Software Engineering Group Project
System Test Specification

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1. INTRODUCTION

1.1 Purpose of this Document

This document will be used as reference to system testing and specifies how we will test the system as a whole.

1.2 Scope

This document's tests are derived from requirements specification for the software group project [1].

The document's standard and format are from the test procedure standards for the software group project [2]

1.3 Objectives

The objective of this document is to guide the system tester during testing, so that they know what the system should be able to do and how it should behave when doing so.

2. SYSTEM TEST SPECIFICATION

Test Ref	Req being tested	Test Content	Input	Output	Pass Criteria
SE-F-001	FR1	Check that the user is prompted with a menu on startup	Opening or running the program	A menu is displayed on the screen	The menu is displayed correctly
SE-F-002	FR1	Check that menu contains an option to start a new game	Opening or running the program	One of the menu options is to start a new game	The menu option is present and works correctly
SE-F-003	FR1	Check that the players are prompted to enter their names for each colour	The player selects the menu option "start a new game"	The player should be presented with a way to enter two names, one for black and one for white	The player is able to enter a name for both colours and each name is shown correctly with the correct colour
SE-F-004	FR1	Check that the player has the option to restore a previous game on startup	Opening or running the program	One of the menu options is to restore a previous game	The menu option is present and works correctly
SE-F-001	FR2	Check that the player names are tracked for the duration of the game	The player selects the menu option "start a new game" or makes a move in game	The player name is stored for the duration of the game	The name is stored in memory and can be corresponded to pieces
SE-F-002	FR2	Check that the player colour is tracked for the duration of the game	The player selects the menu option "start a new game" or	The colours of each player are stored for each of the	The colours are stored in memory corresponded to the correct

			makes a move in game	players for the duration of the game	players, and therefore the correct pieces
SE-F-003	FR2	Check that program is keeping track of where the players pieces are for the duration of the game	The player selects the menu option "start a new game" or makes a move in game	The pieces and their locations are stored for the duration of the game	The piece positions on the board are stored correctly in memory
SE-F-001	FR3	Check that program visually indicates which player should move	The player selects the menu option "start a new game" or makes a move in game	The program displays which player should move	The correct player is told to move
SE-F-002	FR3	Check that the players names are displayed on the screen	The player selects the menu option "start a new game" or makes a move in game	The program displays the player names	The names are displayed correctly
SE-F-003	FR3	Check that the board is displayed on the screen	The player selects the menu option "start a new game" or makes a move in game	The chess board should be displayed on the screen	The chess board is correctly displayed with no graphical errors
SE-F-004	FR3	Check that the pieces are displayed	The player selects the menu option "start a new game" or makes a move in game	The pieces should appear on the board	The pieces should be displayed in the correct locations, in the correct colour with no graphical errors
SE-F-001	FR4	Check if the player can only select their pieces	The player selects the menu option "start a new game" or makes a move in game	The player will be told if they try to move a piece that isn't theirs	The correct player is prevented from moving the opponents pieces
SE-F-002	FR4	Check that the player can only move one piece at a time	The player selects the menu option "start a new game" or makes a move in game	The player will be told if the try to move more than one piece	Only one piece can be moved at a time
SE-F-001	FR5	Check that the possible legal moves are shown to the user	The player selects the menu option "start a new game" or makes a move in game	The program will show the legal moves for that turn to the user	The legal moves shown are valid and correct

SE-F-002	FR5	Check that the pieces can moved	The player attempts to move a piece	The piece selected will move	The correct piece moves to the correct location
SE-F-003	FR5	Check that the piece can only be moved if it is a valid move	The player attempts to move a piece	The player will be told if the piece cannot be moved	The program does not allow an illegal move
SE-F-004	FR5	Check that the player cannot move a piece to an invalid square	The player attempts to move a piece to an invalid square	The player will be told that it is an illegal move	The program does not allow a move to an illegal square
SE-F-001	FR6	Check that the program detects check and indicates it to the user	The opponent targets the king with one of their pieces	The player is told that they are in check	The program makes sure that the player knows that their king is in check
SE-F-001	FR7	Check that the program detects checkmate	The opponent puts the players king into checkmate	The player is told that they have lost	The program ends the chess game and stores the winner
SE-F-001	FR8	Check that program clearly indicates a game over	A condition that causes the game to end is triggered	The program tells the players that the game is over	The program displays a game over screen at the correct time
SE-F-002	FR8	Check that the program has an option to resign	The player selects the menu option "start a new game" or makes a move in game	There is a button somewhere that allows either player to resign	The player that resigns loses and the game is over
SE-F-003	FR8	Check that the players can make a draw	The player selects the menu option "start a new game" or makes a move in game	There is a button somewhere that allows either player to ask for a draw	Both players are presented with an option to draw and if accepted the game ends
SE-F-004	FR8	Check that the program saves the game as it ends	A condition that causes the game to end is triggered	n/a	The entire game and its details are saved to disk
SE-F-001	FR9	Check that the players can exit the game	The player selects the menu option "start a new game" or makes a move in game	There is a button somewhere that allows either player to quit the game	The game is adjourned and saved for later
SE-F-002	FR9	Check that the players can save the game	The player selects the menu option "start a new	There is a button somewhere that allows	The entire game and its details are saved to disk

				game" or makes a move in game	either player to save the game	
SE-F-001	FR10	Check that the game can be replayed one step at a time	The player selects the menu option "restore previous game"	The board is changed to its next / previous state	The board displayed is one move ahead or behind the current state and has the correct game state
SE-F-002	FR10	Check that the player has the option to review the game backwards	The player selects the menu option "restore previous game"	There is a button that allows the player to move backwards through the game	The board displays the previous move from the current game state
SE-F-003	FR10	Check that the player has the option to review the game forwards	The player selects the menu option "restore previous game"	There is a button that allows the player to move forwards through the game	The board displays the next move from the current game state
SE-F-004	FR10	Check the program allows the user to exit the replay mode	The player selects the menu option "restore previous game"	There is a button that allows the player to exit the replay mode	The button takes the user back to the start menu of the program
SE-F-001	FR11	Check the program saves each move made	The player makes a move in game	n/a	A file is updated with the new move that was made, as well as the new board position
SE-F-002	FR11	Check that the program can restore a game that has been quit	The player selects the menu option "restore previous game"	The is presented with an option to restore the game in question	When the game is selected it is in the correct (previous) state
SE-EI-001	External Interface	Check that a user's input is acted in on in under a second	Any input	The program responds within 1 second	The output is correct and took less than one second to display
SE-EIR-002	External Interface	Check that the program can run on the IS PCs	n/a	n/a	The program runs and behaves correctly on the IS PCs

REFERENCES

[1]   Software Engineering Group Projects – Chess Tutor Requirements Specification 1.1 (Release)
[2]   Software Engineering Group Projects – Test Procedure Standards/2.1 (Release)

DOCUMENT HISTORY

Version	Issue No.	Date	Changes made to document	Changed by
1.0	N/A	15/02/23	N/A - original version	Jac127
1.1	N/A	22/02/23	Added required sections and changed test reference numbers	Jac127