**CSC 478 Fall 2018 – Team #4: Poker Game**

**Test Cases**

**Version 0.2**

**10/18/2018**

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# Version History

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| 0.1 | 10/18/2018 | Initial Checkin | Tanner Cline |
| 0.2 | 11/27/2018 | Removing REQ050400  Updating REQ070300 | Tanner Cline |

# Test Cases

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Test Case ID | Requirement ID | Test Case Description | Test Case Procedure | Expected | Result | Note |
| Platform Requirements | | | | | | |
| **TC10100** | **REQ10100** | **Must run on standard windows computer** | 1. Execute program from a Windows system | Program opens and runs |  |  |
| **TC10300** | **REQ10300** | **Must allow for saving of data locally** | 1. Execute Program 2. Start |  |  |  |
|  |  |  |  |  |  |  |
| Human Player Requirements | | | | | | |
| **TC020600** | **REQ020600** | **Must be able to track player information** | 1. Execute program 2. Start new game 3. Play full hand 4. Leave game to lobby 5. Request loan 6. Enter new game from lobby | 1. Players funds should stay with player after leaving game and entering a new game. 2. Player name should not change. 3. Win or loss total should increase or decrease accordingly and stay with player after leaving and entering a new game. 4. Total debt should stay with player after entering game from lobby |  |  |
|  | REQ020601 | Name |  |  |  |  |
|  | REQ020602 | Current money |  |  |  |  |
|  | REQ020603 | Total debt |  |  |  |  |
|  | REQ020604 | Number of Wins |  |  |  |  |
|  | REQ020605 | Number of Losses |  |  |  |  |
| **TC020700** | **REQ020700** | **Human players must be able to borrow money when broke** | Covered in TC020600 | Covered in TC020600 |  |  |
| **TC020800** | **REQ020800** | **Human players must not be allowed to borrow money while at a table** | 1. Execute program 2. Start new game 3. Attempt to take a loan while game is in progress | 1. Should not be able to take a loan while a game is in progress |  |  |
| **TC020900** | **REQ020900** | **Human players must not be able to bet more than they have** | 1. Execute Program 2. Start new game 3. Attempt to bet more than the current amount the player has. | 1. Should not be able to place the bet. |  |  |
| Computer Player Requirements | | | | | | |
| **TC030100** | **REQ030100** | **Must be able to track computer player information** | 1. Execute program 2. Start new game 3. Play full hand 4. Exit to lobby 5. Start another game | 1. Computer player names should not change 2. Computer players current amount of money should not change 3. Computer player debt should stay the same unless a loan is taken 4. Computer player number of wins/losses should not increase/decrease after game is complete, and stay the same when the next game starts 5. Computer player skill level should not change. |  |  |
|  | REQ030101 | Name |  |  |  |  |
|  | REQ030102 | Current Money |  |  |  |  |
|  | REQ030103 | Total Debt |  |  |  |  |
|  | REQ030104 | Number of Wins |  |  |  |  |
|  | REQ030105 | Number of Losses |  |  |  |  |
|  | REQ030106 | Skill Level |  |  |  |  |
| **TC030200** | **REQ030200** | **Computer players must be able to borrow money when broke** | 1. Execute program 2. Start new game 3. Play full hand 4. Exit to lobby 5. Repeat until computer player is out of money. | 1. Computer player should request a loan in lobby. 2. Loan amount should be given to computer player. 3. Total debt should increase for computer player by same amount |  |  |
| **TC030300** | **REQ030300** | **Computer players must not be allowed to borrow money while at a table** | 1. Execute program 2. Start new game 3. Play full hand 4. Exit to lobby 5. Repeat until computer player is out of money | 1. Computer player should not be able to request a loan while the game is still in progress. |  |  |
