was able to increase the line coverage approximately 17% with random testing.

Smithy:

Unit testing: 86.27% line coverage and 100% branch execution
I was able to increase the line coverage approximately 14% with random testing.

Adventurer:

Unit testing: 83.33% line coverage and 100% branch execution
I was able to increase the line coverage by approximately 17% with random testing.

The random testing was able to test with randomized players and a randomized seed where the unit tests were hardcoded in. The random tests were able to test and cover much more than the unit test making it more efficient at testing the code.