**User Story 1: Start Game Ganesh**

**Happy Scenario**

* **Acceptance Criterion 1.1: Successful initiation of a new game**
  + Given I am on the game's main menu
  + When I click on the "Start New Game" button
  + Then the board should be initialized and cleared
  + And I should be able to see an empty board ready to play

**Negative Scenarios**

* **Acceptance Criterion 1.2: Unsuccessful initiation due to system error**
  + Given I am on the game's main menu
  + When I click on the "Start New Game" button
  + And there's a system error
  + Then the board should display an error message
  + And I should be prompted to try again
* **Acceptance Criterion 1.3: Trying to start a new game while one is in progress**
  + Given a game is already in progress
  + When I click on the "Start New Game" button
  + Then a confirmation prompt should appear to ensure I want to abandon the current game
* **Acceptance Criterion 1.4: Attempt to start a new game with insufficient system resources**
  + Given I am on the game's main menu
  + And the system resources are low (e.g., low RAM or CPU)
  + When I click on the "Start New Game" button
  + Then the game should display an error message about insufficient resources
  + And advise closing other applications or rebooting the device

**User Story 2: Placing a Piece Ashna**

**Happy Scenario**

* **Acceptance Criterion 2.1: Successfully placing a piece**
  + Given the game has started
  + And it's my turn
  + When I click on an empty slot
  + Then a piece should be placed in that slot
  + And the turn should switch to the other player

**Negative Scenarios**

* **Acceptance Criterion 2.2: Unsuccessful attempt to place a piece in occupied slot**
  + Given the game has started
  + And it's my turn
  + When I click on an already occupied slot
  + Then a piece should not be placed in that slot
  + And a warning should be displayed indicating the slot is occupied
* **Acceptance Criterion 2.3: Attempt to place a piece out of turn**
  + Given the game has started
  + And it's not my turn
  + When I click on an empty slot
  + Then a piece should not be placed in that slot
  + And a message should appear saying "Not your turn"
* **Acceptance Criterion 2.4: Attempt to place a piece after the game has ended**
  + Given the game has already ended (either by win or draw)
  + When I click on an empty slot
  + Then a piece should not be placed
  + And a message should appear saying "The game has ended. Start a new game to play."
* **Acceptance Criterion 2.5: Trying to place a piece during system lag or hang**
  + Given the game is experiencing lag or a temporary hang
  + When I attempt to place a piece
  + Then my action should be queued and executed once the game resumes
  + And if it can't be executed, a warning should appear saying "Action couldn't be completed. Try again."

**User Story 3: Moving a Piece Ashna**

**Happy Scenario**

* **Acceptance Criterion 3.1: Successful movement of a piece**
  + Given all pieces have been placed
  + And it’s my turn
  + When I drag one of my pieces to an adjacent empty slot
  + Then the piece should move to that slot
  + And the turn should switch to the other player

**Negative Scenarios**

* **Acceptance Criterion 3.2: Unsuccessful attempt to move piece to a non-adjacent slot**
  + Given all pieces have been placed
  + And it’s my turn
  + When I drag one of my pieces to a non-adjacent slot
  + Then the piece should not move
  + And a warning should be displayed indicating the move is invalid
* **Acceptance Criterion 3.3: Attempt to move an opponent's piece**
  + Given all pieces have been placed
  + And it's my turn
  + When I drag one of the opponent's pieces
  + Then the piece should not move
  + And a warning should be displayed saying "Can't move opponent's piece"
* **Acceptance Criterion 3.4: Trying to move a piece out of turn**
  + Given all pieces have been placed
  + And it’s not my turn
  + When I drag one of my pieces
  + Then the piece should not move
  + And a warning should be displayed saying "Not your turn"
* **Acceptance Criterion 3.5: Attempt to move a piece to an occupied slot**
  + Given all pieces have been placed
  + And it’s my turn
  + When I drag my piece to an occupied slot
  + Then the piece should not move
  + And a warning should be displayed indicating the slot is already occupied

