## Test Case Documentation : U.I.

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[**Test Case Documentation : U.I.**](#_pn5bxlocnmj) **1**

[Game Play](#_q2whv2450z7h) 2

[Feature: Login](#_w5rdgkypmhk) 2

[Feature: Initial Game State](#_qunz0t32g9c7) 3

[Feature: Preflop](#_w8quatldojb5) 5

[Feature: Flop](#_cbv8w3k3td05) 7

[Feature: Turn](#_6mkivhgm6tzh) 8

[Feature: River](#_mhq486kfrvdp) 9

[Feature: Showdown](#_vcnbt1jva935) 11

[Feature: New hand](#_s85ony83g8bg) 11

[Feature: Game Completion](#_e01c34sf9c3j) 12

[Game Actions](#_cfb52quni36i) 13

[Feature: Bet](#_9i9tuj7wibvu) 13

[Feature: Fold](#_wqk2tph22oo5) 14

[Feature: Raise](#_99mv6tjqxy51) 15

[Feature: Check](#_y5rh23hzplxx) 16

[Feature: Call](#_7r32yc2ol37t) 16

[Game Objects](#_3qulc9xoxixl) 17

[Feature: Cards](#_kzfm4r6m5psc) 17

[Feature: Stacks](#_o2plmcws1pov) 18

[Feature: Minimum Bet](#_7ewpuqc2e22e) 18

### 

### Game Play

### **Feature:** Login

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Scenario** | **Preconditions** | **Action** | **Result** | **Pass** |
| User attempts to log in with valid username | User types valid username into username input box. | User clicks enter or presses enter on keyboard | User should be brought to a game screen where a game has started. | **Y** |
| User attempts to log in with no user name | - User has typed not typed a username into input box. | User clicks enter or presses enter on keyboard | A modal screen should appear informing the user that they have submitted an invalid username and prevent them from logging in. | **Y** |
| User attempts to log in with a username that is already logged in. | - User types valid user name that is already logged in to the web app. | User clicks enter or presses enter on keyboard | A modal screen should appear informing the user that they have submitted a username that is already logged in and prevent them from logging in. | **Y** |
| User attempts to log in with a user name with ‘:’ or ‘;’ in it | - User types user name containing the colon or semicolon character | User clicks enter or presses enter on keyboard | A modal screen should appear informing the user that they have submitted a username that is invalid and prevent them from logging in. |  |

#### **Feature**: Initial Game State

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Scenario** | **Preconditions** | **Action** | **Result** | **Pass** |
| A player should have the dealer button | - User should be succesfully logged in.  - User is on the main game screen | **N/A** | One of either the A.I. player or the user should have dealer button. | **Y** |
| Players should have equal initial stack sizes | - User should be succesfully logged in.  - User is on the main game screen | **N/A** | Both the A.I player and the user must have the same number of chips in each of their stacks. | **Y** |
| User should be able to see their cards | - User should be succesfully logged in.  - User is on the main game screen | **N/A** | The user should be able to see their cards clearly.  The user should also only be able to see the back of the A.I.’s cards. | **Y** |
| User should not be able to see any board cards | - User should be succesfully logged in.  - User is on the main game screen | **N/A** | The user should not be able to see any board/community cards. | **Y** |
| User bet options when user has the dealer button | - User should be succesfully logged in.  - User is on the main game screen  - User has the dealer button  - User bet options have been enabled | **N/A** | The user should be given the option to:   * Raise * Bet * Fold |  |
| User bet options | - User should be succesfully logged in.  - User is on the main game screen  - User bet options should be unclickable and look disabled | User waits for a few seconds | User bet options should be clickable and look enabled. |  |
| User bet options when A.I. has dealer button | - User should be succesfully logged in.  - User is on the main game screen  - User has the dealer button  - User bet options have been enabled | **N/A** | The user should be given the option to:   * Raise * Bet * Fold |  |
| Blinds have been correctly placed when the user has the dealer button | - User should be succesfully logged in.  - User is on the main game screen  - User has the dealer button | **N/A** | The user should have placed half of the the big blind as contribution to the pot.  The A.I should have placed all of the big blind as their contribution to the pot.  The pot should be made up of the total contributions by both players |  |
| Blinds have been correctly placed when the A.I has the dealer button | - User should be succesfully logged in.  - User is on the main game screen  - A.I. has the dealer button | **N/A** | The AI should have placed half of the the big blind as contribution to the pot.  The user should have placed all of the big blind as their contribution to the pot.  The pot should be made up of the total contributions by both players |  |

