

# Product Requirements

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## Brief problem statement

The problem being addressed is the design and development of a player vs player chess video game. The game should follow the rules of chess, implementing the correct movements of all pieces, and the outcomes of a chess game. The game should be user-friendly, and easy to use.

## System requirements

The game is not demanding on the system and requires minimal level of hardware to run. There is no software needed to run the game.

The game is developed in the game engine unity and makes use of unity's build feature, turning the game into a executable file.

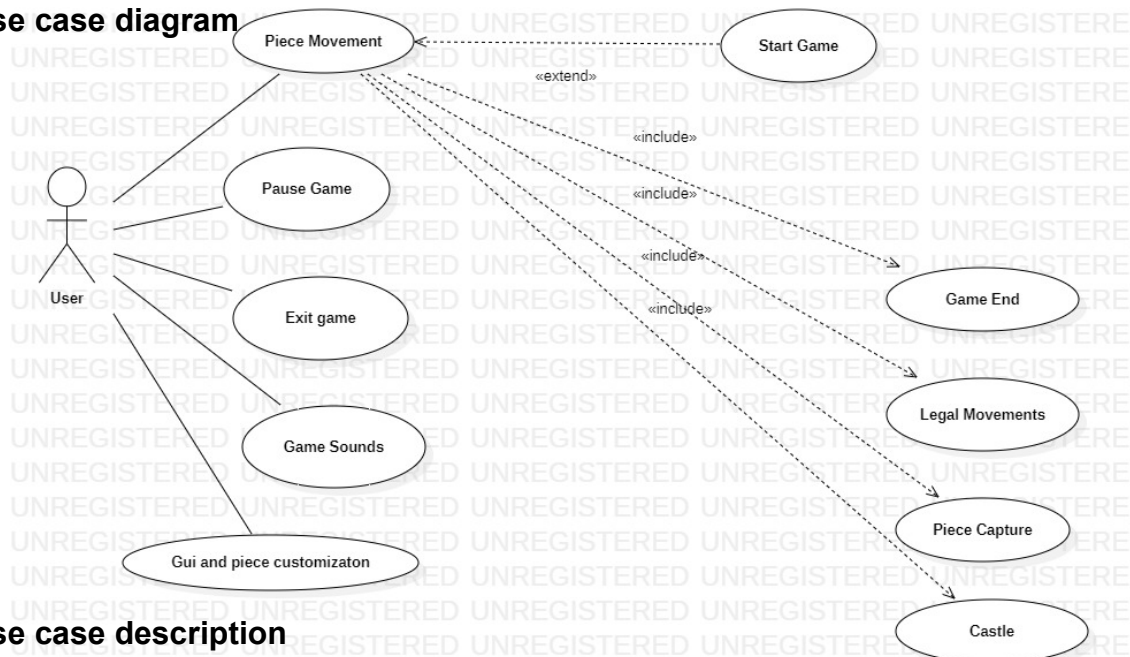
## Users profile

The game is made to be accessible to anyone who desires to play it and possesses the game. There is a need for basic computer usage knowledge and knowledge of chess, and how it is played.

## Feature requirements (user stories)

No.	User Story Name	Description	Release
1.	Game-start	As a player, I want to start a new game so that I can play a fresh game of chess.	R1
2.	Piece-Movement	As a player, I want to move my pieces on the board according to the rules of chess.	R1
3.	Legal-Movements	As a player I want to be able to see what moves are legal and available to play	R1
4.	Piece-Capture	As a player , I want to capture my opponent's pieces when I move to their occupied squares.	
5.	Castle	As a player I want to castle my king and rook under the appropriate conditions	R1
6.	Game-End	As a player I want to be able to checkmate my opponent or arrive at a drawing position as well as be notified when this happens.	R2
7.	Exit	As a player I want to be able to quit the game at any given moment	R2
8.	Game-Pause	As a player I want to be able to pause the game at any moment	R2
9.	Game-Sounds	As a player I want to be able to hear sounds effects from the pieces as well as from the GUI	R2
10.	Piece-Customization	As a player I want to customize the game settings and pick my preferred piece designs	R3
11.	GUI-Customization	As a player I want to customize how the game looks, toggle full screen and change the volume	R3

## Use case diagram



## Use case description

<b>Use Case Number:</b>	<b>UC-01</b>
<b>Use Case Name:</b>	<b><i>Play game</i></b>
<b>Overview:</b>	<b><i>The purpose of the use case is for the player to play a game of chess.</i></b>
<b>Actor(s):</b>	<b><i>Player/User</i></b>
<b>Pre condition(s):</b>	<b><i>The player must have the folder containing the game files and run the .exe file</i></b>
<b>Scenario Flow:</b>	<p><b><i>Main (success) Flow: Steps should be numbered.</i></b></p> <ol style="list-style-type: none"> <li><b><i>1. The main menu appears on screen</i></b></li> <li><b><i>2. The user clicks on play</i></b></li> <li><b><i>3. The user selects the desired time-control</i></b></li> <li><b><i>4. The user selects the piece they want to move.</i></b></li> <li><b><i>5. The game continues until one side wins or the game is drawn.</i></b></li> <li><b><i>6. The final result shows on screen</i></b></li> <li><b><i>7. The user chooses between playing again, returning to the menu or quitting the game.</i></b></li> </ol>
	<p><b><i>Alternate Flows:</i></b></p> <p><b><i>AF1.</i></b></p> <ol style="list-style-type: none"> <li><b><i>1. The player selects edit in the main menu</i></b></li> <li><b><i>2. The player chooses the desired piece sprites</i></b></li> <li><b><i>3. The user returns to the main menu</i></b></li> </ol> <p><b><i>AF2.</i></b></p> <ol style="list-style-type: none"> <li><b><i>1. The player opens settings</i></b></li> <li><b><i>2. The player toggles full screen on/of</i></b></li> <li><b><i>3. The player moves the volume slider</i></b></li> <li><b><i>4. The player returns to the main menu</i></b></li> </ol> <p><b><i>AF3.</i></b></p> <ol style="list-style-type: none"> <li><b><i>1. The player quits the game</i></b></li> </ol>
<b>Post Condition:</b>	<b><i>Enter the condition that must be true when the main flow is completed.</i></b>