| **TC030400** | **REQ030400** | **Computer players must not be allowed to bet more than they have** | 1. Execute program 2. Start new game 3. Play full hand | 1. Computer player should at no time be able to place a bet that is higher than the total amount of money they have. |  |  |
| Game Object Requirements | | | | | | |
| **TC040100** | **REQ040100** | **Must track Deck information** | 1. Execute program 2. Start new game 3. Play full hand | 1. There should not be duplicate cards in game. 2. Should not be any cards that don’t exist in a real card deck. 3. Should be all 52 cards available in deck. |  |  |
|  | REQ040101 | Correct 52 cards |  |  |  |  |
| **TC040200** | **REQ040200** | **Must allow Deck to be shuffled** | 1. Execute program 2. Start new game 3. Play full hand 4. Exit to lobby 5. Start new game | 1. Deck should be shuffled before each game. 2. Card order should not be the same between sequential rounds. |  |  |
|  | REQ040201 | Must allow pseudorandom Shuffle |  |  |  |  |
|  | REQ040103 | Must allow non-random shuffle (Sort) |  |  |  |  |
| **TC040300** | **REQ040300** | **Must track Card information** | 1. Execute program 2. Start new game 3. Play full hand | 1. Cards in all hands should not unintentionally change during play |  |  |
|  | REQ040301 | Suit |  |  |  |  |
|  | REQ040302 | Rank |  |  |  |  |
| **TC040600** | **REQ040600** | **Player Hand** | 1. Execute program 2. Start new game 3. Play full hand | 1. Game should track the status of the player’s hand. Card facing status should not change unintentionally. 2. Hand should not exceed 7 cards. |  |  |
|  | REQ040601 | Each of up to seven cards |  |  |  |  |
|  | REQ040602 | Face up/down state |  |  |  |  |
| Game State Requirements | | | | | | |
| **TC050100** | **REQ050100** | **Uniquely track games** | 1. Execute program 2. Start new game 3. Play full hand 4. Exit to lobby 5. Start a new game | 1. Game should treat each game as a separate instance. Each game win/loss should be tracked uniquely. |  |  |
| **TC050200** | **REQ050200** | **Log game history** | 1. Execute program 2. Start new game 3. Play full hand 4. Exit to lobby | 1. Game history should be visible to player tracking the win/loss count, |  |  |
| **TC050300** | **REQ050300** | **Keep Track if players for each game** | 1. Execute program 2. Start new game 3. Play full hand 4. Exit to lobby | 1. Players should remain the same for the entire game. |  |  |
| **TC050500** | **REQ050500** | **Ante (can be zero or monetary amount)** | 1. Execute program 2. Start new game 3. In round one attempt to place ante | 1. Player should be able to place ante and amount should be deducted from player total |  |  |
| **TC050600** | **REQ050600** | **Low stake limit (positive amount, non-zero, smaller than high stake limit)** | 1. Execute program 2. Start new game 3. Attempt to place bet at low stake limit | 1. Player should not be able to place bet lower than low stake limit |  |  |
|  | **REQ050700** | **High stake limit (positive amount, larger than low stake limit)** | 1. Execute program 2. Start new game 3. Attempt to place bet at high stake limit | 1. Player should not be able to place bet higher than high stake limit |  |  |
| **TC050800** | **REQ050800** | **Number of player (2-7)** | 1. Execute program 2. Start new game | 1. Player count should be between 2 - 7 |  |  |
| **TC050900** | **REQ050900** | **Position of players in game** | 1. Execute program 2. Start new game 3. Play full hand 4. Exit to lobby | 1. Position of the players should not change during the game |  |  |
| **TC051000** | **REQ051000** | **Position of dealer in game** | 1. Execute program 2. Start new game 3. Play full hand 4. Exit to lobby | 1. Position of the dealer should not change during the game |  |  |
| Game Operation Requirements | | | | | | |
| **TC060100** | **REQ060100** | **Shuffle deck before dealing** | Covered in TC020400 | Covered in TC020400 |  |  |
| **TC060200** | **REQ060200** | **Ante payment (for nonzero ante)** | 1. Execute program 2. Start new game | 1. If ante payment is required, should deduct that amount from the player’s money total. |  |  |
