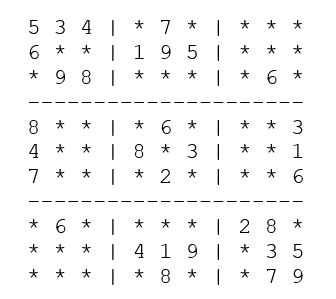
# Assignment 2 Test Cases

**Test Cases for Part 1**

|  |  |  |  |
| --- | --- | --- | --- |
| **Test #** | **Scenario** | **User Input** | **Expected Results** |
| 1 | Entering a nonexistent filename | “notSudoku.txt” | Error message: notSudoku.txt does not exist. |
| 2 | Entering a filename with improper file format | “badSudoku.txt” | Error message: badSudoku.txt does not have the correct file format. |
| 3 | Entering the correct filename, with the proper format | “sudoku.txt” | Game continues, displaying instructions on how to Quit, Save and Undo. |
| 4 | Entering a correct file, but breaks the rules | “rulebreaker.txt” | Error message: rulebreaker.txt does not have the correct file format. |
| 5 | Entering a won game | “alreadywon.txt” | Board is displayed as completed: Message displayed “Congratulations! You won!” |
| 6 | Entering an invalid column number | (row, column) > 8, 10 | Error message: Invalid column number. Please try again |
| 7 | Entering an invalid row number | (row, column) > 0, 5 | Error message: Invalid row number. Please try again. |
| 8 | Entering an invalid row & column number | (row, column) > -9, -7 | Error message: Invalid row & column number. Please try again. |
| 9 | Entering an invalid row & column number | (row, column) > s, / | Error message: Invalid row & column number. Please try again. |
| 10 | Entering an occupied square number | (row, column) > 8, 9 | Error message: Invalid move. That square already has a value. Please try again. |
| 11 | Entering a valid square number | (row, column) > 1, 4 | Game continues, displaying a prompt “Enter value:” |
| 12 | Entering an illegal number | (row, column) > 1, 4 value: 7 | Error message: Illegal move. There is already a 7 in that row/column/square. Please try again |
| 13 | Entering an invalid number | (row, column) > 9, 4 value: 0 | Error message: Invalid value. Number must be between 1 and 9. Please try again |
| 14 | Entering an invalid number | (row, column) > 7, 9 value: 10 | Error message: Invalid value. Number must be between 1 and 9. Please try again |
| 15 | Entering an invalid number | (row, column) > 7, 9 value: hello | Error message: Invalid value. Number must be numeric. Please try again |
| 16 | Entering a legal number | (row, column) > 1, 4 value: 2 | Star in row 1 column 4 is replaced by the value 2 |
| 17 | Entering an occupied square number (entered previously) | (row, column) > 1, 4 | Error message: Invalid move. That square already has a value. Please try again. |
| 18 | Entering a legal number | (row, column) > 3, 7  value: 1 | Star in row 3 column 7 is replaced by the value 1 |
| 19 | Undoing the previous move | > U | Previous entered value, 1 in (3,7), is replaced by a star |
| 20 | Undoing a second time | > U | Error message: Cannot undo more than the previous move. |
| 21 | Saving the game | > S | File “sudoku.txt” is overwritten with its current changes (there should be a 2 in (1,4)). Message displayed: Game saved successfully. |
| 22 | Saving the game again | > S | Error message: The game has already been saved. File “sudoku.txt” remains the same as in Test 15. |
| 23 | Entering an illegal number from previously entered value | (row, column) > 9, 4 value: 2 | Error message: Illegal move. There is already a 2 in that row/column/square. Please try again |
| 24 | Quitting the game without saving the last move | > Q | Program is terminated with the last saved changes only. File “sudoku.txt” remains the same as in Test 15. |
| 25 | Board completed: Winning the game | - | Board is displayed as completed: Message displayed “Congratulations! You won!” |
| 26 | Immediately quitting | > Q | Game quits |
| 27 | Immediately saving | > S | Message: “Game saved successfully” |
| 28 | Immediately undoing | > U | Error message: Cannot undo. |



**Test Cases for Part 2**

\*Use all relevant test cases from Part 1 and these extra ones.   
\*All error messages for the frame must be pop-up windows.  
\*All “stars” are now just combo boxes with options 1-9.

|  |  |  |  |
| --- | --- | --- | --- |
| **Test #** | **Scenario** | **User Input** | **Expected Results** |
| 1 | Clicking the Help button | “Help” | Message box displays instructions for the game. |
| 2 | Clicking the About button | “About” | Message box displays: Sudoku - Sabrina Tochkov - 2023 Cégep Heritage College |
| 3 | Selecting an illegal value | Row 3, Column 6: 5 | Error message pop-up: Illegal move. There is already a 5 in that row/column/square. Combo box is cleared. |
| 4 | Selecting a legal value | Row 3, Column 6: 4 | Combo box becomes non-editable and slightly changes colour to indicate that a value has been entered |
| 5 | Selecting an illegal value (from #4) | Row 3, Column 5: 4 | Error message pop-up: Illegal move. There is already a 4 in that row/column/square. Combo box cleared. |
| 6 | Clicking the Undo button | “Undo” | Combo box from previously entered value (4 in (3,6)) is cleared. |
| 7 | Clicking the Save button | “Save” | File is overwritten with all the new changes. |
| 8 | Clicking the Exit button | “Exit” | Program is terminated with the last saved changes only. |