CP317 Assignment 1 Chess317

Project ID: CP317-TP19

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1. Introduction

1.1 Purpose

This document will explain all the requirements for the chess application, Chess317: deadline, functional and non-functional requirements, and costs.

Deadline: December 8, 2020

Costs: Budget to be determined

Functional and non-functional requirements: See below.

1.2 Intended Audience

This document is intended for the development team - they will refer to this document throughout development to ensure that all requirements are being met.

1.3 Intended Use

The chess application will be used by chess players to play the game of chess against other players.

1.4 Scope

The goal of Chess317 is to provide an environment and community for chess players to enjoy chess. The application will allow users to:

- create a personal account
- add other users onto their buddy list
- challenge friends to rated matches

1.5 Definitions and Acronyms: Glossary

Term	Definition
Square	One of the 64 squares on a chess board. A square is either black or white.
Piece	A chess piece is one of six possible pieces: Pawn, Bishop, Knight, Rook, Queen, or
	King.
FIDE	The International Chess Federation (Fédération Internationale des Échecs) is an
	international organization responsible for governing all international chess
	competition.

2. Overall Description

2.1 User Needs

Users will need to be able to play the game of chess via a graphical interface.

2.2 Assumptions and Dependencies

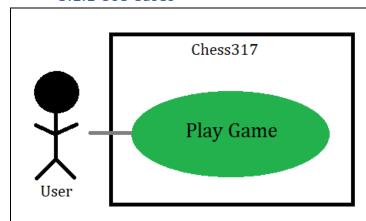
We assume that any user of Chess317 will know how to play the game of chess or is capable of learning the rules via the FIDE laws of chess (link provided in Section 3.1). In order to run the application, users will need to have Java installed on their computer. Access to a mouse and keyboard is also assumed.

3. System Features and Requirements

3.1 Functional Requirements

- Menu should have a 'Play' and 'Options' button
- Users should have a 'Forfeit' button while playing
- Game should follow the chess rules as outlined by the FIDE laws of chess (https://www.fide.com/FIDE/handbook/LawsOfChess.pdf)
- Game should track match histories, which should be viewable from the menu

3.1.1 Use Cases

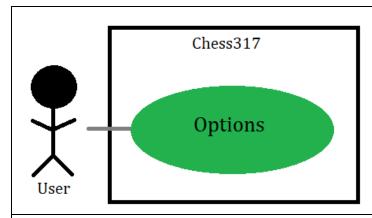


Brief Description

The **Play Game** use case allows a User to start a game of chess. Once in game, both Players can take turns moving pieces.

Step-by-Step Description

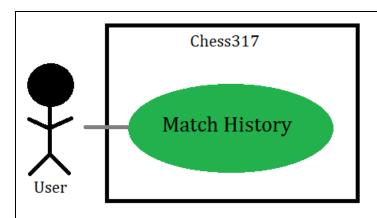
1. Move board pieces until the game is finished.



Brief Description

The **Options** use case allows a User to customize certain settings such as the way pieces look, board colours, time-controls, etc.

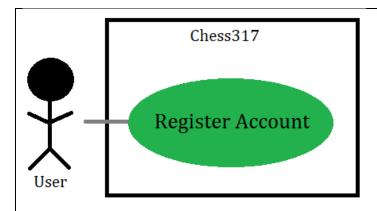
- 1. Click on the Options button.
- 2. Customize options.



The Match History use case allows the User to view their previous match results.

Step-by-Step Description

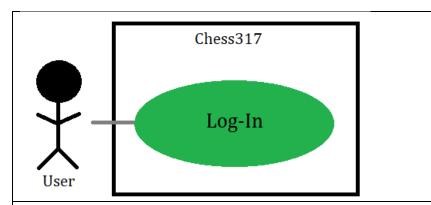
1. Click on the Match History button.



Brief Description

The **Register Account** use case enables a User to sign up for an account as an identifier and to track match histories.

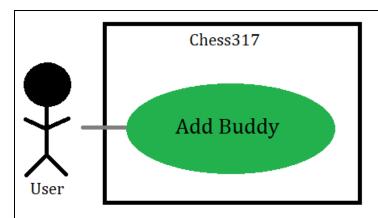
- 1. Fill in required information.
- 2. Select 'Create Account'.



The Log-in use case allows the User to connect to their account.

