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CS 301

1st item in check list is skipped as defined in homework outline

Task 1 McConnell's Check List - StateAndSolverTest

2) No, there are elements of the original design such as NumberOfStatesExplored() which are untouched by the test case. There is no particular reason for this.

3) No, each line of code has not been tested with at least one test case. As stated in the last problem, some methods are untouched in testing. There is no particular reason for this.

4)No, all def-use data flow paths have not been tested with at least one case. There is no reason for this.

5)No, the test suite does not check for pairings such as these. Some patterns are near impossible to test for, such as a def-def pairing, and should probably be checked by going over the code personally.

6)As far as I can tell, no… Unless these errors include null Assertions.

7) No. Maximum settings and middle of the road settings are not fully tested.

8)I believe this has been accounted for. The test asserts a null check for inputs which create illegal moves. This blocks computing variables which are too small or too large.

9)No the test suite does not check for improper user input, but this is okay as the user can only shift tiles. There is no input allowed besides the preset move operations.

10)Yes there are some 3x3 tests

11)The minimal and minimum normal configurations are both tested, 2x2 and 3x3

12)The maximal normal configuration, 4x4 is not tested, and I assume this would be to save time and memory on testing.

13)Yes, many of the tests are tests which could easily be checked by hand.

Task 2 McConnell's Check List - MySimplePuzzleSolverTest

2) Yes all elements of the design have now been given their own test cases.

3) No, each line of code has not been tested with at least one test case. Null checks on the state of the bfs(when it cannot find the solution) have been difficult for me to implement. When I place checks to see if an element is in a list/set/array, I seem to get false values consistently even when I know the

list/set/array contains that element. I believe Java is making this false assertion based on memory locations of the items, but I have no idea how to navigate around this.

4)No, all def-use data flow paths have not been tested with at least one case. This is something that should be checked by the user. Nothing we have learned covers how to check for data-flow path issues in test suites.

5)No, the test suite does not check for pairings such as these. Some patterns are near impossible to test for, such as a def-def pairing, and should probably be checked by going over the code personally.

6)If null Assertions count for “common” errors, then yes. Otherwise, there is no list of common errors to draw from to make such test cases.

7) Yes. Tests such as 4x4configure have now been included to accommodate this.

8)I believe this has been accounted for. The test asserts a null check for inputs which create illegal moves. This blocks computing variables which are too small or too large.

9)No the test suite does not check for improper user input, but this is okay as the user can only shift tiles. There is no input allowed besides the preset move operations.

10)Yes there are some 3x3 tests

11)The minimal and minimum normal configurations are both tested, 2x2 and 3x3

12)The maximal normal configuration, 4x4 is now tested. Tests such as 4x4configure and 4x4solver are now in the test suite.

13)Yes, many of the tests are tests which could easily be checked by hand.