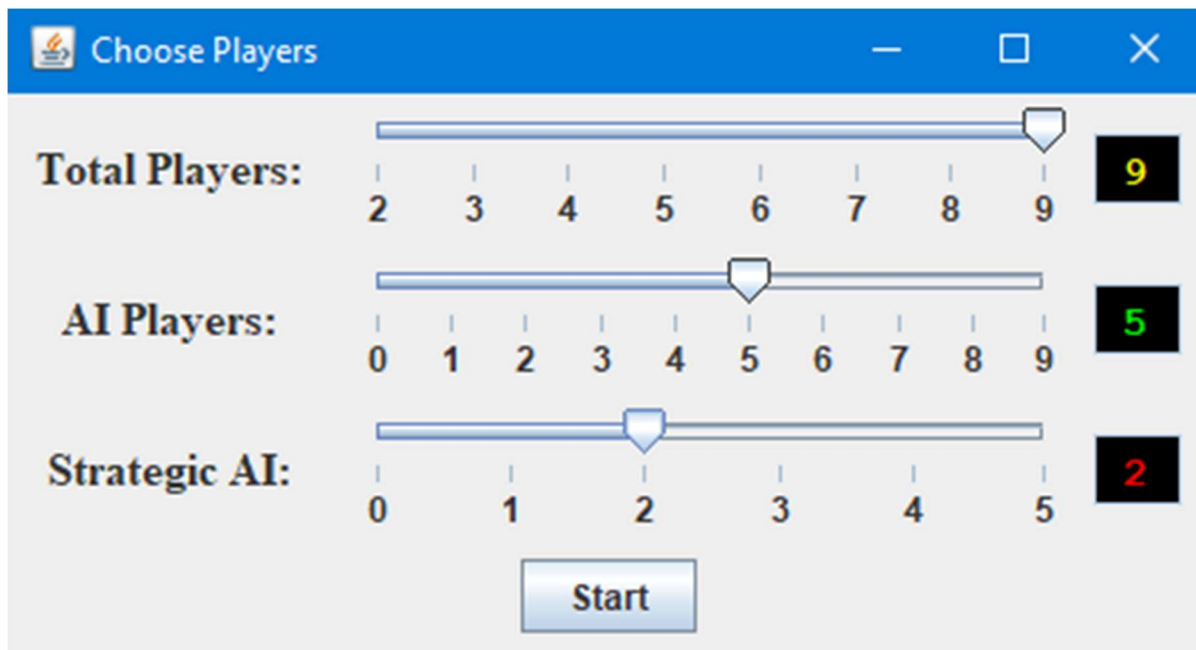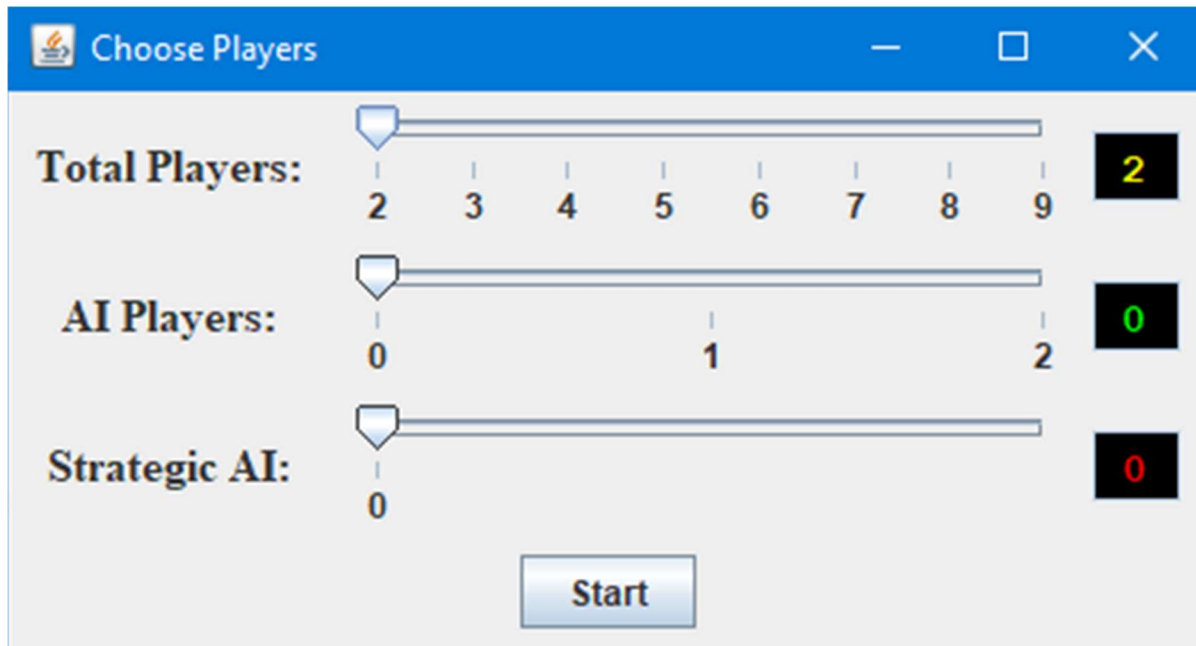**Environment Setup** (These are not hard requirements)**:**
- JavaSE 13
- JDK 16.0.1
- Junit 4.13.0
- Eclipse IDE For Java Developers – 2021-06
- Windows 10

