CS414: Object-Oriented Design - Fall 2018

Project 3:

Testing Document

Team: ByteMe

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This document outlines the system test cases for the Banqi Game implementation. The purpose of these tests is to ensure that the entire system is tested in full (from end to end) before its release.

First are system test cases for the system components partially implemented (in a way that they run) or fully implemented in first-draft form. Then the currently determined unit test cases follow.

System Test Case: Log-In

Test ID	Test Step/Input	Expected Result	Actual Result	Pass/Fail
LI-1	From the command line, enter "1" to pull up login feature.	Pulls up login feature/prompt asking for nickname and password	Login feature comes up	Pass
LI-2	User enters nickname and password	User is authenticated, both inputs are valid	User is logged in and able to play	Pass
Alternative Flow 1: User doesn't exist (nickname)				
LI-2a	User enters a nickname that does not exist among registered accounts.	System prompts User to try entering the nickname again	System asks User to reenter nickname	Pass
Alternative Flow 2: User doesn't enter a valid password				
LI-2b2	User enters a password that does not match up with the nickname they entered.	System prompts (with print statement) the User to try entering the password again	Print statement tells User credentials are invalid.	Pass
LI-2b2	The system decrements a counter to limit the number of failed password attempts.	The number of remaining attempts is decreased by 1	No explicit result for the User, but the count is decremented	Pass
LI-2b3	The User has run out of login attempts	The system tells via print statement that the User cannot be authenticated; login is cancelled.	Login is cancelled, User is not authenticated	Pass

System Test Case: Create Account/Profile

Test ID	Test Step/Input	Expected Result	Actual Result	Pass/Fail
CA-1	From the command line, enter "2" to pull up create account feature.	Pulls up create account feature	Account creation begins via command line	Pass
CA-2	User enters nickname, email and password	Banqi Controller finds that the nickname/email aren't registered with an existing account	The credentials are valid and new in the system.	Pass
CA-3	The date of registration is determined and associated with the User's account.	The correct date for when the account was created	The correct date is written	Pass
CA-4	The Banqi Controller creates a new Profile for the User	A User Profile matching the User it was created for. All game result counts will be 0 (e.g. wins). There is also a file associated with that User's information.	There is a new record for this User, appearing like a new User. There is a file associated with that User's information.	Pass
Alternative Flow 1: Email exists with a registered account (nickname)				
CA-2a	User enters an email that already exists with a registered user in the system.	System prompts User with a message that the email address exists in the system.	Print statement tells User to try a different nickname.	Pass
Alternative Flow 2: Nickname is taken				
CA-2b1	User enters a nickname that is in use by another registered user in the system.	System prompts the User (though print statement) to select a new nickname	Print statement tells User credentials are in use.	Pass
CA-2b2	User enters a new nickname that is new in the system	A User Profile matching the User it was created for. All game result counts will be 0 (e.g. wins). There is also a file associated with that User's information.	There is a new record for this User, appearing like a new User. There is a file associated with that User's information.	Pass

System Test Case: Logout/Exit

Test ID	Test Step/Input	Expected Result	Actual Result	Pass/Fail
LO-1	From the command line, enter "3" to exit the system.	System asks via print statement if User wants to log out with options	Print statement asks user to enter 'confirm' or 'cancel' for logout	Pass
LO-2	User types in and enters "yes" to confirm exit	User is logged out of the system	User is logged out of the system	Pass
Alternative Flow 1: User cancels exit/log out				
LO-2a	User types in and enters "cancel" to stop the exit	Logout cancelled; system returns User to the game; User can resume regular system gameplay.	User is returned to the general game screen and can choose to access any current games they're a part of	Pass

System Test Case: Create new game

Test ID	Test Step/Input	Expected Result	Actual Result	Pass/Fail
CG-1	User indicates via command line, their interest in creating a new game	System prompts the User about what to enter to create a new game. Account credentials are entered one at a time.	Print statement asks the User to enter nickname, email and password for their new account, one at a time.	Pass
CG-2	User enters the nicknames of one or more other Users to invite them to play the game	System sends out invites to all of the invitees	Invited Users are connected to saved for game, but invites are not sent	Fail (invites are not yet implemented)
CG-3	A User accepts an invite to play the game (the first to accept)	The game is created; any outstanding invites are canceled	The game is created, but with one single player right now.	Fail (Users are not invited yet, thus they

				cannot accept an invite)

Alternative Flow 1: One or more of the invited Users does not exist				
CG-2a	User enters one or more nicknames that are not registered in the system	System responds with an error, saying that the user(s) is/are not registered	System searches through registered Users to find those to invite and reports the User doesn't exist.	Pass