#### **Feature:** Preflop

*Pre conditions for all Preflop scenarios:*

- User should be succesfully logged in.

- User is on the main game screen

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Scenario** | **Preconditions** | **Action** | **Result** | **Pass** |
| No community cards at any point of pre flop stage |  |  | No community cards should appear at any point at this stage regardless action take by user |  |
| User bet options when user has dealer button | - User has the dealer button  - User bet options have been enabled | **N/A** | The user should be given the option to:   * Raise * Bet * Fold |  |
| User has dealer button and carries out first action of hand - call | - User has dealer button  - User has enough chips to call | User clicks action ‘Call’ | The pot should be correctly calculated to account for the ‘called’ contribution towards the pot.  The A.I should carry out one of the following actions:   * Call * Raise * Fold |  |
| User has dealer button and carries out first action of hand - fold | - User has dealer button | User clicks action ‘Fold’ | The pot should be added to the A.I. chip stack.  A new hand should be dealt out. |  |
| User has dealer button and carries out first action of hand - raise | - User has dealer button  - User has enough chips to raise | User inputs amount to raise by and clicks action ‘Raise’ | The raise contribution should be added to the user contribution and to the total pot.  The A.I should carry out one of the following actions:   * Call * Raise * Fold |  |
| A.I has dealer button and carries out first action of hand - call | - A.I. has dealer button  - A.I. has enough chips to call | A.I. carries out action ‘Call’ | The amount to call by should be added to the AI contribution and the total pot.  The user should be given the option to   * Bet * Check * Fold |  |
| A.I has dealer button and carries out first action of hand - raise | - A.I has dealer button  - A.I has enough to chips to raise | A.I. carries out action ‘Raise’ | The amount raised, plus the amount needed to call the bet should be added to A.I. contribution and to the total pot.  The user should be given the option to   * Call * Raise * Fold |  |
| A.I has dealer button and carries out first action of hand - fold | - User has dealer button | A.I carries out action to ‘Fold’ | The pot should be added to the user chip stack.  A new hand should be dealt out. |  |
| AI checks, followed by User checks | The previous AI action is Check | The user checks | The hand should move on to the flop stage |  |
| User checks, followed by AI checking | The previous user action is Check | The AI checks | The hand should move to the flop stage |  |
| User raises, follwed by AI calling | The previous user action is raise | The AI calls | The hand should move to the flop stage |  |
| AI raises, followed by user calling | The previous user action is raise | The AI call | The hand should move to the flop stage |  |
| User bets, followed by AI checking | The previous user action is bet | The AI calls | The hand should move to the flop stage |  |
| AI bets, followed by AI calls | The previous user action is bet | The AI calls | The hand should move to the flop stage |  |

#### **Feature:** Flop

Precondition - Preflop completed

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Scenario** | **Preconditions** | **Action** | **Result** | **Pass** |
| Community cards |  |  | Should be three three community cards visible to the user |  |
| User has the dealer button, no action completed | User has dealer button |  | User has option to   * Check * Bet * Raise |  |
| A.I has dealer button, no action completed | A.I. has dealer button |  | User does not have the option to carry out any action until A.I carries out one of following actions:   * Check * Bet * Raise |  |
| AI checks, followed by User checks | The previous AI action is Check | The user checks | The hand should move on to the turn stage |  |
| User checks, followed by AI checking | The previous user action is Check | The AI checks | The hand should move to the turn stage |  |
| User raises, follwed by AI calling | The previous user action is raise | The AI calls | The hand should move to the turn stage |  |
| AI raises, followed by user calling | The previous user action is raise | The AI call | The hand should move to the turn stage |  |
| User bets, followed by AI checking | The previous user action is bet | The AI calls | The hand should move to the turn stage |  |
| AI bets, followed by AI calls | The previous user action is bet | The AI calls | The hand should move to the turn stage |  |
| A.I carries out action - fold |  | A.I carries out action to ‘Fold’ | The pot should be added to the user chip stack.  A new hand should be dealt out. |  |
| User carries out action - fold |  | User carries out action to ‘Fold’ | The pot should be added to the A.I. chip stack.  A new hand should be dealt out. |  |

