Template
Use Case:
Iteration: 1
Primary Actor:
Goal in context:
Preconditions:
Trigger:
Scenario:

1.

Postconditions:
Exceptions:

1.

Priority:
When Available:
Frequency of Use:
Channel to Actor:
Secondary Actors:
Channel to secondary Actors:
Open Issues:

1.

Checkmate
Use Case: Checkmate in Chess
Iteration: 1
Primary Actor: Chess Player 1
Goal in context: To deliver a checkmate and win the game by placing the opposing Chess Player 2 in a position where it cannot escape the attack.
Preconditions: A game of chess is ongoing and it is Chess Player 1's turn to move.
Trigger: Chess Player 1 making a move that could lead to checkmate.
Scenario:

1. A game of chess is being played between two players
2. As the game goes by, Chess Player 1 recognizes that their opponent's king is in a position for checkmate.
3. A player moves their pieces to attack the opponent's king.
4. The king is unable to move or block the attack and no longer has any possible moves outside of accepting a capture in the next move.
5. A "checkmate" is declared by Chess Player 1.
6. The game ends with Chess Player 1 winning.

Postconditions: The opponent's king is checkmated and Chess Player 1 wins the game. The victory is recorded along with the captures of pieces made in the session.

Exceptions:

1. The opponent's king can escape.
2. The opponent can use another piece to block or capture the attack piece.
3. A bug in the software that prevents checkmates from being registered.

Priority: High, it is an end goal in the game and one way to ensure that the match concludes.
When Available: As soon as the opponent's king is in a position where no legal moves are possible to avoid check.
Frequency of Use: At most **Once** each game, but can not occur at all if draw is called.
Channel to Actor: Game GUI
Secondary Actors: Chess Player 2 (Opponent/Player being checkmated).
Channel to secondary Actors: Game GUI
Open Issues: N/A

Castling
Use Case: Castling in Chess
Iteration: 1
Primary Actor: Chess Player 1
Goal in context: Perform a castling move to safeguard the king.
Preconditions:

1. A game of chess is ongoing and it is Chess Player 1's turn to move.
2. There are no pieces between the king and the chosen rook.
3. The king and the chosen rook have not made a move.
4. The king is not in check, will not pass through a check, and not land on a check after castling.

Trigger: Chess Player 1 decides to perform the castling move and all the preconditions are met.
Scenario:

1. A game of chess is being played between two players.
2. As the game goes by, Chess Player 1 wants to perform castling in order to place their king in a safer position and their rook in a move active location.
3. Chess Player 1 is able to perform the move if all preconditions have been met.
4. If preconditions are not met, notify Chess Player 1 as to why (visually).
5. Castling is performed and the game continues.

Postconditions: Castling has been successfully performed and the king and rook have performed castling, their positions updating where the king moves two squares in the direction of the rook and the rook to the opposite side of the king.

Exceptions:

1. The king has already been moved.
2. The chosen rook for castling has already been moved.
3. Coding error that allows illegal moves without fulfilling the preconditions.

Priority: Medium, it is an element of chess used often but not game-ending like checkmate.
When Available: As soon as the chess player decides to make the castling move assuming they fulfill all the preconditions.
Frequency of Use: Often but at most **once** each game for each player, and on occasions not at all if decided so by the player.
Channel to Actor: Game GUI
Secondary Actors: N/A
Channel to secondary Actors: N/A
Open Issues: N/A

En Passant
Use Case: En Passant capture in chess.
Iteration: 1
Primary Actor: Chess Player 1
Goal in context: Capturing the opponent's pawn piece by performing the En Passant move..
Preconditions:

1. A game of chess is ongoing and it is Chess Player 1's turn to move.
2. Chess Player 2 has moved their pawn piece two squares forward from its starting position prior.
3. Chess Player 1 has an adjacent pawn to the pawn Chess Player 2 moved.

Trigger: Chess Player 1 decides to perform an En Passant capture and all the preconditions are met.
Scenario:

1. A game of chess is being played between two players.
2. As the game goes by, Chess Player 2 moves their pawn two squares forward.
3. Chess Player 1 has a pawn that happens to be adjacent to Chess Player 2's pawn which had just performed a two square move forward.
4. Chess Player 1 has the option to perform the move En Passant and does so.
5. If Chess Player 1 refuses to do so then the move is no longer possible unless all preconditions are met once again.

Postconditions: If Chess Player 1 has chosen to perform En Passant, then Chess Player 2's pawn is captured and Chess Player 1's pawn is moved behind this captured pawn.

Exceptions:

1. Chess Player 1 has chosen not to perform En passant so move is then no longer possible in the next turn.
2. The opponent's pawn was not moved two squares forward from its starting position (If it instead made two moves one square each.)
3. The pawn making the capture is not directly adjacent to the opponent's pawn.
4. Some coding error to allow an illegal move of En Passant without fulfilling preconditions.

Priority: Low, it is an element of chess but not game-ending like checkmate and not higher in priority as castling.
When Available: As soon as the both player's pawn meets the precondition **but only during the turn the preconditions are met by the player performing the move**.
Frequency of Use: Rarely, can only occur when the preconditions have been met.
Channel to Actor: Game GUI
Secondary Actors: Chess Player 2 (Opponent/Player being checkmated).
Channel to secondary Actors: Game GUI
Open Issues: N/A

Offer Draw
Use Case: Offer a draw.
Iteration: 1
Primary Actor: Chess Player 1
Goal in context: To offer for a draw to Chess Player 2.
Preconditions: N/A
Trigger: Draw Button.
Scenario:

1. Chess Player 1 either wants to call a draw for fun or believes that the game is completely even to the point that the game will never end.
2. Chess Player 1 calls for a draw.
3. Chess Player 2 can decide whether to accept or decline the draw.
4. If Chess Player 2 accepts, the game ends.
5. If Chess Player 2 declines, the game continues.

Postconditions: The game continues until one player runs out of time or the game ends with a draw.

Exceptions:

1. The draw button is disabled due to a bug.

Priority: Medium, Not always will a draw be offered.
When Available: Always.
Frequency of Use: As much as the player wants.
Channel to Actor: Game GUI
Secondary Actors: Chess Player 2
Channel to secondary Actors: Game GUI
Open Issues:

1. What if a player wants to spam the draw button for fun.

Promotion
Use Case: Promote a piece.
Iteration: 1
Primary Actor: Chess/Checker Player 1
Goal in context: A pawn has made it to the opposing end of the board and the player wants to promote it to a higher ranking piece.
Preconditions: A player's pawn or checker piece must reach the opposite end of the board.
Trigger: A player moves their pawn/checker piece to the opposite end.
Scenario:

1. A game of chess/checkers is ongoing and it is Player 1's turn to move.
2. A pawn/checker piece is one move away from reaching the opposite end of the board from Player 1.
3. Player 1 moves their piece to the end.
4. Player 1 must then promote the piece.

Postconditions: The promoted piece becomes a king in checkers, or any other piece except a king in chess.

Exceptions:

1. Promotion outside of the player's turn.

Priority: Medium, it is an element of chess.
When Available: After preconditions are fulfilled.
Frequency of Use: Rarely.
Channel to Actor: Game GUI
Secondary Actors: N/A
Channel to secondary Actors: N/A
Open Issues: N/A