1. Test – ChoosePlayerView

@ Test 1.1 – Button "Start"

When user clicks the start button, the window should launch UNO game with specified number of players.

@ Test 1.2 – Number of Players Slider

User should be able to change the number of players allowed in the game by sliding the bar. This should also update the number of player box next to it. This change should also reflect on AI player.

@ Test 1.3 – Number of AI Player Slider

User should be able to change the number of AI players allowed in the game by sliding the bar. This should also update the number of AI player box next to it. This change should be reflected on strategic AI slider.
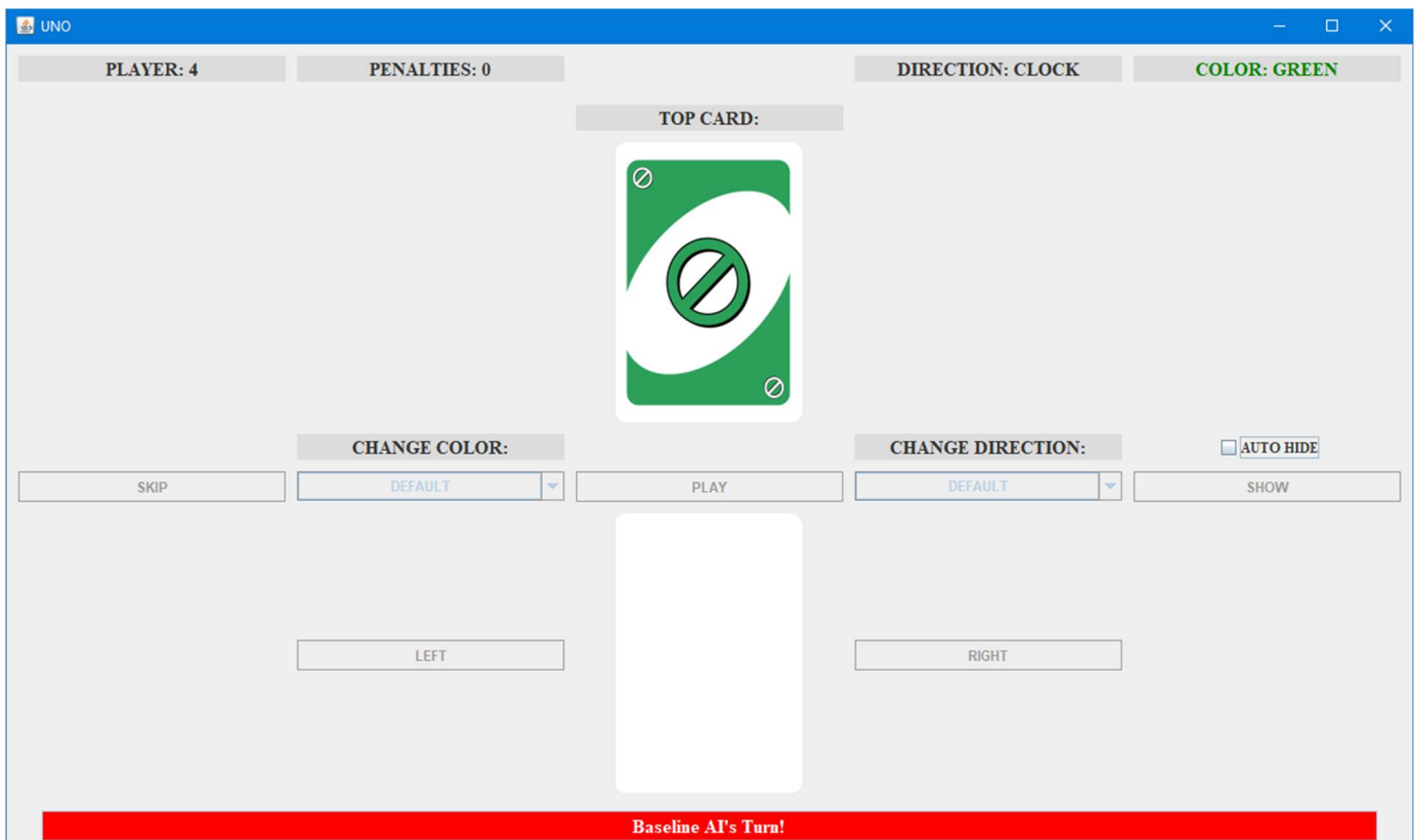
@ Test 1.4 – Number of Players Slider