#### **Feature**: Turn

Precondition:

* Flop completed

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Scenario** | **Preconditions** | **Action** | **Result** | **Pass** |
| Community cards |  |  | Should be four community cards visible to the user |  |
| User has the dealer button, no action completed | User has dealer button |  | User has option to   * Check * Bet * Raise |  |
| A.I has dealer button, no action completed | A.I. has dealer button |  | User does not have the option to carry out any action until A.I carries out one of following actions:   * Check * Bet * Raise |  |
| AI checks, followed by User checks | The previous AI action is Check | The user checks | The hand should move on to the river stage. |  |
| User checks, followed by AI checking | The previous user action is Check | The AI checks | The hand should move to the river stage. |  |
| User raises, follwed by AI calling | The previous user action is raise | The AI calls | The hand should move to the river stage. |  |
| AI raises, followed by user calling | The previous user action is raise | The AI call | The hand should move to the river stage. |  |
| User bets, followed by AI checking | The previous user action is bet | The AI calls | The hand should move to the river stage. |  |
| AI bets, followed by AI calls | The previous user action is bet | The AI calls | The hand should move to the river stage. |  |
| A.I carries out action - fold |  | A.I carries out action to ‘Fold’ | The pot should be added to the user chip stack.  A new hand should be dealt out. |  |
| User carries out action - fold |  | User carries out action to ‘Fold’ | The pot should be added to the A.I. chip stack.  A new hand should be dealt out. |  |

#### **Feature:** River

Precondition:

* Turn completed

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Scenario** | **Preconditions** | **Action** | **Result** | **Pass** |
| Community cards |  |  | Should be fivecommunity cards visible to the user |  |
| User has the dealer button, no action completed | User has dealer button |  | User has option to   * Check * Bet * Raise |  |
| A.I has dealer button, no action completed | A.I. has dealer button |  | User does not have the option to carry out any action until A.I carries out one of following actions:   * Check * Bet * Raise |  |
| AI checks, followed by User checks | The previous AI action is Check | The user checks | The hand should move on to the showdown stage. |  |
| User checks, followed by AI checking | The previous user action is Check | The AI checks | The hand should move to the showdown stage. |  |
| User raises, follwed by AI calling | The previous user action is raise | The AI calls | The hand should move to the showdown stage. |  |
| AI raises, followed by user calling | The previous user action is raise | The AI call | The hand should move to the showdown stage. |  |
| User bets, followed by AI checking | The previous user action is bet | The AI calls | The hand should move to the showdown stage. |  |
| AI bets, followed by AI calls | The previous user action is bet | The AI calls | The hand should move to the showdown stage. |  |
| A.I carries out action - fold |  | A.I carries out action to ‘Fold’ | The pot should be added to the user chip stack.  A new hand should be dealt out. |  |
| User carries out action - fold |  | User carries out action to ‘Fold’ | The pot should be added to the A.I. chip stack.  A new hand should be dealt out. |  |

#### **Feature:** Showdown

Precondition:

* River stage completed

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Scenario** | **Preconditions** | **Action** | **Result** | **Pass** |
| User has better hand rank than AI at showdown (per rules of poker hand ranking) |  |  | The pot should be added to the User chip stack.  Contributions and the pot should be reset to 0.  A new hand should be dealt out. |  |
| A.I. has better hand rank than user (as per rules of poker hand ranking) |  |  | The pot should be added to the AI chip stack.  Contributions and the pot should be reset to 0.  A new hand should be dealt out |  |