Step-by-Step Description

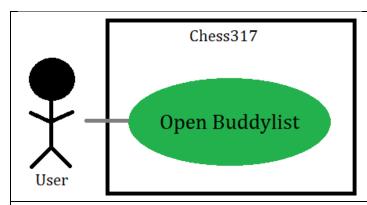
- 1. Click on the Log-in button.
- 2. Enter username and password



Brief Description

The Add Buddy use case allows the User to add people to their buddylist for match invites.

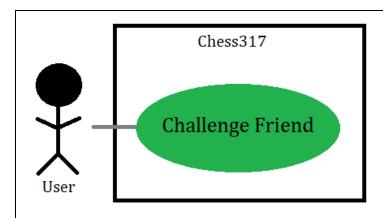
- 1. Fill in the username of buddy to be added.
- 2. Press the Add Buddy button.



The Open Buddylist use case lets the User open their buddylist.

Step-by-Step Description

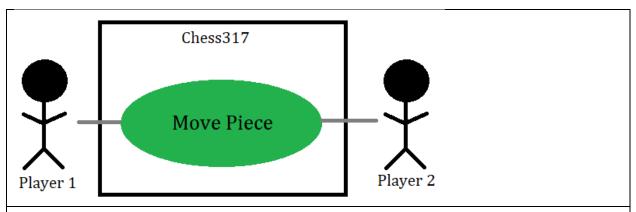
- 1. Click on the Open Buddylist button.
- 2. View list of buddies.



Brief Description

The **Challenge Friend** use case allows the User to challenge a friend to a game of chess.

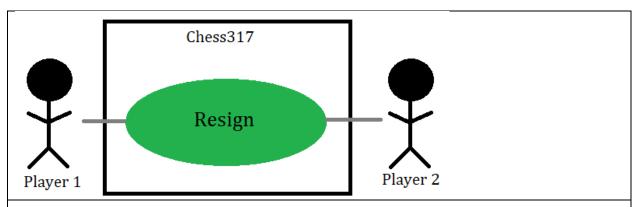
- 1. Click on Challenge Friend
- 2. Enter the friend's name.
- 3. Customize the game settings.
- 4. Click 'OK'.



The **Move Piece** use case is available once the Player is in a match. It allows the player to move the board pieces.

Step-by-Step Description

- 1. Click on the desired piece.
- 2. Click on the space of intended movement.

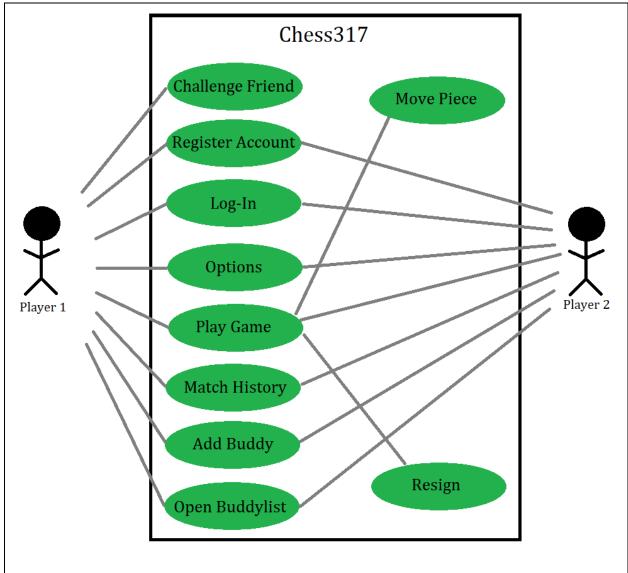


Brief Description

The **Resign** use case is available once the Player is in a match. It allows the player to forfeit the match, causing an instant loss.

- 1. Click on the Resign button.
- 2. Click 'Yes' when the confirmation box pops up.

3.1.2 Use Case Diagram



3.2 External Interface Requirements

Chess317 will use a graphical user interface consisting of buttons that allow the user to navigate menus. The software will be developed on 1920x1080p resolution screens, but also supports other resolutions as well.

Chess317 can run on Windows, Mac, and Linux, as long as Java is installed, on any desktop or laptop computer. Chess317 will not be supported for tablets or mobile devices.

3.3 System Features

Chess317 will feature basic chess functionalities such as:

- Specific piece movement patterns
- Capturing
- Castling
- Promotions
- En passant
- Check and checkmate

The extra functionalities include:

- Recorded match histories
- Account creation
- Options feature to customize the game experience
- Both online and offline play
- · Buddylist feature for online matches

3.4 Nonfunctional Requirements

- Must be able to function without an internet connection
- The game pieces must move in their specified pattern
- The game should be compatible with Windows and Mac operating systems
- The user interface should be clean and simple to understand