User should be able to change the number of strategic AI players allowed in the game by sliding the bar. This should also update the number of strategic AI player box next to it.

2. Test – GameView
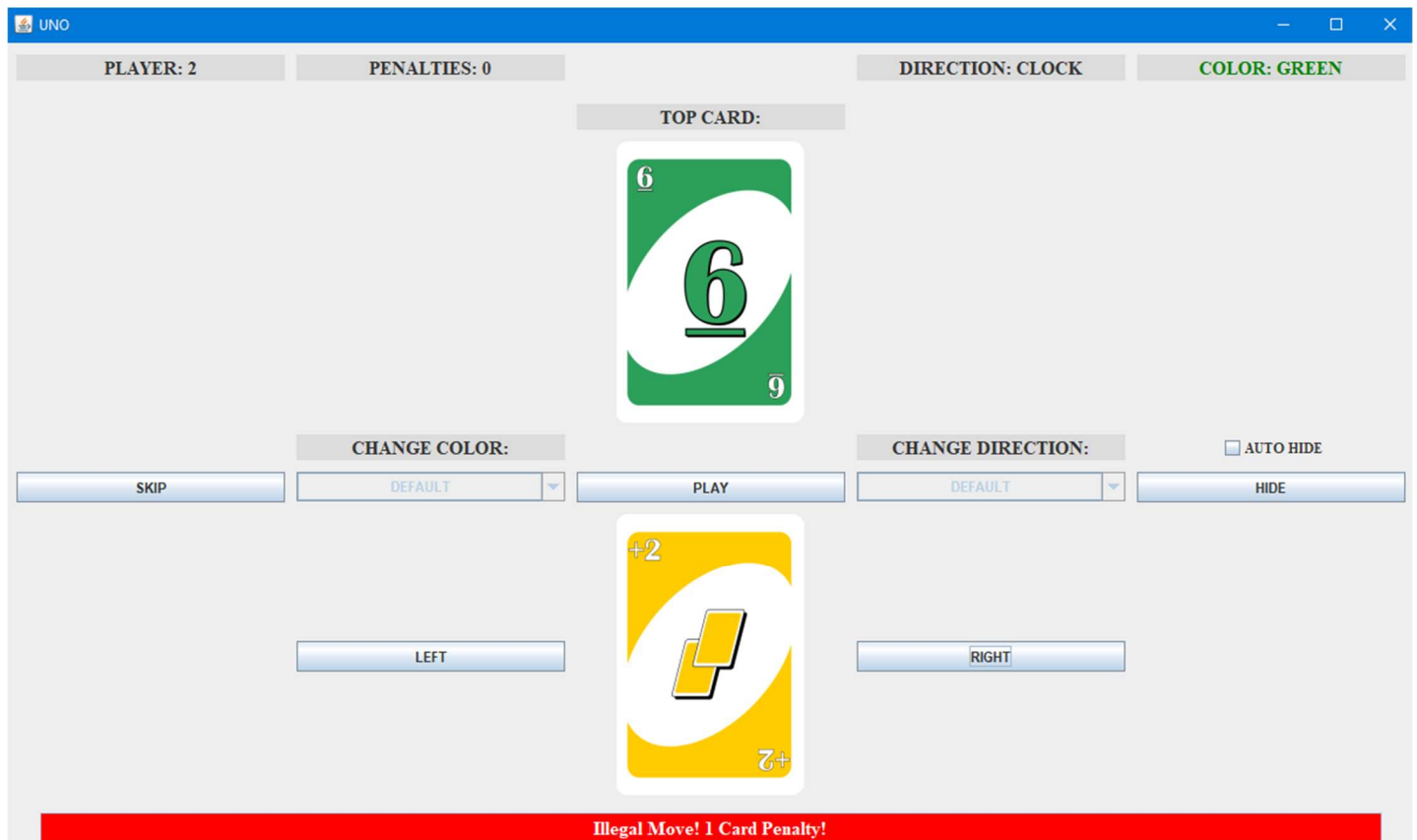
Manual Test Continued On The Next Page….

@ Test 2.1 – Button "Show"

When user clicks the unhide button, the game shows the card of the player. Player cannot play card while the cards are hidden.

