System Verification and Validation Report for Chess Connect

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1 Revision History

Date	Version	Notes
2023-03-04	Arshdeep Aujla	Added Template for Nonfunctional Requirements
2023-03-05	Arshdeep Aujla	Added Table for functional requirements, traceability matrix
2023-03-07	Jonathan Cels	Added some nonfunctional requirement test reports

2 Symbols, Abbreviations and Acronyms

symbol	description
T	Test

Refer to SRS Section 1 for an extensive list of used symbols, abbreviations, and acronyms.

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3 Functional Requirements Evaluation

Refer to the VnV Plan for descriptions of the tests derived to evaluate the functional requirements.

3.1 Game Active State

Test	Input	Expected	Actual	Notes	Result
GA-1	Draw/resign button pressed while game active.	System variable 'gameInProgress' set to false.	System variable configured correctly.		Pass
GA-2	Start game button pressed while game active.	System variable 'gameInProgress' remains true.	System variable configured correctly.		Pass
GA-3	User mode button pressed while game active.	System variable 'currMode' changed to represent the selected user mode.	User mode unchanged.	Design changed, user mode not switchable while a game is active. Test fails by design.	Fail
GA-4	Start game button pressed while game inactive.	System variable 'gameInProgress' set to true, 'currFEN' variable is set to the starting FEN.	System variables configured correctly.		Pass
GA-5	Move made that results in stalemate or checkmate according to the rules of chess.	System variable 'gameInProgress' set to false.	System variable configured correctly.		Pass

Table 1: Active State Functional Requirements Results

3.2 Game Inactive State

Test	Input	Expected	Actual	Notes	Result
GI-1					
GI-2					
GI-3					
GI-4					
GI-5					

Table 2: Inactive State Functional Requirements Results

3.3 Normal Mode

Test	Input	Expected	Actual	Notes	Result
GA-1					
GA-2					
GA-3					
GA-4					
GA-5					

Table 3: Normal Mode Functional Requirements Results

3.4 Engine Mode

Test	Input	Expected	Actual	Notes	Result
GA-1					
GA-2					
GA-3					
GA-4					
GA-5					

Table 4: Engine Mode Functional Requirements Results

3.5 Beginner Mode

Test	Input	Expected	Actual	Notes	Result
GA-1					
GA-2					
GA-3					
GA-4					
GA-5					

Table 5: Beginner Mode Functional Requirements Results

4 Nonfunctional Requirements Evaluation

Refer to the VnV Plan for descriptions of the tests derived to evaluate the non-functional requirements.

4.1 Look and Feel

Test	Result	Notes
NFT-1		

Table 6: Look and Feel Non-Functional Requirements Results

4.2 Usability and Humanity

Test	Result	Notes
NFT-2		
NFT-3		

Table 7: Usability and Humanity Non-Functional Requirements Results

4.3 Performance

Test	Result	Notes
NFT-4		
NFT-5		
NFT-6		
NFT-7		

Table 8: Performance Non-Functional Requirements Results

4.4 Health and Safety

Test	Result	Notes
NFT-8		

Table 9: Health and Safety Non-Functional Requirements Results

4.5 Precision and Accuracy

Test	Result	Notes
NFT-9		

Table 10: Precision and Accuracy Non-Functional Requirements Results

4.6 Capacity

Test	Result	Notes
NFT-10		

Table 11: Capacity Non-Functional Requirements Results

4.7 Security

Test	Result	Notes
NFT-11		
NFT-12		

Table 12: Security Non-Functional Requirements Results

5 Unit Testing

6 Changes Due to Testing

7 Automated Testing

8 Trace to Requirements

Test	Requirement
GA-1	GA1
GA-2	GA2
GA-3	GA3
GA-4	GA6
GA-5	GA7
GI-1	GI1
GI-2	GI2
GI-3	GI3
GI-4	GI4
GI-5	GI5, GI6
NB-1	NB1
NB-2	NB2
NB-3	NB3
ND-1	ND1
NA-1	NA1, NA2
NA-2	NA3
EB-1	EB1
EB-2	EB2
EB-3	EB3
EB-4	EB4
ED-1	ED1
ED-2	ED2
EA-1	EA1, EA2
EA-2	EA3, EA4, EA5
EA-3	EA6

BB-1	BB1
BB-2	BB2
BB-3	BB3
BB-4	BB4
BB-5	BB5
BD-1	BD1
BA-1	BA1
BA-2	BA2
NFT1	LF3
NFT2	UH5
NFT3	UH6
NFT4	PR1
NFT5	PR2
NFT6	PR3
NFT7	PR4
NFT8	PR6
NFT9	PR7
NFT10	PR10
NFT11	SR4
NFT12	SR3

Table 13: Requirements Traceability Matrix

9 Trace to Modules

10 Code Coverage Metrics

A Reflection Appendix

References