| **TC060300** | **REQ060300** | **Burn first card of hand** | 1. Execute program 2. Start new game 3. Play until first hand is dealt | 1. First card dealt should be burned, should not be placed into play and remain unused |  |  |
| **TC060400** | **REQ060400** | **Deal face down** | 1. Execute program 2. Start new game 3. Play full hand | 1. Round 1/Card 1: Card should be dealt face down, should not be visible to other players. 2. Round 1/Card 2: Card should be dealt face down, should not be visible to other players. 3. Round 5/Card 7: Card should be dealt face down, should not be visible to other players. |  |  |
|  | REQ060401 | Card 1 (Round 1 Deal) |  |  |  |  |
|  | REQ060402 | Card 2 (Round 1 Deal) |  |  |  |  |
|  | REQ060403 | Card 7 (Round 5 Deal) |  |  |  |  |
| **TC060500** | **REQ060500** | **Deal face up** | 1. Execute program 2. Start new game 3. Play full hand | 1. Round 1/Card 3: Card should be dealt face up. 2. Round 2/Card 4: Card should be dealt face up. 3. Round 3/Card 5: Card should be dealt face up. 4. Round 4/Card 6: Card should be dealt face up. |  |  |
|  | REQ060501 | Card 3 (Round 1 Deal) |  |  |  |  |
|  | REQ060502 | Card 4 (Round 2 Deal) |  |  |  |  |
|  | REQ060503 | Card 5 (Round 3 Deal) |  |  |  |  |
|  | REQ060504 | Card 6 (Round 4 Deal) |  |  |  |  |
| **TC060600** | **REQ060600** | **Determine first player to take action in a Round** | 1. Execute program 2. Start new game 3. Play full hand | 1. Round 1: Player with the lowest up card goes first 2. Round 2 - 5: Player with the highest exposed hand goes first 3. Ties are settled by closest to dealer in deal order 4. Showdown: Round 5 with no bets, the highest showing hand will go first 5. Showdown: Round 5 with bets, last to bet or raise will go first |  |  |
|  | REQ060601 | Round 1 - Lowest up card |  |  |  |  |
|  | REQ060602 | Round 2 - Highest exposed hand (up cards) |  |  |  |  |
|  | REQ060603 | Round 3 - Highest exposed hand (up cards) |  |  |  |  |
|  | REQ060604 | Round 4 - Highest exposed hand (up cards) |  |  |  |  |
|  | REQ060605 | Round 5 - Highest exposed hand (up cards) |  |  |  |  |
|  | REQ060606 | Showdown with no bets in Round 5: high showing hand |  |  |  |  |
|  | REQ060607 | Showdown with bets in Round 5: Last to establish bet or raise |  |  |  |  |
|  | REQ060608 | Ties settled by closest to dealer in deal order |  |  |  |  |
|  | **REQ060700** | **Process player choices per player in Round 1** |  |  |  |  |
| **TC060701** | REQ060701 | Forced minimum bet: low limit stake | 1. Execute program 2. Start new game 3. In round 1 bet minimum amount | 1. Players should be forced to bet the minimum amount and amount should be deducted from player money totals |  |  |
| **TC060702** | REQ060702 | Raise can be any amount | 1. Execute program 2. Start new game 3. In round 1 raise any amount | 1. Players can raise any amount (up to their money total) |  |  |
| **TC060703** | REQ060703 | Player can call by matching current bet amount | 1. Execute program 2. Start new game 3. Call by matching last bet | 1. Players should be able to call by matching the last amount bet |  |  |
| **TC060704** | REQ060704 | Player can fold, removing themselves from the hand | 1. Execute program 2. Start new game 3. In round one, fold hand | 1. Player should be removed from further play in that game |  |  |
|  | **REQ060800** | **Process player choices per player in Round 2** |  |  |  |  |
| **TC060801** | REQ060801 | Bet is set at low limit stake | 1. Execute program 2. Start new game 3. Play until round 2 4. Place minimum bet | 1. Player bet should not be less than the low limit stake |  |  |
| **TC060802** | REQ060802 | Raise is not allowed unless a player has a face up pair | 1. Execute program 2. Start new game 3. Play until round 2 4. Raise without face up pair | 1. Player should not be allowed to raise |  |  |