@ Test 2.2 – Label "Player"

Player label shows the current player, so when the turn changes, the player label gets updated.

@ Test 2.3 – Label "Penalties"

Penalties label shows the number of cards to draw from the pile if skipped the turn. So, when a player plays a draw two or draw four cards, then the penalties for the next player should increase accordingly.

@ Test 2.4 – Label "Direction"

Direction label shows the current game direction, so when the direction changes from reverse card or a wild card, then the direction label must be updated accordingly.

@ Test 2.5 – Label "Skip/Draw"

When a player wants to skip their turn or draw the cards from the deck, then this button should automatically draw correct number of cards for the player from the deck.

@ Test 2.6 – Label "Color"

Color label should change according to the current color being played in the game. If a player changes the next color, then the color label needs to be updated.

@ Test 2.7 – Button "Right"

A can navigate next cards to the right using right button. So, a right button press should show user their next card available in their hand. If the user reaches the right most card, then the right button gets disabled.
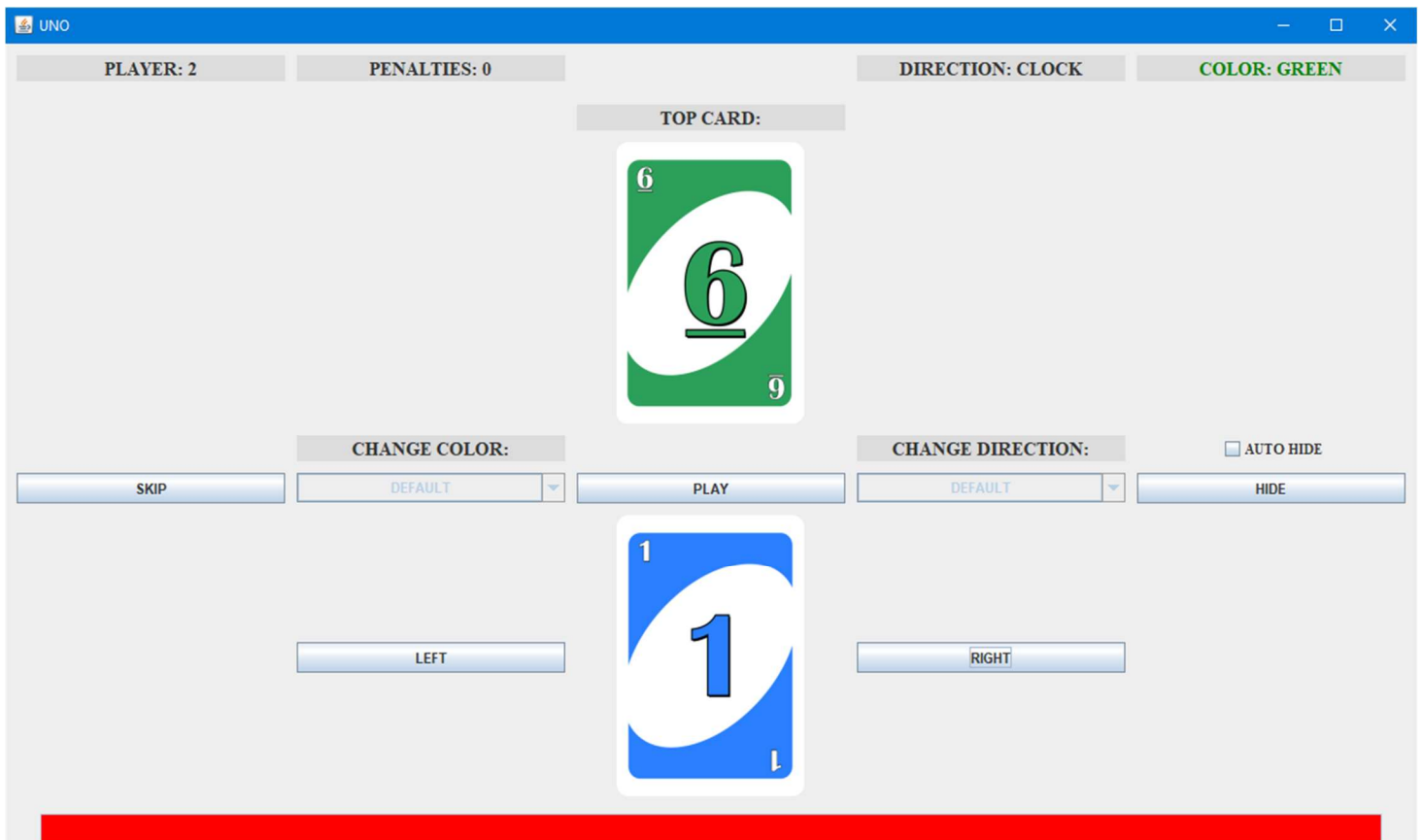
@ Test 2.8 – Check Box "Auto Hide"

