

Use Case Name: “Make a bid”

Primary Actor: User(s)

Stakeholders and Interests:

- All players should know whose turn it is to make the first bid
- The players should clearly see the timer and know how much time is left at all times
- The player should be able to easily make a bid

Preconditions:

- The board should be set up correctly
- A target square has been selected
- All players are aware of which target square has been selected
- The system knows the location of all robot pieces

Success Guarantee:

- All players are given the proper opportunity to place a bid
- The timer works correctly and no player is given extra time
- The system properly calculates the distance so player with the correct and most accurate bid is correctly identified.

Main Success Scenario:

1. The system indicates whose turn it is and the target square is selected randomly and displayed in the centre of the board [*Alt 1: The user would like to save the game and exit; Alt 2: The user would like to reset the game; Alt 3: The user decides to exit the game*]
2. The player who goes first enters their bid into their drop down menu
3. The system records the first players bid and saves the data
4. The user then presses the ‘Start Bid Timer!’ button to indicate that other players can now begin to enter bids
5. The system starts the timer
6. Once the timer has started, the bid round has begun and the timer ticks down from 1 minute
7. The three other players can now select their bids from their respective drop down menus
8. The system records each bid and assigns the bid to the appropriate player
9. Once the timer is complete the user selects the ‘Lock All Bids’ button
10. The system registers this as the end of the bidding round and no changes can be made to players bids for the rest of the turn
11. Once bids are locked, the player who made the lowest bid then demonstrates their path by selecting all squares from their current square to the target square
12. The system records each mouse click to count the moves while the player is demonstrating
13. Once the player has demonstrated their bid, they press the ‘Verify Bids!’ button
14. The system then displays a pop-up message dialog which confirms or denies the correct bid
15. If the bid was correctly displayed, the player who made the bid wins the round and is awarded a point
16. The system will add one to the player who won’s tally
17. If the first players bid was incorrect, you go back to Step 11 for each player until a winner is awarded or each player has had a chance to demonstrate their bid
18. The system moves the winners’ piece from its current location to the target square’s location
19. The target square is removed from the game once it is claimed by the winner
20. Once the target square is reached, this turn is now complete

21. The system returns to step 1. *Use case ends.*

Alternate Flows:

Alt 1:

-Save the game:

1. The user selects to save the game's progress and exit the game
2. The system requests the user confirm their choice and notifies the user that all progress will be saved until the user elects to load a saved game
3. The user elects to save the game
4. The system automatically saves all progress: location of robot pieces, tally of scores, location of tokens and exits the game. *Use case ends*

Alt 2:

-Reset the game:

1. The user selects to reset the game.
2. The system asks the user to confirm their selection and notifies the user that all progress will be lost if they choose to continue
3. The user confirms their choice
4. The system resets the game configuration and all progress is lost. *Use case ends*

Alt 3:

-Exit the game

1. The user selects to exit the game
2. The system asks the user to confirm their choice and notifies the user that all progress will be lost if they choose to continue
3. The user confirms their selection
4. The system ends the game, losing all progress. *Use case ends*

Exceptions:

- If any player enters a bid that is less than the minimum amount of moves, they are automatically disqualified from that round
- If a player's bid is equal to or greater to the original bid, then it is not checked
- A player has the option to select the option for a hint

Special Requirements:

- If requested, a player is able to use the option of a hint.
- The user should be able to save a game and return to it later to complete it.

Open Issues:

- How long should the timer be to have a fair balance of competitiveness and usability?