Test Plan for Program 4

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1. Evaluating system functionality

The following tests will be used to determine that the system is functioning properly. The system needs to handle accepting external files that represents a maze, which might or might not be valid. The system needs to display the maze and the exit(s) found. The system needs to correctly execute the help function. The system needs to exit the session correctly.

Test Set 1: Opening a valid maze

Method: User will open a .dat file representing a valid maze.

Pass Criteria: expected output observed.

Test Set 2: System does not accept invalid file type

Method: User will attempt to open a file other than .dat

Pass Criteria: expected output observed.

Test Set 3: System does not accept invalid maze

Method: User will attempt to open a .dat file representing an invalid map.

Pass Criteria: expected output observed.

Test Set 4: System correctly displays maze and route(s) with exit(s).

Method: User will open a .dat file representing a valid maze.

Pass Criteria: expected output observed.

Test Set 5: System correctly executes help function.

Method: User will activate help function.

Pass Criteria: expected output observed.

Test Set 6: System correctly exits.

Method: User will activate close function.

Pass Criteria: expected output observed.

1. Evaluating usability.

The following test will be used to determine the system’s usability. System can be displayed on different resolutions. System can be minimized and unminimized.

Test Set 1: System is displayed at 1366 x 768 resolution.

Method: User will start program using 1366 x 768 resolution.

Pass Criteria: System is completely viewable.

Test Set 2: System is displayed at 1024 x 768 resolution.

Method: User will start program using 1024 x 768 resolution.

Pass Criteria: System is completely viewable.

Test Set 3: System is correctly minimized.

Method: User will active minimize function.

Pass Criteria: expected output observed.

Test Set 4: System is correctly unminimized.

Method: User will active the system from the taskbar.

Pass Criteria: expected output observed.

1. Evaluating performance.

The following tests will determine if the system runs efficiently. The system needs to respond to the user input within 500 milliseconds.

Test Set 1: System will display maze within time range.

Method: User will open valid maze file.

Pass Criteria: Maze is displayed within time range.

Test Set 2: System will display help message within time range.

Method: User will activate help function.

Pass Criteria: Help message is displayed within time range.

Test Set 3: System will display invalid message within time range.

Method: User will open invalid maze file.

Pass Criteria: Invalid message is displayed within time range.

Test Set 4: System will close within time range.

Method: User will active close function.

Pass Criteria: System will close within time range.