When selected, the next player's cards are automatically hide between turns. When unchecked, the cards are exposed for the next player.

@ Test 2.9 – Error Bar

When player does an illegal move, then the error bar notifies the player. Also, the error bar is used to show that an AI is playing the card if the current player is not human.

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3. Test – GameView

@ Test 3.1 – Button "Play"

When user clicks the play button, the game state is updated. If the card played is not legal, then the user is penalized. Otherwise, the game state gets updated along with the removal of the card played from the user hand and addition of the new card on top of the discard deck. Also, the user cannot play a card when the hand cards are hidden.

@ Test 3.2 – Button "Left"

The player can navigate their cards on the left side of the deck. If the player reaches the left most card, then the left button gets disabled. If the user navigates to the right side, the left button should automatically get re-activated.

@ Test 3.3 – Drop Down "ChangeColorBox"

If a player selects a wild card or wild draw four card, then the player can select the next color card that needs to be played. And the labels for the next color and next direction should be updated accordingly. Also, the draw four card should apply penalties to the next player.

@ Test 3.4 – Drop Down "ChangeDirectionBox"

If a player selects a wild card or wild draw four card, then the player can select the next direction that needs to be played in. This should also update the direction label in order to indicate the current direction of the game

4. Test – GameOverView
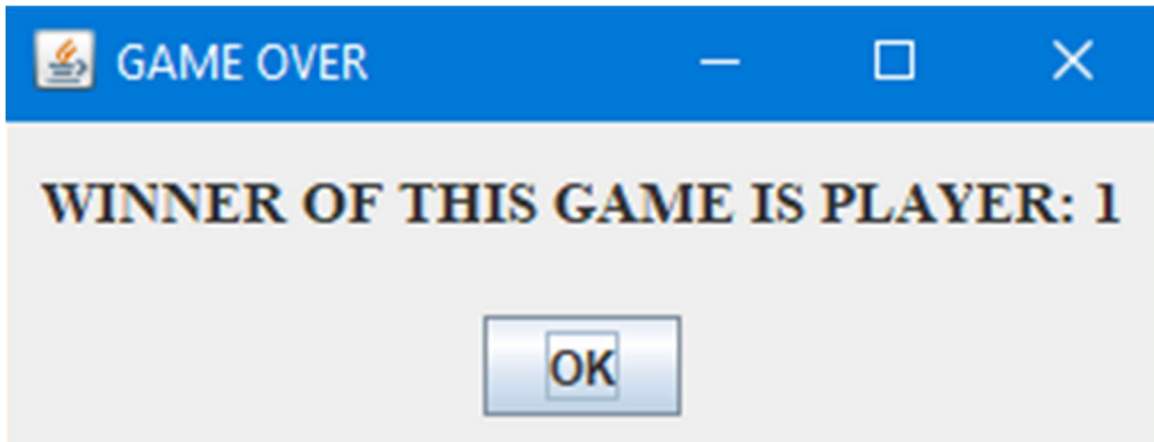
@ Test 4.1 – Game Over

Game over frame needs to be shown when a player wins a game. This frame shows the player who has won the game and disables the GameView window. This marks the end of the current game, and player can start a new game.

Manual Test Continued On The Next Page….

@ Test 4.2 – Button "Ok"

On clicking the ok button, the GameOverView window as well as GameView windows needs to be closed. And the player is directed to the ChoosePlayerView to start a new game.

@ Test 4.2 – Button "Start"

On clicking the start button on the choose player menu, the game should dispose all the frames and restart a fresh new game.