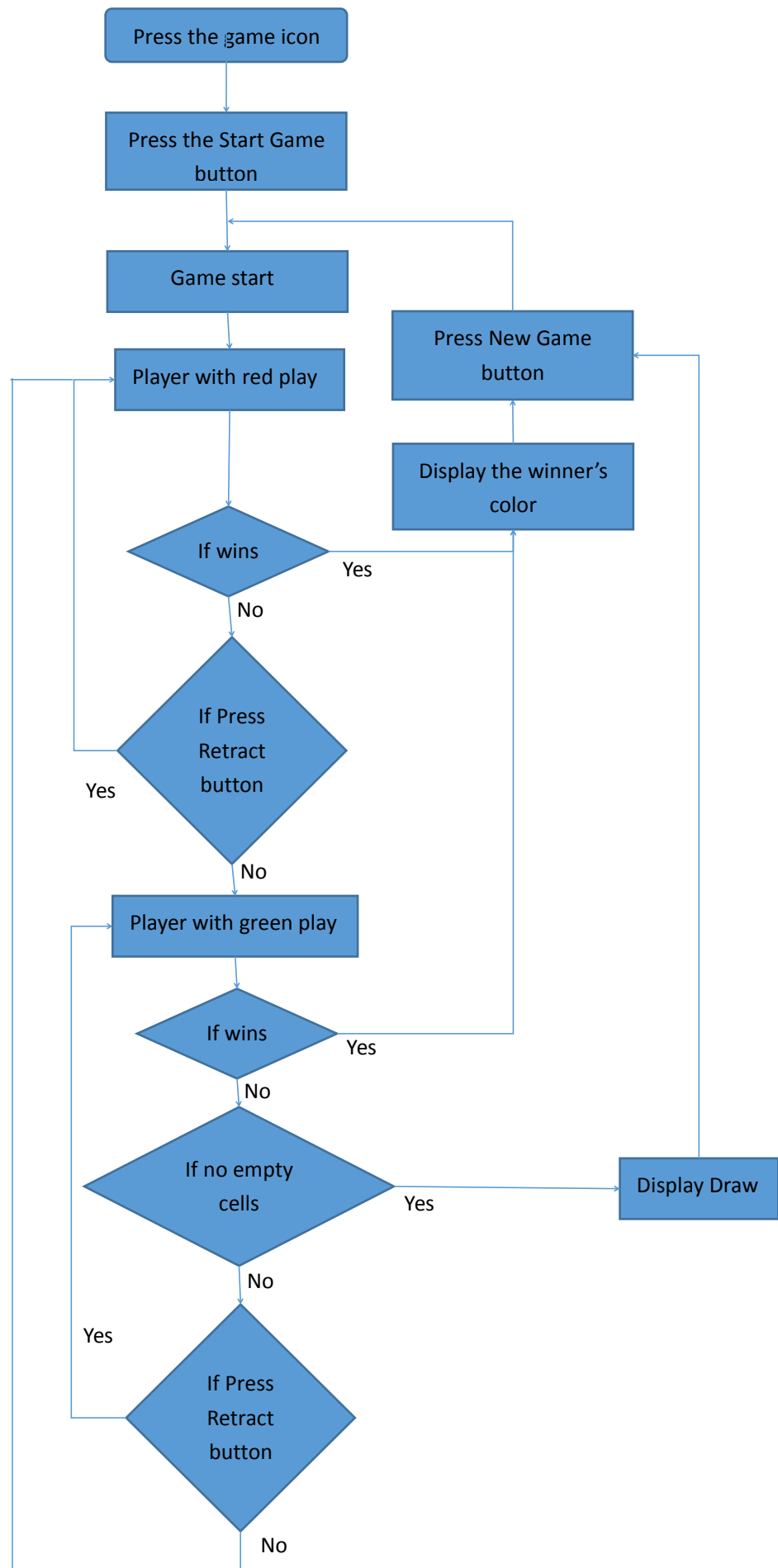


Game flow:



Design:

There are two pages. The first page contains two textviews including name and university number for identification purpose. This page also provides a button “Start Game” for starting the game. The second page is the game main frame which will be loaded when the “Start Game” in the first page is pressed.

In the second page, the layout contains three main parts. Each part is uses LinearLayout as the layout. The upper one contains two bottom called “New Game” and “Retract”. When the “New Game” button is pressed, it will restart the game. The “Retract” button is used to retract the play. The button can only be pressed when there are chess in the board and there is no winner. The middle part is a 6 (rows) * 7 (columns) board. The player can place the chess on it. And the bottom one is used to display who’s turn. When the winner comes out, it would display the winner’s chess icon and also include the total movements of this round.

Implementation:

In the chess board, I use 2-D array (ivCell[6][7]) to represent the board and use ImageView to display the image. In the for loop, I set listener for each of the ivCell. Once it is clicked, it would check the column which the cell is and find if there is an empty cell in the column. If has, it would set the lowest cell’s value to 1 or 2 represents it is occupied by red or green chess. And the it would check the cells around the chess just placed to find if there are 4 pieces or more same color chess connected. If it does, then display the winner color and change the cells’ images into another one. If there are no empty cells at the end, then display “Draw”. When check whether the player wins, I write a CheckWinner() function. In this function, it would check four directions, and in each direction, it checks 6 cells near the cell player just places. In these cells, if there are 4 or more continuous same value then the player wins. Else keep playing. And if the player press the “Retract” button, it would retract. In the retract function, I set an ArrayList called moveList to record all the movements. When the player retract, it would check if there are chess in the board, if no chess, it cannot retract, else it would retract, and get the last value in the moveList, set the cell to empty and remove the value in the moveList. Then the player can play another one. If the player press the “New Game” button, then it would call the init_game() and play_game() function which would initiate the game.

Features:

There is a background music playing when the game begins, and you can turn it off.

When the winner wins, it would vibrate. And the bottom part would display the total movements.

Reference:

In the design of the chess board, I reference fivechess game and learned that it uses “for loop” to set listener on each cell.

And learn from Youtube tutorial video “Android Tutorial for Beginners”.