**User Story 4: Forming a Mill Varshith**

**Happy Scenario**

* **Acceptance Criterion 4.1: Successfully forming a mill**
  + Given I have three of my pieces in a row
  + When it's my turn to remove a piece
  + Then a prompt should appear allowing me to remove an opponent's piece

**Negative Scenarios**

* **Acceptance Criterion 4.2: Attempt to remove a piece without forming a mill**
  + Given I have not formed a mill
  + When I attempt to remove an opponent's piece
  + Then the game should not allow me to remove the piece
  + And a warning should appear saying "You haven't formed a mill"
* **Acceptance Criterion 4.3: Delay in removing an opponent's piece after forming a mill**
  + Given I have formed a mill
  + And I don't select an opponent's piece to remove within a reasonable time
  + Then a reminder should appear instructing me to remove an opponent's piece
* **Acceptance Criterion 4.4: Attempt to form a mill with a combination of mine and opponent's pieces**
  + Given I have a combination of my pieces and opponent's pieces in a row
  + When I attempt to form a mill
  + Then the game should not recognize this as a mill
  + And I should not be prompted to remove an opponent's piece
* **Acceptance Criterion 4.5: Attempting to remove an opponent's piece that's part of another mill**
  + Given I have formed a mill
  + When I try to remove an opponent's piece that's part of another mill
  + Then I should not be allowed to remove that piece
  + And a warning should appear saying "Can't remove pieces from an existing mill"

User Story 5: Removing an Opponent's Piece Alex

**Happy Scenario**

* **Acceptance Criterion 5.1**: **Successfully removing an opponent’s piece**
  + Given that I have formed a mill
  + When I click on one of the opponent’s pieces that is not part of a mill
  + Then that piece should be removed from the board

**Negative Scenarios**

* **Acceptance Criterion 5.2**: **Unsuccessful attempt to remove opponent’s piece in a mill**
  + Given that I have formed a mill
  + When I click on one of the opponent’s pieces that is part of a mill
  + Then that piece should not be removed
  + And a warning message should be displayed
* **Acceptance Criterion 5.3**: **Attempting to remove own piece instead of opponent’s**
  + Given I have formed a mill
  + When I click on one of my pieces
  + Then my piece should not be removed
  + And a warning should be displayed
* **Acceptance Criterion 5.4: Attempting to remove opponent's piece without forming a mill**
  + Given I haven't formed a mill
  + When I click on one of the opponent's pieces
  + Then that piece should not be removed
  + And a warning should be displayed saying "Cannot remove opponent's piece without forming a mill."

**User Story 6: Flying a Piece Ashna**

**Happy Scenario**

* **Acceptance Criterion 6.1: Successfully flying a piece**
  + Given I have only three pieces left on the board
  + And it's my turn
  + When I drag one of my pieces to any empty slot
  + Then the piece should successfully move to that slot.

**Negative Scenarios**

* **Acceptance Criterion 6.2: Unsuccessful attempt to fly a piece with more than three pieces on the board**
  + Given I have more than three pieces on the board
  + And it's my turn
  + When I try to fly a piece to any empty slot
  + Then the piece should not move to the new slot
  + And an error message should display saying "Can only fly pieces when you have three pieces left."
* **Acceptance Criterion 6.3: Trying to fly a piece to an occupied slot**
  + Given I have only three pieces left
  + And it's my turn
  + When I drag one of my pieces to an occupied slot
  + Then the piece should not move there
  + And a warning should appear saying "Slot occupied. Choose a different slot."
* **Acceptance Criterion 6.4: Attempting to fly an opponent's piece**
  + Given I have only three pieces left
  + And it's my turn
  + When I try to drag one of the opponent's pieces
  + Then the piece should not move
  + And a warning should be displayed saying "Can't move opponent's piece."

**User Story 7: Declaring a Winner Varshith**

**Happy Scenario**

* **Acceptance Criterion 7.1: Successfully declaring a winner**
  + Given one player has less than three pieces or cannot move
  + Then the game should successfully declare the other player as the winner.

