

Chess Requirements Analysis

① What does the User Want:

→ When we asked the user what he wanted he gave us the following statement:

"I want a 5x5 Chess game containing a King, Jumper, Runner, Tower and Pawn pieces, I want to play the Chess game with my friends and want it to be to some extent easy to use and visually appealing."

→ After some time with the user we could come up with the following requirements that our program should have:

- ① A Graphical user Interface displaying a 5x5 board initialised with ~~the~~ white and black chess pieces
- ② A mechanism to move the chess piece preferably using the mouse cursor
- ③ When moving a chess piece display the available moves that can be taken on the chess board
- ④ In case of dead chess pieces remove them from the chess board and graphically specify which pieces have died

⑤ After each Chess move the Chess Board updates according to the chess pieces movements

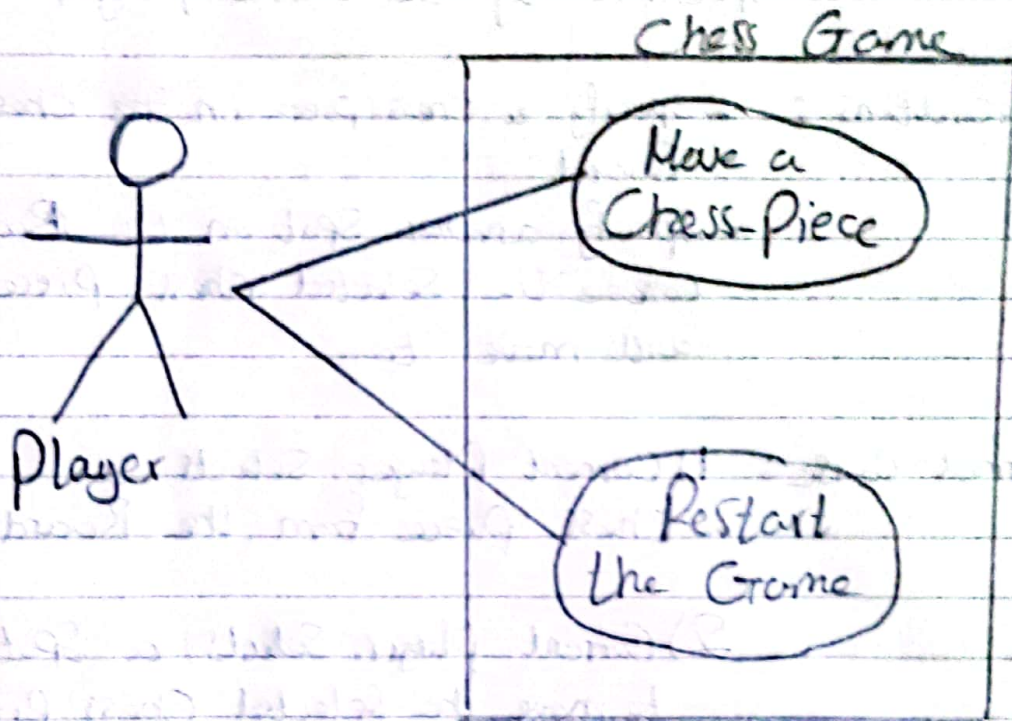
⑥ State the winner player in case of check mate, else Specify Draw in case the game reached a State where no one can win

2 Use Case Diagram :

⇒ Based on the requirements we gathered we come up with the following use cases

a) Move a Chess Piece

b) Restart Game



Use Case Specification

a

~~Use~~ Move a chess piece

Actor : Current Player

Description : Moves a chess piece from its current spot to ~~the~~ another spot specified by the current player

Preconditions :

- specify a chess piece on the chess Board
- Specify another spot on the Board where the selected chess piece will move to

Normal Course :

- 1) Current Player selects a chess piece from the Board

- 2) Current player selects a spot to move the selected chess piece

- 3) Chess piece moves to the specified spot

- 4) ~~the~~ If the spot contains any chess piece from the other player chess pieces, it dies and is displayed that this chess piece died

- 5) Update the Board

- 6) Current Player is changed to the other player

Post Conditions : - A chess piece move could result in ~~an~~ a checkmate and one of the players winning and the game ending

- A chess piece move could result in a Draw between the 2-players and the game ending

Exceptions : 1) The current player chooses an invalid spot

2) The current player chooses an invalid chess piece

b

Restart the Game

Actor: Any Player

Description: Restarts the Game by initialising the ~~Board~~ Chess Board to its initial state -

Preconditions: None

Normal Course: 1) One of the 2 players clicks the Restart the Game Button

2) The Chess Board is initialised to its initial state

3) The 2 players start playing as if it was a new game

Post-Conditions: - Initial state of the Chess Game

Exceptions: None

3] Activity Diagram:

⇒ We will create the Activity Diagram for the "move a chess piece" use case, because it is the most important functionality in the chess game.

