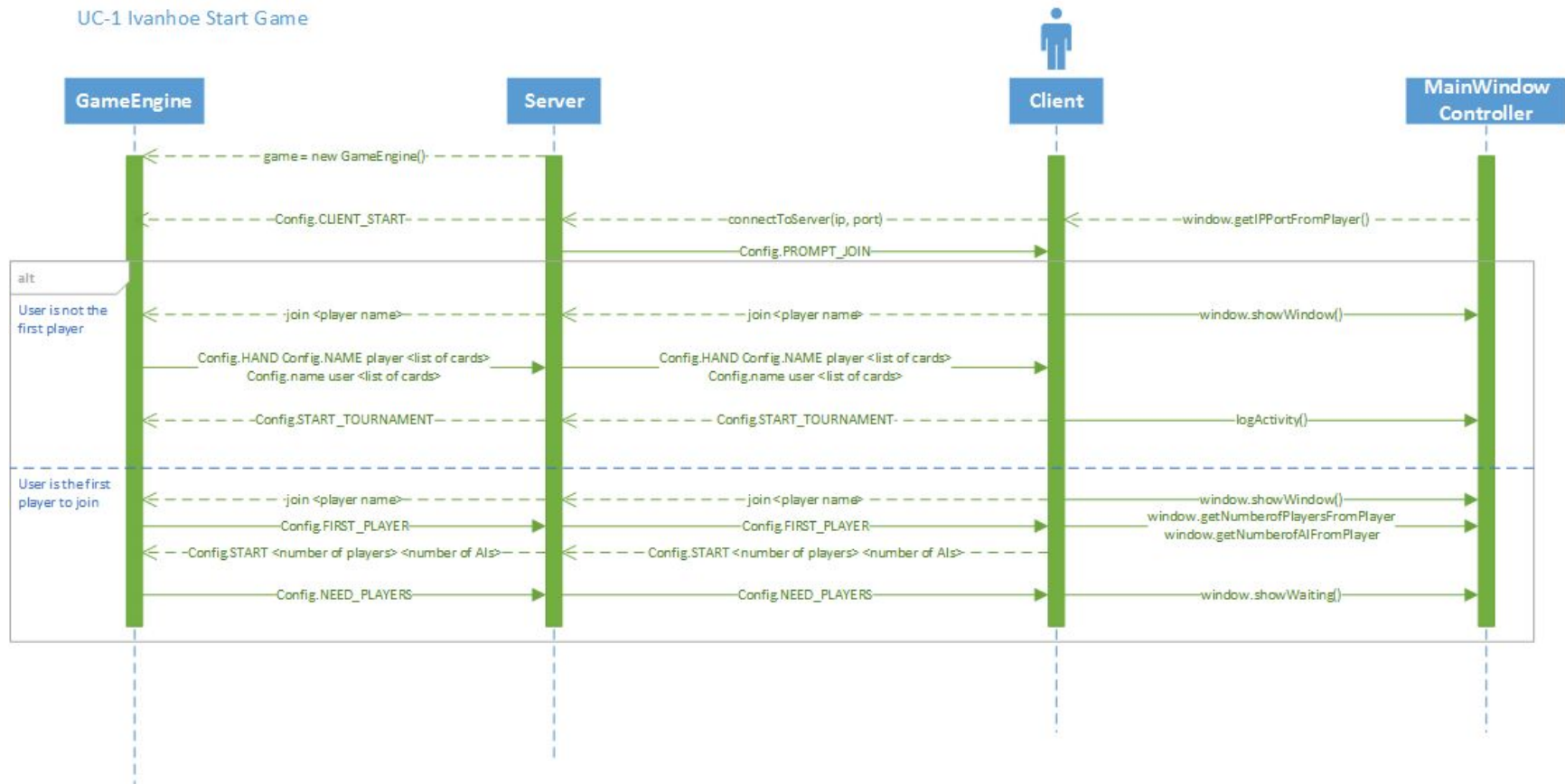


Use Case Identifier: UC-1 Ivanhoe Start Game
Description: Describes the steps to start an Ivanhoe game
External Actors: User
Precondition: No game has been started Triggering Events: User starts an Ivanhoe game
Main Sequence: <ol style="list-style-type: none"> 1. User enters IP address and port of server machine and their player name 2. System receives all the entered data 3. The main GUI window appears
Resulting Event: Ivanhoe game has begun. Post Condition: Ivanhoe game has started
Alternatives <i>A1: The user is the first person to join the game</i> <ol style="list-style-type: none"> 1. User enters IP address and port of server machine 2. User selects to play the game with 2-5 players (including AIs) 3. User enters their name 4. 2-5 players (excluding AIs) will enter the server's IP and port then will enter a valid player name
Nonfunctional Requirements: <ul style="list-style-type: none"> - System can only handle one user joining the game at a time
Comments:

Sequence Diagram for Use Case 1

**user is the current client instance in the diagram*

UC-1 Ivanhoe Start Game

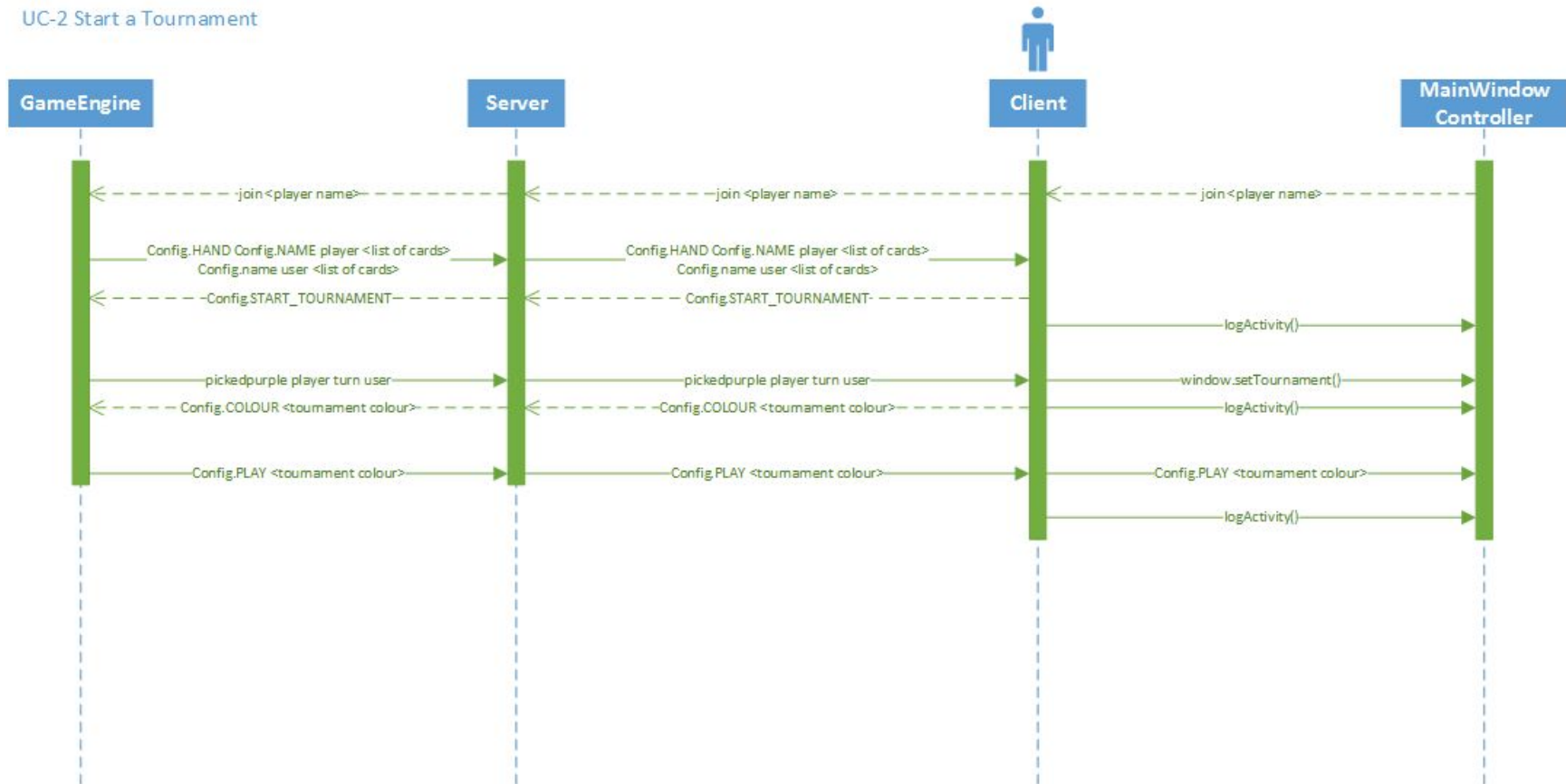


Use Case Identifier: UC-2 Start a Tournament
Description: Describes the steps to start a tournament
External Actors: User
Precondition: Ivanhoe game has started Triggering Events: All players have joined a game or the previous tournament has ended
Main Sequence: <ol style="list-style-type: none"> 1. The system randomly generates which player gets to choose the first tournament 2. The system announces who the first player is and disables all other players main GUI window 3. The first player chooses the tournament colour 4. The main GUI window changes the background colour of the tournament to the one chosen by the first player
Resulting Event: A tournament has started Post Condition: User can now play a card
Alternatives
Nonfunctional Requirements: <ul style="list-style-type: none"> - Only one user may start a tournament
Comments:

Sequence Diagram for Use Case 2

**user is the current client instance in the diagram*

UC-2 Start a Tournament

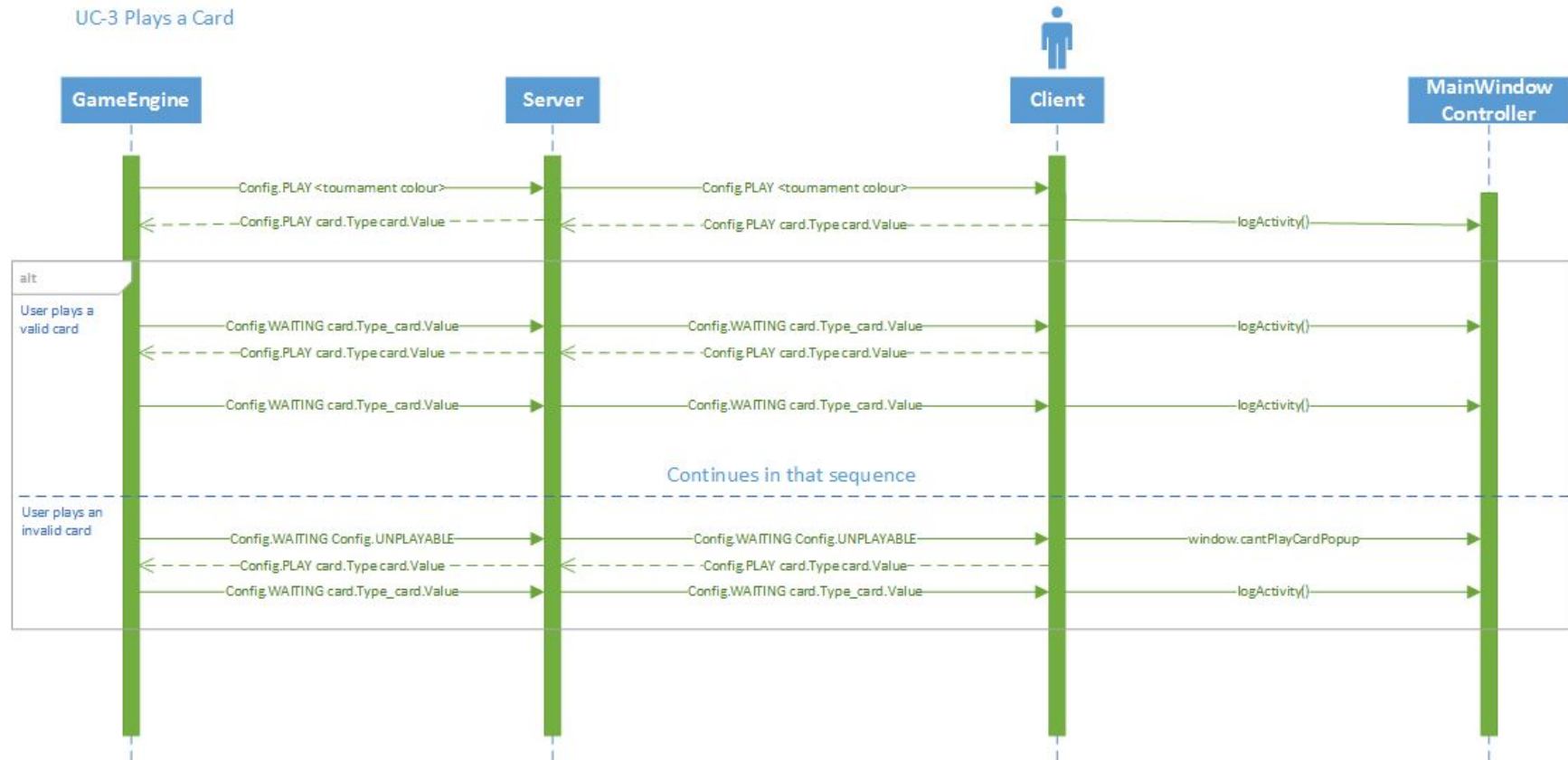


Use Case Identifier: UC-3 Plays a Card
Description: Describes the steps to play a card
External Actors: User
Precondition: A tournament has started and the user is currently active in the tournament Triggering Events: User is the current player
Main Sequence: <ol style="list-style-type: none"> 1. The system enables the user's main GUI window 2. User selects from their hand the card(s) they would like to play 3. The system receives the card(s) played and logs the user has played a card to the other players 4. User continues to play a cards until they no longer have cards to play or wishes to end their turn
Resulting Event: User has played their cards Post Condition: User's main GUI window is disabled
Alternatives <i>A1: User does not play a valid card (wrong tournament colour)</i> <ol style="list-style-type: none"> 1. The system enables the user's main GUI window 2. User selects from their hand the card(s) they would like to play 3. The system receives the cards played and notifies the player that they have played a wrong card 4. The system adds the card back to the player's hand 5. User can select from their hand a valid card to play
Nonfunctional Requirements: <ul style="list-style-type: none"> - The system can only handle one card being played at a time
Comments:

Sequence Diagram for Use Case 3

**user is the current client instance in the diagram*

UC-3 Plays a Card

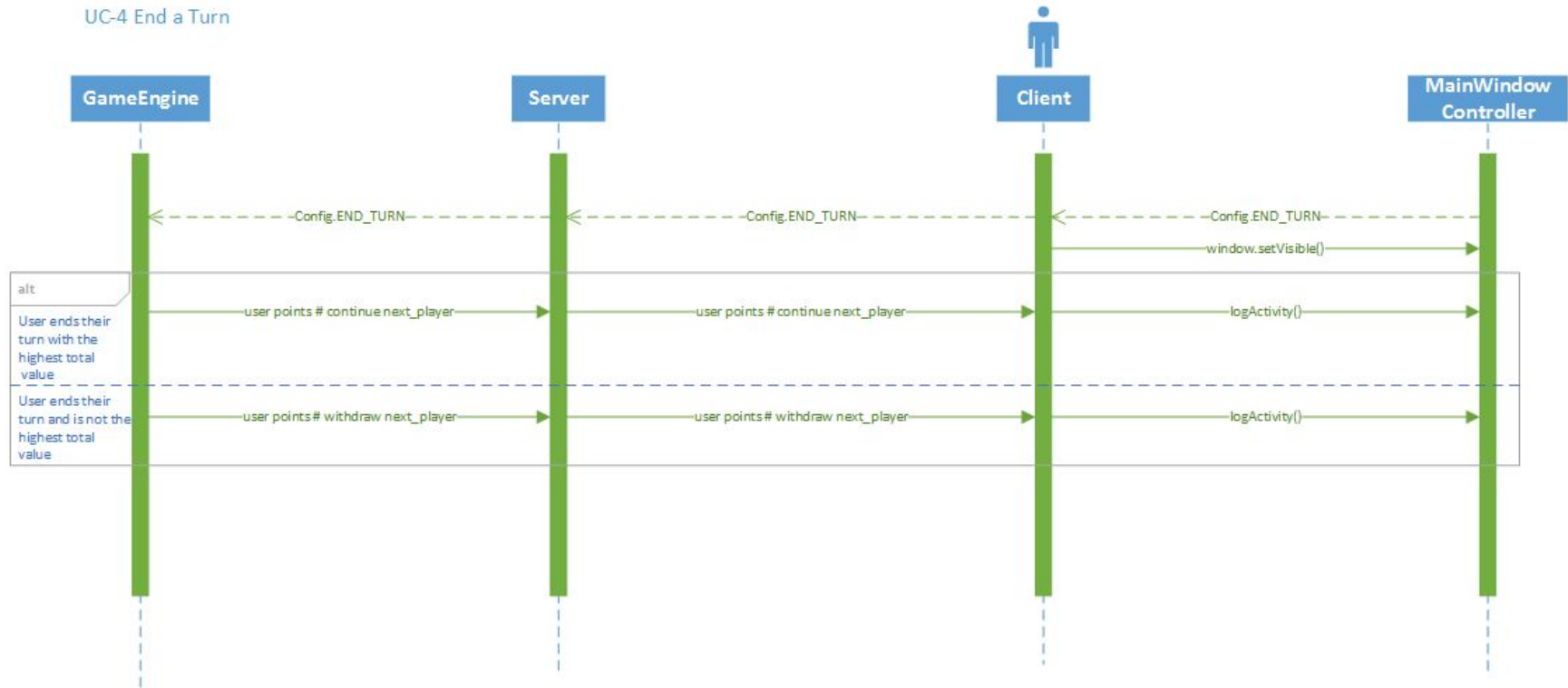


Use Case Identifier: UC-4 End A Turn
Description: Describes the step to end a turn
External Actors: User
Precondition: User has played their card(s) and is currently active in the tournament Triggering Events: User selects the 'End Turn' button
Main Sequence: <ol style="list-style-type: none"> 1. The system receives that the user has ended their turn and calculates the number of points the player will receive 2. The user's main GUI screen is disabled 3. The system announces to all players the points that the user has accumulated 4. The system announces the next player's turn
Resulting Event: User has ended their turn and their main GUI window is disabled Post Condition: User is no longer the current player
Alternatives <i>A1: The user's total value is not the highest</i> <ol style="list-style-type: none"> 1. User has finished playing all their cards in a round 2. The system receives that the user has ended their turn and calculates the number of points the player will receives 3. The system notifies the player that they did not have the highest number of points and withdraws the player from the tournament
Nonfunctional Requirements:
Comments:

Sequence Diagram for Use Case 4

**user is the current client instance in the diagram*

UC-4 End a Turn

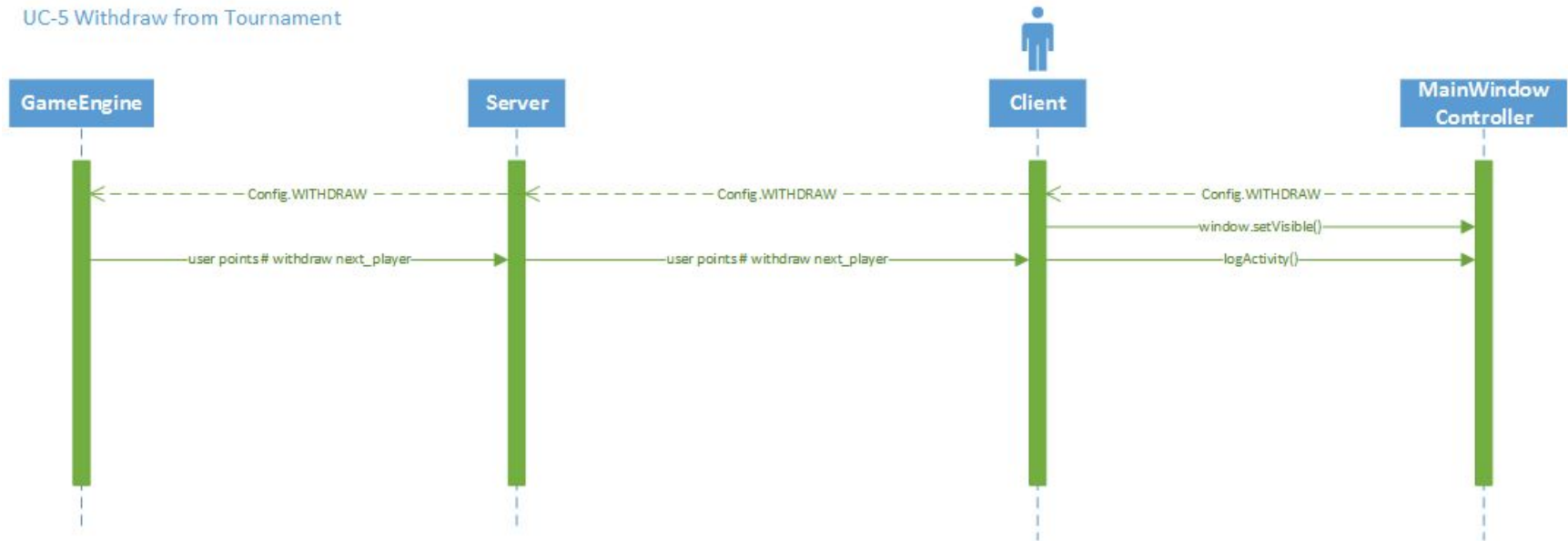


Use Case Identifier: UC-5 Withdraws from Tournament
Description: Describes the steps to withdraw from a tournament
External Actors: User
Precondition: User is the current player, has no cards to play in this round or does not wish to participate in the tournament Triggering Events: User selects the 'Withdraw' Button
Main Sequence: <ol style="list-style-type: none"> 1. The system receives that the user has withdrawn from the tournament 2. The system announces to all players the points that the user has accumulated (0 points) and removes the user from the tournament 3. The system announces the next player's turn
Resulting Event: User is no longer in the current tournament Post Condition: User is no longer the current player
Alternatives
Nonfunctional Requirements:
Comments:

Sequence Diagram for Use Case 5

**user is the current client instance in the diagram*

UC-5 Withdraw from Tournament

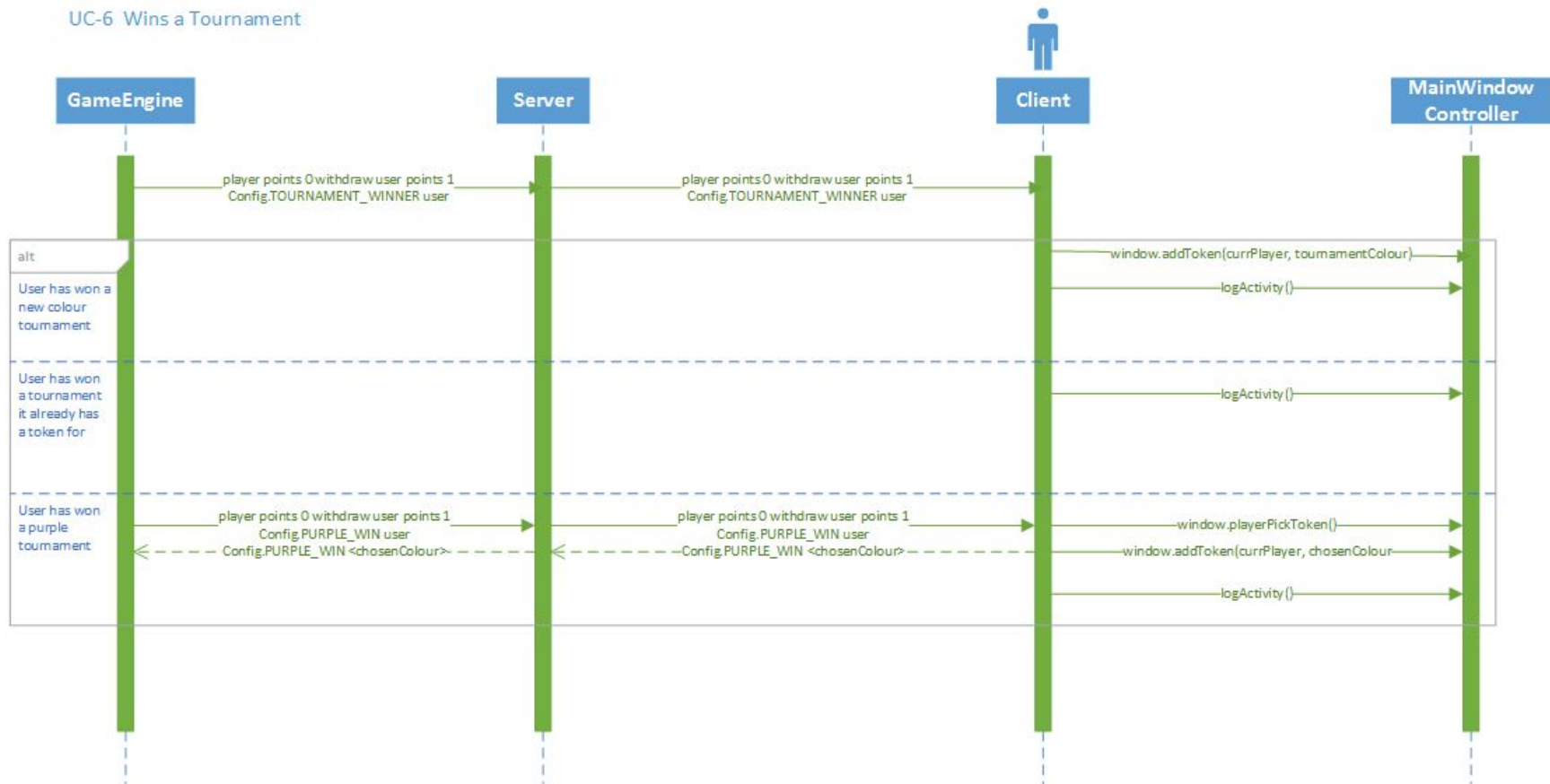


Use Case Identifier: UC-6 Win a Tournament
Description: Describes the steps for winning a tournament
External Actors: User
Precondition: User is the only player left in the tournament Triggering Events: User is the current player and all other players have withdrawn
Main Sequence: <ol style="list-style-type: none"> 1. The system acknowledges that the user is the only player left in the tournament 2. The system notifies all players that the user is the winner of the tournament 3. The system adds a token to the user's token display in the main GUI window
Resulting Event: User receives a token of the tournament colour Post Condition: A new tournament has started and User gets to chose the tournament colour
Alternatives <i>A1: The user already has the token of the tournament colour</i> <ol style="list-style-type: none"> 1. The system acknowledges that the user is the only player left in the tournament 2. The system notifies all players that the user is the winner of the tournament 3. The system does not change the token display <i>A2: The user has won on a purple tournament</i> <ol style="list-style-type: none"> 1. The system acknowledges that the user is the only player left in the tournament 2. The system notifies all players that the user is the winner of the tournament 3. The system asks the user to choose a token of their choice 4. The user picks a token of their choice 5. The system adds a token to the user's token display in the main GUI window
Nonfunctional Requirements:
Comments:

Sequence Diagram for Use Case 6

**user is the current client instance in the diagram*

UC-6 Wins a Tournament



Use Case Identifier: UC-7 Win the Ivanhoe Game
Description: Describes the steps to winning an Ivanhoe Game
External Actors: User
Precondition: Current tournament has ended Triggering Events: User has won their last token (user has all tokens)
Main Sequence: <ol style="list-style-type: none"> 1. The system acknowledges that the user has received it's last token 2. The system notifies all players that the user is the winner of the tournament 3. The system notifies all players that the user is the winner of the game 4. The system ends the Ivanhoe game
Resulting Event: The Ivanhoe game has ended and all player's main GUI window are disabled Post Condition: The Ivanhoe game is finished
Alternatives:
Nonfunctional Requirements:
Comments:

Sequence Diagram for Use Case 7

**user is the current client instance in the diagram*

UC-7 Win the Ivanhoe Game

