

Future Networking of The Game

In order to implement the networking of the game, we need to consider if changes are needed in the user interface of the game, how the game state is stored and how the game controls whose turn it is.

We would need to add an user interface for a player to create an online session of the game and invite others to join it. In addition to the the player settings that the game already shows before starting a new game, this interface will also give the player the opportunity to invite other players using some sort of unique id. Apart from that, we will also need to add user interface for players to join the session that they are being invited to. This interface will show the game mode being played, number of players and a list of other players who are invited to the session before giving the players the option to join the session or decline the invitation.

Once the user interface to connect the players is sorted, we would need to implement how to constantly share the game state between the players. The game state is currently stored in the KingDomino class which is also responsible for keeping track of whose turn it is. This class also stores game related information of all the players in the game. If we continue with this approach then the content of the KingDomino class in each player's computer will need to be shared with all the other players. We can take two approaches in implementing this. In the first approach, each player's computer will be responsible for sending data to and receiving data from all the other players in the session after each turn. Another way to implement this would be by making the computer, which created the gaming session, responsible for holding the game state, receiving updated data from other players' computers and sharing it with all the players in the session. The computer which started the session will essentially act as hub. After a player has played their turn, the player's computer will pass the data to the hub. The hub will then use the data to update it's own KingDomino class and also pass it to other computers to update their class.

Finally, we will need to implement how the game controls whose turn it is in an online session. As mentioned before this is currently controlled by the KingDomino class. In our approach of networking the game, the data from the KingDomino class in each player's computer is shared with all the players in the online session, therefore, the the KingDomino class can continue to control whose turn it is, starting a game and ending a game.