#### **Feature:** New hand

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Scenario** | **Preconditions** | **Action** | **Result** | **Pass** |
| User should not be able to see any board cards |  | New hand dealt | The user should not be able to see any board/community cards. | **Y** |
| The A.I should have the dealer button | In the previous hand, the user had the dealer button | New hand dealt | The A.I should have the dealer button for this hand |  |
| The user should have the dealer button | In the previous hand, the A.I. had the dealer button | New hand dealt | The user should have the dealer button for this hand |  |
| Blinds have been correctly placed when the user has the dealer button | - User has the dealer button | New hand dealt | The user should have placed half of the the big blind as contribution to the pot.  The A.I should have placed all of the big blind as their contribution to the pot.  The pot should be made up of the total contributions by both players |  |
| Blinds have been correctly placed when the A.I has the dealer button | - User should be succesfully logged in.  - User is on the main game screen  - A.I. has the dealer button | New hand dealt | The AI should have placed half of the the big blind as contribution to the pot.  The user should have placed all of the big blind as their contribution to the pot.  The pot should be made up of the total contributions by both players |  |

#### **Feature:** Game Completion

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Scenario** | **Preconditions** | **Action** | **Result** | **Pass** |
| User does not have enough chips to place a big blind in a hand | User does not have chips to place a big blind in a new hand | New hand | Message appears informing user that they have lost, button inviting player to play a new game is shown |  |
| A.I does not have enough chips to place a big blind in a new hand | A.I. does not have enough chips to place a big blind in a new hand | New hand | Message appears congratulating player on their win, button inviting player to play a new game is shown |  |

### Game Actions

#### **Feature:** Bet

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Scenario** | **Preconditions** | **Action** | **Result** | **Pass** |
| User chooses to bet | User has option to bet | - User types amount greater than/equal the minimum bet and less than/equal their own chip stack  - User clicks option to bet | Amount is added to both user contribution and the total pot  A.I. turn to carry out an action(call, fold or raise). |  |
| A.I chooses to bet | A.I has option to bet  A.I has enough chips to bet. | A.I carries out action to bet. | Amount that the AI has bet by is added to AI contribution and also to the total pot. |  |
| User chooses to bet - not enough chips | User has option to bet  User has less chips than minimum bet | - User types amount greater than/equal the minimum bet and less than/equal their own chip stack  - User clicks option to bet | A modal appears to the user informing them that they must bet a valid amount - between the minimum bet and their chip stack size. |  |
| User chooses to bet - amount over their stack size | User has option to bet | - User types amount greater to their own chip stack  - User clicks option to bet | A modal appears to the user informing them that they must bet a valid amount - between the minimum bet and their chip stack size. |  |
| User chooses to bet - amount below minimum | User has option to bet | - User types amount below the minimum bet  - User clicks option to bet | A modal appears to the user informing them that they must bet a valid amount - between the minimum bet and their chip stack size. |  |
| User chooses to bet - invalid number | User has option to bet | - User types an amount that can not be parsed as a positive integer  e.g) “test”, “-400”, “forty”  - User clicks option to bet | A modal screen appears to the user informing them that:  ‘The amount you have entered is not a valid integer. Please enter valid value.’ |  |

#### **Feature:** Fold

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Scenario** | **Preconditions** | **Action** | **Result** | **Pass** |
| User chooses to fold | User has the option to fold | User clicks on ‘fold option’ | The pot should be added to the A.I. chip stack.  Contributions and the pot should be reset to 0.  A new hand should be dealt out. |  |
| A.I. chooses to fold | A.I. has the option to fold | User clicks on ‘fold’ option | The pot should be added to the user chip stack.  Contributions and the pot should be reset to 0.  A new hand should be dealt out. |  |