| **TC060803** | REQ060803 | If raise is allowed, it must be in multiples of low or high stake | 1. Execute program 2. Start new game 3. Play until round 2 4. Raise low stake value with face up pair | 1. Player should only be allowed to raise in multiple of low stake |  |  |
| **TC060804** | REQ060804 | If raises are used and a player has used a multiple of the high stake, remaining raises must be multiples of high stake as well. | 1. Execute program 2. Start new game 3. Play until round 2 4. Raise high stake value with face up pair | 1. Further raises should be multiple of high stake |  |  |
| **TC060805** | REQ060805 | Player can call by matching current bet amount | 1. Execute program 2. Start new game 3. Play until round 2 4. Attempt to call by matching current bet | 1. Player should call |  |  |
| **TC060806** | REQ060806 | Player can fold, removing themselves from the hand | 1. Execute program 2. Start new game 3. Play until round 2 4. Fold hand | 1. Player should fold hand, removing from further play in that game. |  |  |
|  | **REQ060900** | **Process player choices per player in Round 3** |  |  |  |  |
| **TC060901** | REQ060901 | Bet is set at high limit stake | 1. Execute program 2. Start new game 3. Play until round 3 4. Place bet | 1. Bet should be at high limit stake |  |  |
| **TC060902** | REQ060902 | Raise is not allowed | 1. Execute program 2. Start new game 3. Play until round 3 4. Attempt to raise | 1. Raising should not be allowed |  |  |
| **TC060903** | REQ060903 | Player can call by matching current bet amount | 1. Execute program 2. Start new game 3. Play until round 3 4. Attempt to call by matching current bet | 1. Player should call |  |  |
| **TC060904** | REQ060904 | Player can fold, removing themselves from the hand | 1. Execute program 2. Start new game 3. Play until round 3 4. Fold hand | 1. Player should fold hand, removing from further play in that game. |  |  |
|  | **REQ061000** | **Process player choices per player in Round 4** |  |  |  |  |
| **TC061001** | REQ061001 | Raise can be any amount | 1. Execute program 2. Start new game 3. Play until round 4 4. Attempt to raise | 1. Raise should be successful at any amount |  |  |
| **TC061002** | REQ061002 | Player can call by matching current bet amount | 1. Execute program 2. Start new game 3. Play until round 4 4. Attempt to call by matching current bet | 1. Player should call |  |  |
| **TC061003** | REQ061003 | Player can fold, removing themselves from the hand | 1. Execute program 2. Start new game 3. Play until round 4 4. Fold hand | 1. Player should fold hand, removing from further play in that game. |  |  |
|  | **REQ061100** | **Process player choices per player in Round 5** |  |  |  |  |
| **TC061101** | REQ061101 | Raise can be any amount | 1. Execute program 2. Start new game 3. Play until round 5 4. Attempt to raise | 1. Raise should be successful at any amount |  |  |
| **TC061102** | REQ061102 | Player can call by matching current bet amount | 1. Execute program 2. Start new game 3. Play until round 5 4. Attempt to call by matching current bet | 1. Player should call |  |  |
| **TC061103** | REQ061103 | Player can fold, removing themselves from the hand | 1. Execute program 2. Start new game 3. Play until round 5 4. Fold hand | 1. Player should fold hand, removing from further play in that game. |  |  |
|  | **REQ061200** | **Process player choices per player in "Showdown"** |  |  |  |  |
| **TC061201** | REQ061201 | Show cards | 1. Execute program 2. Start new game 3. Play until showdown | 1. Player should have to show cards |  |  |
| **TC061202** | REQ061202 | Muck (toss cards into center pile) | 1. Execute program 2. Start new game 3. Play until round showdown 4. Complete showdown | 1. Players should muck their cards |  |  |
|  | **REQ061300** | **Find best hand from 1-7 cards** |  |  |  |  |
| **TC061301** | REQ061301 | Royal flush |  | Same suit Ace, King, Queen, Jack, and 10 (high 5 ranks) |  |  |
| **TC061302** | REQ061302 | Straight flush |  | 5 same suit consecutive ranked cards |  |  |
| **TC061303** | REQ061303 | 4 of a kind |  | 4 cards of matching rank |  |  |
