

NAME	Start Game	
USE CASE NO.	1	
DESCRIPTION	Initializes the SDL chess game when the player starts a new session.	
ACTORS	Player	
PRECONDITIONS	Game must be launched successfully.	
POST CONDITIONS	Board and pieces are displayed, and turn system is initialized.	
TRIGGER	Player clicks "Play 1v1"	
DESCRIPTION	STEP	ACTION
	1	Player opens the application
	2	Player clicks "Play 1v1"
	3	SDL window initializes
	4	Board is rendered, pieces are placed
STEP EXTENSTIONS	STEP	BRANCHES
	3	If SDL fails, display error and exit
ALTERNATE COURSES	STEP	ACTION
	2	If no input, game stays on intro screen

NAME	Move a Piece	
USE CASE NO.	2	
DESCRIPTION	Handles movement of a piece from its source to a valid destination.	
ACTORS	Player	
PRECONDITIONS	The game is active and it is the player's turn.	
POST CONDITIONS	The piece is moved, the board updates, and the turn switches.	
TRIGGER	Player clicks a valid piece and using the mouse moves it to a valid square	
DESCRIPTION	STEP	ACTION
	1	Player selects a piece.
	2	System calculates valid moves for the selected piece.
	3	Player moves mouse piece to a valid square
	4	Player clicks on the square and the piece is placed
STEP EXTENSTIONS	STEP	BRANCHES
	4	If destination is invalid, input is ignored
ALTERNATE COURSES	STEP	ACTION
	2	If it is not the player's turn, the move is blocked.

NAME	Pawn Promotion	
USE CASE NO.	3	
DESCRIPTION	Promotes pawn to queen when it reaches the final rank, if no queen is already on board.	
ACTORS	Player	
PRECONDITIONS	Pawn reaches 8th rank (white) or 1st rank (black)	
POST CONDITIONS	Pawn becomes a queen	
TRIGGER	Player moves pawn to last rank	
DESCRIPTION	STEP	ACTION
	1	Pawn reaches the last row
	2	System checks for existing queen
	3	If none exists, pawn is promoted to queen
	4	Board is updated
STEP EXTENSTIONS	STEP	BRANCHES
	2	If queen already exists, promotion denied
ALTERNATE COURSES	STEP	ACTION
	3	No other promotions supported yet

NAME	Illegal Move Handling	
USE CASE NO.	4	
DESCRIPTION	Prevents the player from performing moves that violate chess rules.	
ACTORS	Player	
PRECONDITIONS	Game is running, move attempted	
POST CONDITIONS	Move is blocked	
TRIGGER	Player clicks invalid destination	
DESCRIPTION	STEP	ACTION
	1	Player selects piece
	2	Player moves piece to and clicks invalid square
	3	System checks legality
	4	Move is rejected
STEP EXTENSTIONS	STEP	BRANCHES
	3	Rule violation results in rejection
ALTERNATE COURSES	STEP	ACTION
	2	Player retries a legal move

NAME	Turn-Based System	
USE CASE NO.	5	
DESCRIPTION	Ensures turn alternation between two players.	
ACTORS	Player	
PRECONDITIONS	One valid move is completed	
POST CONDITIONS	Turn changes to other player	
TRIGGER	Completion of a move	
DESCRIPTION	STEP	ACTION
	1	Valid move is completed
	2	Turn switches to other player
	3	Current player disabled
STEP EXTENSTIONS	STEP	BRANCHES
	3	Wrong-player input is ignored
ALTERNATE COURSES	STEP	ACTION
	1	Invalid move keeps same player's turn

NAME	Click-Based Piece Selection	
USE CASE NO.	6	
DESCRIPTION	Allows a player to click and select one of their own pieces	
ACTORS	Player	
PRECONDITIONS	It is the player's turn	
POST CONDITIONS	The selected piece is ready to move	
TRIGGER	Player clicks a piece	
DESCRIPTION	STEP	ACTION
	1	Player clicks on piece
	2	System verifies turn and piece ownership
	3	Piece is selected
STEP EXTENSTIONS	STEP	BRANCHES
	2	Opponent's piece is ignored
ALTERNATE COURSES	STEP	ACTION
	1	Clicking an empty square does nothing

NAME	Capture a Piece	
USE CASE NO.	7	
DESCRIPTION	Replaces an opponent's piece with the player's own piece when a legal capturing move is made.	
ACTORS	Player	
PRECONDITIONS	Player selects their piece and clicks on an opponent's piece in a legal capture move.	
POST CONDITIONS	Opponent's piece is removed from the board, and the current piece moves into its square.	
TRIGGER	Player clicks on a legal destination containing an opponent's piece.	
DESCRIPTION	STEP	ACTION
	1	Player selects a piece
	2	Player moves piece and clicks on a square with an opponent's piece
	3	System checks legality of capture
	4	If legal, opponent's piece is removed
	5	Player's piece moves to that square
STEP EXTENSIONS	STEP	BRANCHES
	3	If the move is not legal or the piece is not an opponent's, input is ignored
ALTERNATE COURSES	STEP	ACTION
	2	Player moves piece and clicks an empty square — process as a standard move

NAME	Invalid Turn Attempt	
USE CASE NO.	8	
DESCRIPTION	Prevents the wrong player from making a move when it is not their turn.	
ACTORS	Player	
PRECONDITIONS	It is the opponent's turn	
POST CONDITIONS	No move is executed	
TRIGGER	Player clicks during opponent's turn	
DESCRIPTION	STEP	ACTION
	1	Player clicks on their piece
	2	System checks active player
	3	If mismatch, action is ignored
STEP EXTENSTIONS	STEP	BRANCHES
	2	Repeat input attempts are ignored
ALTERNATE COURSES	STEP	ACTION
	1	Game remains idle until correct player acts

NAME	Intro Screen	
USE CASE NO.	9	
DESCRIPTION	Displays a static intro screen when the game is launched.	
ACTORS	System	
PRECONDITIONS	Application starts	
POST CONDITIONS	Waits for player to begin	
TRIGGER	Game is launched	
DESCRIPTION	STEP	ACTION
	1	SDL loads into the background
	2	Display is shown
	3	System waits for click or input
STEP EXTENSTIONS	STEP	BRANCHES
	3	On input either exits or moves to main game
ALTERNATE COURSES	STEP	ACTION

NAME	Visual Board Rendering	
USE CASE NO.	10	
DESCRIPTION	Redraws the board and pieces after every valid move or event.	
ACTORS	System	
PRECONDITIONS	Game state has changed	
POST CONDITIONS	Visuals are updated	
TRIGGER	Valid move or state change	
DESCRIPTION	STEP	ACTION
	1	Game processes the move
	2	SDL clears and redraws board
	3	Piece images are rendered in new positions
STEP EXTENSTIONS	STEP	BRANCHES
	3	If image is missing, error handler runs
ALTERNATE COURSES	STEP	ACTION
	2	No redraw on invalid move

