

# Vision Document

Kingdomino

Iteration - 1

## Introduction

In this project, we aim to build a digital version of the Kingdomino board game, allowing players to play it on their digital devices.

## Problem Statement

Kingdomino is a classical board game, however, a digital version does not exist. This means players would have to physically purchase the game to play it. Kingdomino is designed to be played by two to four players; hence, this means single players would not be able to play it. Also, being a board game, there is no means to save the current game's progress and play it later. Finally, the board game approach makes the game very limited and not open to changes/updates to meet the current world needs and demands (E.g., we cannot address special accessibility needs such as color contrast). Building a digital version solves all of these concerns, as players can now download and play Kingdomino on the go! We also introduce the computer player, removing the minimum player limitation. Being digital also means that players can now save the progress of their game and play it later, whenever they want to. Finally, building a digital version improves the scope for future updates, and it also aids in providing special accessibility needs, making Kingdomino enjoyable for all.

## Stakeholders and key Interests

Stakeholders	Key Interests
Player	Play Kingdomino with other players and/or the computer player.
IT and Maintenance staff	Perform maintenance, update and improve the game accordingly.
Parents and/or family	Make sure (where applicable) their children/family members play and enjoy the game within their respective boundaries.
Kingdomino Investors	Ensure the digital version is fully functional and mimics and enhances the playing experience.

## User and user-level goals

User	Goals
Player(s)	Run the game, set up the game, load the game, save the game, exit the game, delete/discard a game, play the game, choose a difficulty level, choose the number of players, choosing the accessibility options, view progress on the game, view final scores, view the rankings.

## Summary of System Features

- The system shall allow running Kingdomino.
- The system shall allow the saving of a current game.
- The system shall allow the loading of a saved game.
- The system shall allow the deletion of a saved game.
- The system shall allow the creation of a new game.
- The system shall allow exiting a current game, allowing the user to either save the progress or discard it.
- The system shall allow choosing the number of computer players and their difficulty.
- The system shall allow choosing the accessibility needs and adjust accordingly.
- The system shall coordinate and control the game, allowing players to take their respective turns, choose their board pieces and build their separate kingdoms.
- The system shall also prevent and notify players of any invalid moves.
- The system shall calculate the standings when the game is completed and display the rankings accordingly.

## Project Risks

- Making sure the kingdom remains 5\*5 might prove to be difficult because the starting piece does not necessarily have to be in the centre. The player can build their kingdom in any orientation of their choice, provided it is a 5\*5.
- A board piece could be added either horizontally or vertically. Making sure the adjacent pieces are compatible could also be challenging simply because there could be more than one way to place that piece. Hence, we would need to account for all such possibilities. If a piece is not compatible, we would need to discard it.
- Designing the different computer player difficulty levels might also be challenging because of the limited knowledge base on it. In addition, there is no set definition of the difficulty levels; hence, we would need to define the difficulty levels and account for them accordingly.