#### **Feature:** Raise

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Scenario** | **Preconditions** | **Action** | **Result** | **Pass** |
| User chooses to raise | User has option to raise  User has enough chips to both call and raise a bet. | - User types amount into raise by input greater than/equal the minimum bet and less than/equal their own chip stack  - User clicks option to raise | Both the amount to call by and amount to raise by is added to both user contribution and the total pot  A.I. turn to carry out an action(call, fold or raise). |  |
| A.I chooses to raise | A.I has option to raise  A.I has enough chips to both call and raise a bet. | A.I carries out action to raise. | Amount that the AI has raise by is added to AI contribution and also to the total pot.  User turn to carry out action (call, fold, or raise) |  |
| User chooses to raise- not enough chips | User has option to raise  User has raise chips than minimum bet | - User types amount greater than/equal the minimum bet and less than/equal their own chip stack  - User clicks option to raise | A modal appears to the user informing them that they must bet a valid amount - between the minimum bet and their chip stack size. |  |
| User chooses to raise - amount over their stack size | User has option to raise | - User types amount greater to their own chip stack  - User clicks option to raise | A modal appears to the user informing them that they must bet a valid amount - between the minimum bet and their chip stack size. |  |
| User chooses to raise- amount below minimum | User has option to raise | - User types amount below the minimum bet  - User clicks option to raise | A modal appears to the user informing them that they must bet a valid amount - between the minimum bet and their chip stack size. |  |
| User chooses to raise - invalid number | User has option to raise | - User types an amount that can not be parsed as a positive integer  e.g) “testraise”, “-400”, “forty”  - User clicks option to raise | A modal screen appears to the user informing them that:  ‘The amount you have entered is not a valid integer. Please enter valid value.’ |  |

#### **Feature:** Check

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Scenario** | **Preconditions** | **Action** | **Result** | **Pass** |
| User chooses to check | User has option to check | - User clicks option to check | No contribution is added to either user contribution or the total pot  A.I. turn to carry out an action. |  |
| A.I. chooses to check | A.I. has option to check | A.I. carries out option to check | No contribution is added to either A.I. contribution or the total pot  User turn to carry out action |  |

#### **Feature:** Call

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Scenario** | **Preconditions** | **Action** | **Result** | **Pass** |
| User chooses to call | User has option to call  User has enough to chips to call | - User clicks option to call | The amount called is the contribution is added to both user contribution and the total pot  A.I. turn to carry out an action. |  |
| A.I. chooses to call | A.I. has option to check  A.I has enough chips to call | A.I. carries out option to call | The amount called is the contribution is added to both user contribution and the total pot  User turn to carry out action |  |
| User chooses to call - not enough chips | User has option to call  User does not have enough to chips to call | - User clicks option to call | The game ends with winner being:   * A.I |  |
| A.I. chooses to call - not enough chips | A.I. has option to call  A.I has not enough chips to call | A.I. carries out option to call | The game ends with winner being:   * User |  |

### Game Objects

#### **Feature:** Cards

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Scenario** | **Preconditions** | **Action** | **Result** | **Pass** |
| Valid Card - value |  |  | Valid card should one value of the following:   * 2,3,4,5,6,7,8,9,10,J,Q,K,A |  |
| Valid Card - suit |  |  | Valid card should have one suit of one of the following:   * Hearts, Spades, Clubs, Diamonds |  |
| Valid Cards in a hand |  |  | No two cards equivalent in both suit and value may appear in one hand. |  |

#### **Feature:** Stacks

#### 

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Scenario** | **Preconditions** | **Action** | **Result** | **Pass** |
| Valid Stack |  |  | Stack should never have a negative value. (always >= 0) |  |

#### **Feature:** Minimum Bet

#### 

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Scenario** | **Preconditions** | **Action** | **Result** | **Pass** |
| Minimum should increase every ‘X’ hands |  | ‘X’ hands played | The minimum bet should double |  |
| The number of hands should decrease for every hand that passes, apart from ‘0 hands left’ case |  | A hand is played | The number of hands left until the min. bet doubles should decrement by one. |  |
| When there are 0 hands left, the number of hands should then go back to a higher number(e.g. 10/15/20) | 1 hand left until minimum bet doubles | A hand is played | The number should reset to a higher number. |  |