| **TC061304** | REQ061304 | Full house |  | 3 cards of matching rank and 2 cards of another matching rank |  |  |
| **TC061305** | REQ061305 | Flush |  | 5 cards of same suit, not in sequence |  |  |
| **TC061306** | REQ061306 | Straight |  | 5 consecutive ranked cards (not suit matched) |  |  |
| **TC061307** | REQ061307 | 3 of a kind |  | 3 cards of matching rank |  |  |
| **TC061308** | REQ061308 | 2 Pair |  | 2 cards of matching rank and 2 cards of another matching rank |  |  |
| **TC061309** | REQ061309 | 1 pair |  | 2 cards of matching rank |  |  |
| **TC061310** | REQ061310 | High card |  | Sorted by high solo rank |  |  |
| **TC061400** | **REQ061400** | **Compare player scores to find winner** | 1. Execute program 2. Enter Lobby 3. Start new game 4. Play full game | 1. Player with the highest score should be declared the winner |  |  |
|  | REQ061401 | Winning ties are resolved by splitting the pot |  |  |  |  |
| **TC061500** | **REQ061500** | **Process the pot** | 1. Execute program 2. Enter Lobby 3. Start new game 4. Play full game | 1. Player who won money should have that money added to their current money total |  |  |
|  | REQ061501 | Add to correct player/s accounts |  |  |  |  |
| User Interface Requirements | | | | | | |
| **TC070100** | **REQ070100** | **Must include a game lobby** | 1. Execute program 2. Enter lobby | 1. Player should be able to change settings for table 2. Player should be able to choose how many players for the next game 3. Player must be able to select computer players 4. Player must be able to take out a loan 5. Player must be able to start a new game 6. Display must show information about current player |  |  |
|  | REQ070101 | Must allow table configuration |  |  |  |  |
|  | REQ070102 | Must allow human player to select the total number of players |  |  |  |  |
|  | REQ070103 | Must allow computer player selection |  |  |  |  |
|  | REQ070104 | Must allow players to borrow money from the bank if broke |  |  |  |  |
|  | REQ070105 | Must allow a player to start the game |  |  |  |  |
|  | REQ070106 | Must show current player information |  |  |  |  |
| **TC070200** | **REQ070200** | **Must include a game play screen (during play)** | 1. Execute program 2. Start a new game | 1. Display should show current round 2. Display should show current state of game 3. Display should show round information 4. Display should show current hand status for other players 5. Display must show current player money 6. Display must show valid actions available to player 7. Display must let player select amount while betting 8. Display must show computer player actions 9. Display must show computer player actions 10. Display must allow player to return to lobby |  |  |
|  | REQ070201 | Should clearly display current game state |  |  |  |  |
|  | REQ070202 | Must display game round information |  |  |  |  |
|  | REQ070203 | Must show current hand information for all other players |  |  |  |  |
|  | REQ070204 | Must show current player money amount |  |  |  |  |
|  | REQ070205 | Must show valid player action choices |  |  |  |  |
|  | REQ070206 | Must allow player to select allowed amounts during betting actions |  |  |  |  |
|  | REQ070207 | Must show computer player actions |  |  |  |  |
|  | REQ070208 | Must allow player to return to the game lobby |  |  |  |  |
|  | **REQ070300** | **Must include a game over screen** | 1. Execute program 2. Start new game 3. Play game to completion |  |  |  |
|  | REQ070301 | Must show scoring |  | 1. Game over screen should show final scores of all players |  |  |
|  | REQ070302 | Must show game results |  | 1. Game over screen must show who won the game |  |  |
|  | REQ070303 | Must allow player to deal next hand |  | 1. Game over screen must allow player to start next hand |  |  |
|  | REQ070304 | Must allow player to return to game lobby |  | 1. Game over screen must allow user to exit to lobby |  |  |
|  |  |  |  |  |  |  |