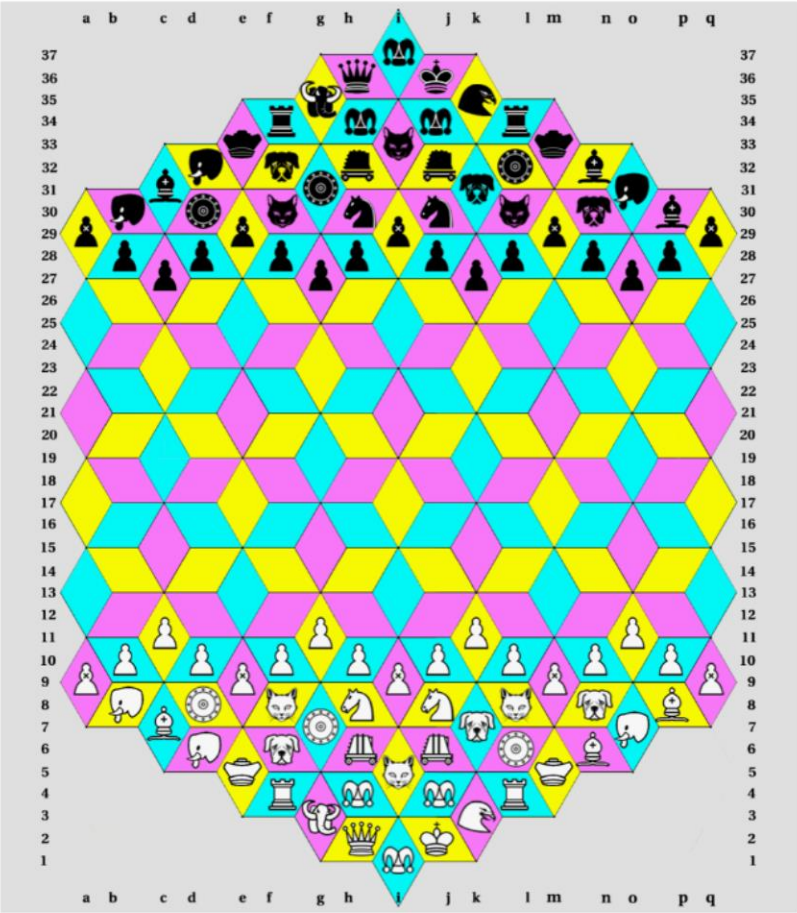
RHOMBICHESS

PROJECT DESCRIPTION



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Chess has a rich history tracing back to the 6th century, and today it's played worldwide. As students intrigued by the game of chess, we were very eager to learn more about a chess variant with fresh new board rules, new pieces, and even a new board type. This is a project worth doing as this variant can bring a fresh challenge to a traditional game, promoting a "what if" mindset to the classic game and ruleset. To see this new variant succeed, we plan to build a platform where the game can be played between two people and can have its settings easily changed to offer a unique experience every match. Making this variant stand out can promote a sense of community which enables people to form new connections.

The purpose of this application is to introduce a chess variant that has special rules and pieces which could be challenging for even some chess enthusiasts as it forces the player to see the chessboard from various angles. It is significantly different from a traditional chessboard in that it is a variant chessboard that is made up of rhombuses instead of squares (refer to the image on the cover page). This chess variant is intended to encourage the growth of the players' problem-solving skills as well as their overall chess skills. It could also be a platform for social interactions as we intend to host this game online.

Primary stakeholders include our supervisor and the users/players. Our supervisor will oversee the whole project, provide resources and ensure that the project aligns with its goals and objectives. They have a vested interest in the project's success. The users/players are fundamental stakeholders as they will be the ones who interact with the project daily. Their preferences, needs and feedback will shape the game's design and development. The secondary stakeholders include designers, developers, and testers working together to bring the supervisor's vision to life. The tertiary stakeholder is the chess community – while not directly involved in the project, their interest and enthusiasm about it is an integral part of its potential success.

This will be a full-stack application that will allow users to play the game online in real-time across a variety of devices. There are 16 distinct pieces and 47 pieces per side. These pieces are expected to move around the board and interact with each other based on predefined rules. The user can play against themselves or another player and choose to set a timer for their moves. When a user selects a piece, possible moves are highlighted, and the user must confirm the final position of the piece. Captured pieces are displayed on the interface. Instances of check will be noted, and instances of checkmate will prevent further play. Two major goals will be to have a system where the players can pass notes and the ability for a player to save a game.

Using a project management tool like Jira and Git for code collaboration, we will break down the game requirements into smaller tasks, leveraging our variety of unique skills. We envision using either Python or C++ for the backend logic that will determine the state of the game. We will opt for frontend languages and libraries that will allow us to save time – such as JavaScript and React bundled with a design system such as MUI/Tailwind. Additionally, we will employ Figma to design the game board and the various pieces that our game requires. Using NextJS or another abstracted framework will allow us to save time and focus on the logic of the game instead. To streamline deployment, we will host the app on a service designed for our framework – such as Vercel for NextJS. Regardless of the tools we end up utilizing, we will make sure to leverage the various skills and experiences our team members bring to the table to implement this complex app.