**Negative Scenarios**

* **Acceptance Criterion 7.2: Unsuccessful attempt to declare a winner prematurely**
  + Given both players have more than three pieces and can make valid moves
  + When the system tries to declare a winner
  + Then the game should not end
  + And no winner should be announced.
* **Acceptance Criterion 7.3: Inconsistent game state trying to declare a winner**
  + Given an inconsistency in the game state (e.g., due to a glitch or system error)
  + When the system tries to declare a winner
  + Then the game should halt
  + And an error message should be displayed saying "Game state inconsistency detected. Please restart the game."
* **Acceptance Criterion 7.4: Declaring a draw when neither player can win**
  + Given both players have been repeating the same moves without progressing for a defined number of turns
  + When the game reaches this stalemate situation
  + Then the game should declare a draw
  + And a message should display saying "It's a draw!"

**User Story 8: Restart Game Ganesh**

**Happy Scenario**

* **Acceptance Criterion 8.1: Successfully restarting a game**
  + Given the game has concluded or is in progress
  + When I click the "Restart Game" button
  + Then the board should be cleared and reset
  + And a new game should commence.

**Negative Scenarios**

* **Acceptance Criterion 8.2: System error while restarting the game**
  + Given the game is in progress
  + When I click the "Restart Game" button
  + And there's a system error in resetting the board
  + Then the current game state should remain unchanged
  + And an error message should display saying "Error restarting game. Please try again."
* **Acceptance Criterion 8.3: Trying to restart a game that hasn’t started**
  + Given no game is in progress
  + When I click the "Restart Game" button
  + Then a message should display indicating there's no game to restart.
* **Acceptance Criterion 8.4: Confirming restart during an ongoing game**
  + Given the game is in progress
  + When I click the "Restart Game" button
  + Then a confirmation prompt should appear asking if I'm sure I want to restart and lose the current progress.

**User Story 9: Exiting the Game Ganesh**

**Happy Scenario**

* **Acceptance Criterion 9.1**: Successfully exiting the game
  + When I click the "Exit Game" button
  + Then the game should close successfully without errors.

**Negative Scenarios**

* **Acceptance Criterion 9.2:** System error while trying to exit
  + When I click the "Exit Game" button
  + And there's a system error preventing the game from closing
  + Then the game should remain open
  + And an error message should display saying "Error exiting game. Please try again."
* **Acceptance Criterion 9.3:** Confirming exit during an unsaved game
  + Given a game is in progress and hasn't been saved
  + When I click the "Exit Game" button
  + Then a confirmation prompt should appear asking if I'm sure, as any unsaved progress will be lost.
* **Acceptance Criterion 9.4**: Exiting game accidentally due to external factors
  + Given the game is in progress
  + When there's an accidental trigger like power failure or accidental pressing of close button
  + Then on next launch, the game should display a message like "Game was not exited properly last time. Would you like to continue from the saved state?"

**User Story 10: Saving the Game Alex**

**Happy Scenario**

* **Acceptance Criterion 10.1:** Successfully saving the game state
  + When I click the "Save Game" button
  + Then the current game state should be saved successfully
  + And a confirmation message should display saying "Game saved successfully."

**Negative Scenarios**

* **Acceptance Criterion 10.2**: System error while trying to save the game state
  + When I click the "Save Game" button
  + And there's a system error preventing the game state from being saved
  + Then the game should not be saved
  + And an error message should display saying "Error saving game. Please try again."
* **Acceptance Criterion 10.3**: Unsuccessful save due to lack of storage space
  + Given I'm playing the game
  + And the device runs out of storage
  + When I click the "Save Game" button
  + Then the game should display an error message about insufficient storage
* **Acceptance Criterion 10.4:** Unsuccessful save due to lack of internet connectivity (for cloud saves)
  + Given I'm playing the game
  + And the device loses internet connectivity
  + When I click the "Save Game" button
  + Then the game should display an error message about connectivity issues
* **Acceptance Criterion 10.5**: Attempting to save when the game isn't in progress
  + Given no game is in progress
  + When I click the "Save Game" button
  + Then the game should not save any state
  + And an error message should display saying "No game in progress to save."