System Test Case: Play Game

Test ID	Test Step/Input	Expected Result	Actual Result	Pass/Fail
PG-1	From the command line, a User submits request to view a game board	A printed list of games that User is eligible to access	A printed list of games that User is eligible to access	Pass
PG-2	User selects from all games they are a part of the game they want to view/play	The current board for that game gets printed out (Xs for pieces and -s for empty spaces.)	The current board is printed out, Xs for pieces and -s for empty spaces.	Pass
PG-3	If it is that User's turn, they enter the piece and coordinates of where to move the piece to	The piece is moved to that position and the updated board is printed out	Pieces get moved, but not according to specific piece movement rules. (New Board is also printed out)	Pass (move happens)/Fail (move may not be valid)
PG-4	Controller transfers the move ability to the other player	The other User is notified with a command line statement of it being their turn	Banqi Game is not currently working for multiple players.	Fail
Alternative Flow 1: Not a valid move				
PG-3a	The move that the User has selected is not valid according to the rules of Banqi	The system responds with an invalid move message and	The system is not informed of all valid and invalid	Fail

		prompts the User to select another move	moves at this time.	
Alternative Flow 2: Not the viewing User's turn			
PG-3b	User views the board, but cannot make a move as it is the other User's turn	User is not given the option to input a movement	Banqi is currently single-player only, so that User can make move after move.	Fail

Determined Unit Test Cases (for what is currently implemented):

Test ID	Test Suite Name	How to Test?	Test Data	Expected Result	Actual Result	Pass/ Fail
AT-1	AllTests.java	Run Test Suite	AllTests.java Test Suite	Pass	Pass	Pass
BGC-1	AllTests.java	Run Test Suite	Initialize Banqi Game Controller	New Controller	New Controller	Pass
BGC-2	AllTests.java	Run Test Suite	Controller name is/isn't null	A non-null controller name	A non-null controller name	Pass
BG-1	AllTests.java	Run Test Suite	Initialize Banqi Game	New Banqi Game	New Banqi Game	Pass
BG-2	AllTests.java	Run Test Suite	Set up Banqi Game Board	Banqi Game board is set up	Banqi Game board is set up	Pass
BG-3	AllTests.java	Run Test Suite	Make a move on the Banqi Game Board	User's move is made on the board	User's move is made on the board	Pass
BG-4	AllTests.java	Run Test Suite	Record the stats/results of the Banqi Game in the User's file	Results are recorded in the User's file	Results are recorded in the User's file	Pass
BG-5	AllTests.java	Run Test Suite	Get the current state of the Banqi Game	The state matches up with what the Banqi	The state matches up with what the	Pass

				Game should be	Banqi Game should be	
B-1	AllTests.java	Run Test Suite	Creation of a new Board for a new Banqi Game	The Banqi Game has a board with all pieces face-down and in random starting positions	The Banqi Game has a board with all pieces face-down and in random starting positions	Pass
B-2	AllTests.java	Run Test Suite	Info for each tile on the Board	The correct info is returned for the Tile on the Board	The correct info is returned for the Tile on the Board	Pass
Can-1	AllTests.java	Run Test Suite	Move of a Cannon Piece	The Cannon is moved to the correct new Tile	No piece-specific implemented move method yet	Fail
Char-1	AllTests.java	Run Test Suite	Move of a Chariot Piece	The Chariot is moved to the correct new Tile	No piece-specific implemented move method yet	Fail
E-1	AllTests.java	Run Test Suite	Move of an Elephant Piece	The Elephant is moved to the correct new Tile	No piece-specific implemented move method yet	Fail
G-1	AllTests.java	Run Test Suite	Move of a General Piece	The General is moved to the correct new Tile	No piece-specific implemented move method yet	Fail
H-1	AllTests.java	Run Test Suite	Move of a Horse Piece	The Horse is moved to the correct new Tile	No piece-specific implemented move method yet	Fail

S-1	AllTests.java	Run Test Suite	Move of a Soldier Piece	The Soldier is moved to the correct new Tile	No piece-specific implemented move method yet	Fail
P-1	AllTests.java	Run Test Suite	Get info for the Piece	Returns the correct name, the color and the state of the Piece	Returns the correct name, the color and the state of the Piece	Pass
T-2	AllTests.java	Run Test Suite	Initialization of a Tile	A new Tile is initialized on the Board	A new Tile is initialized on the Board	Pass
T-2	AllTests.java	Run Test Suite	The piece on the specific Tile	The correct Piece that is on a specified Tile	The correct Piece that is on a specified Tile	Pass
U-1	AllTests.java	Run Test Suite	Initialization of a registered User	The User is registered in the system	The User is registered in the system	Pass
U-2	AllTests.java	Run Test Suite	A User Profile and a User	The new User has a User Profile	The new User has a User Profile	Pass
U-3	AllTests.java	Run Test Suite	A new Banqi Game hosted by a User	There is a new Banqi Game associated with the User	There is a new Banqi Game associated with the User	Pass
U-4	AllTests.java	Run Test Suite	Sending of an Invite for a new Banqi Game	The Invite is sent to the User who the hosting User invited	Invitees can be recorded, but Invites are not yet sent	Fail
U-5	AllTests.java	Run Test Suite	Whether a invite has been answered or not answered	The status of a specific invite matches up with what the associated Users have done with it.	Returns the invite is out there, but there is not an ability to accept/reject yet	Fail

| U-6 | AllTests.java | Run Test Suite | The answer for an Invite for a Banqi Game | A User chooses to accept or decline an Invite and that User is a part of or is not a part of the game based on that. | Invites are not yet implemented | Fail |