COMP6710 Assignment2

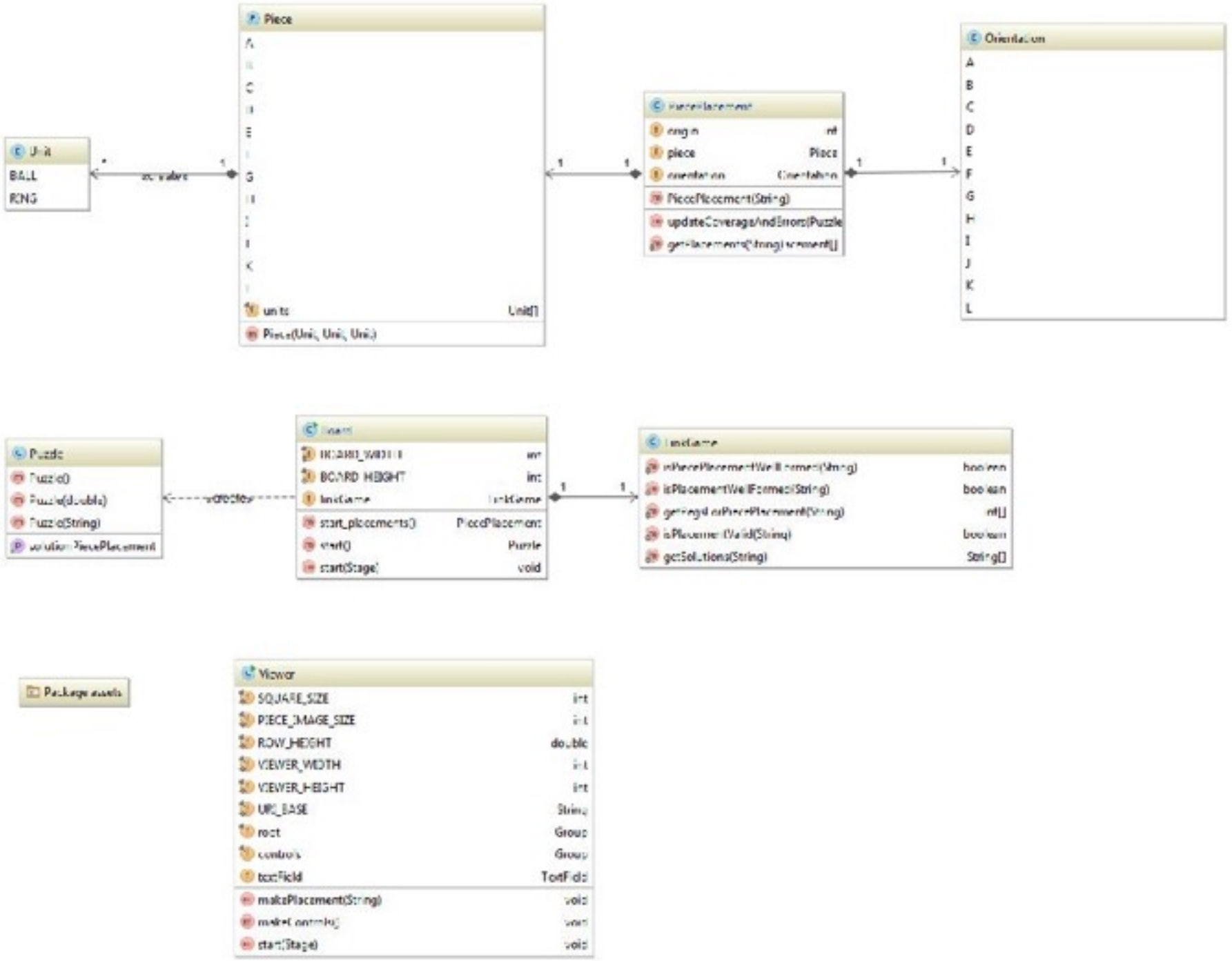
Group Thu11d

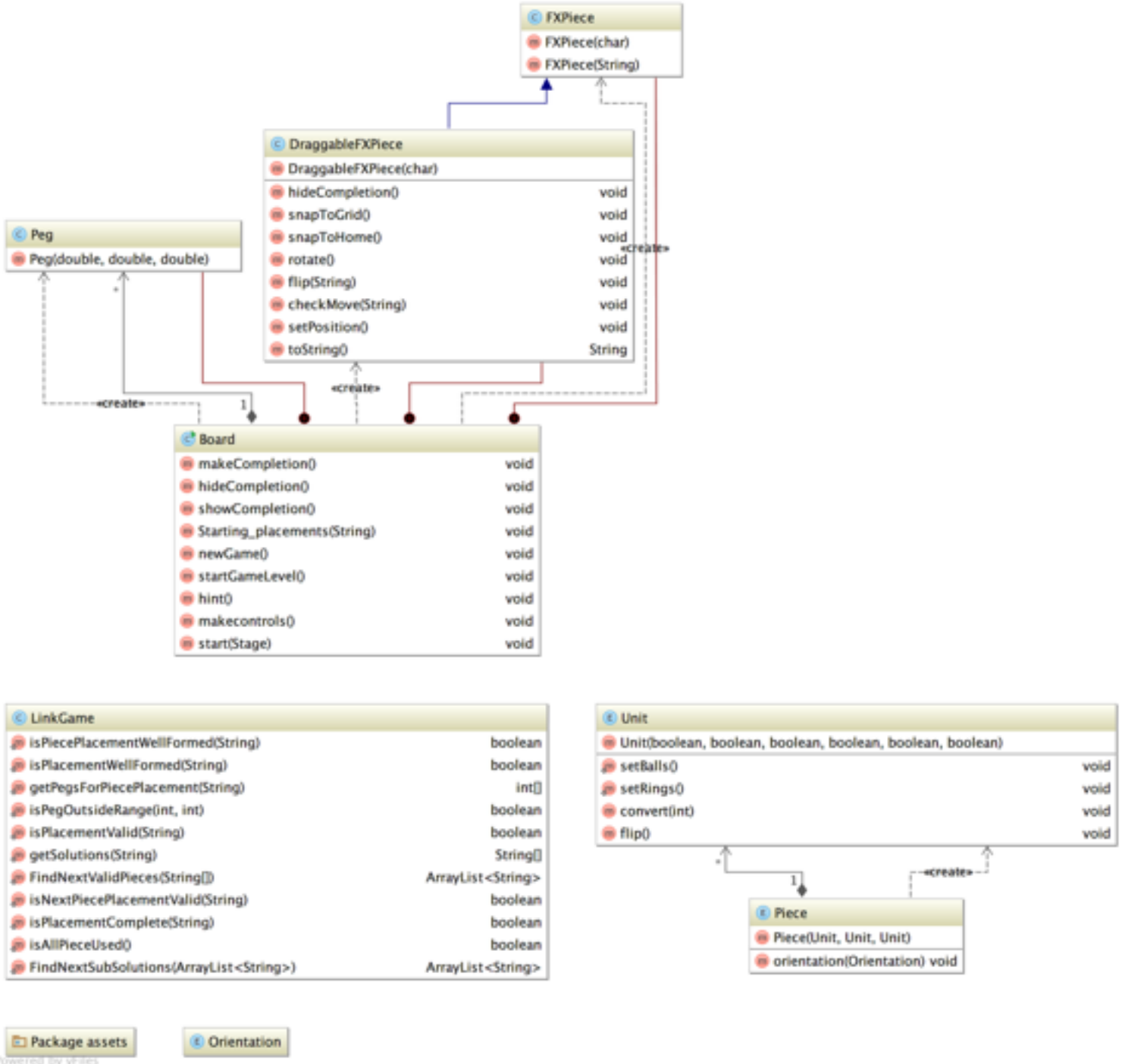
Lei Huang u6041747
Wei Wei u6137273
Yuqiang Li u5693650

Summary of content

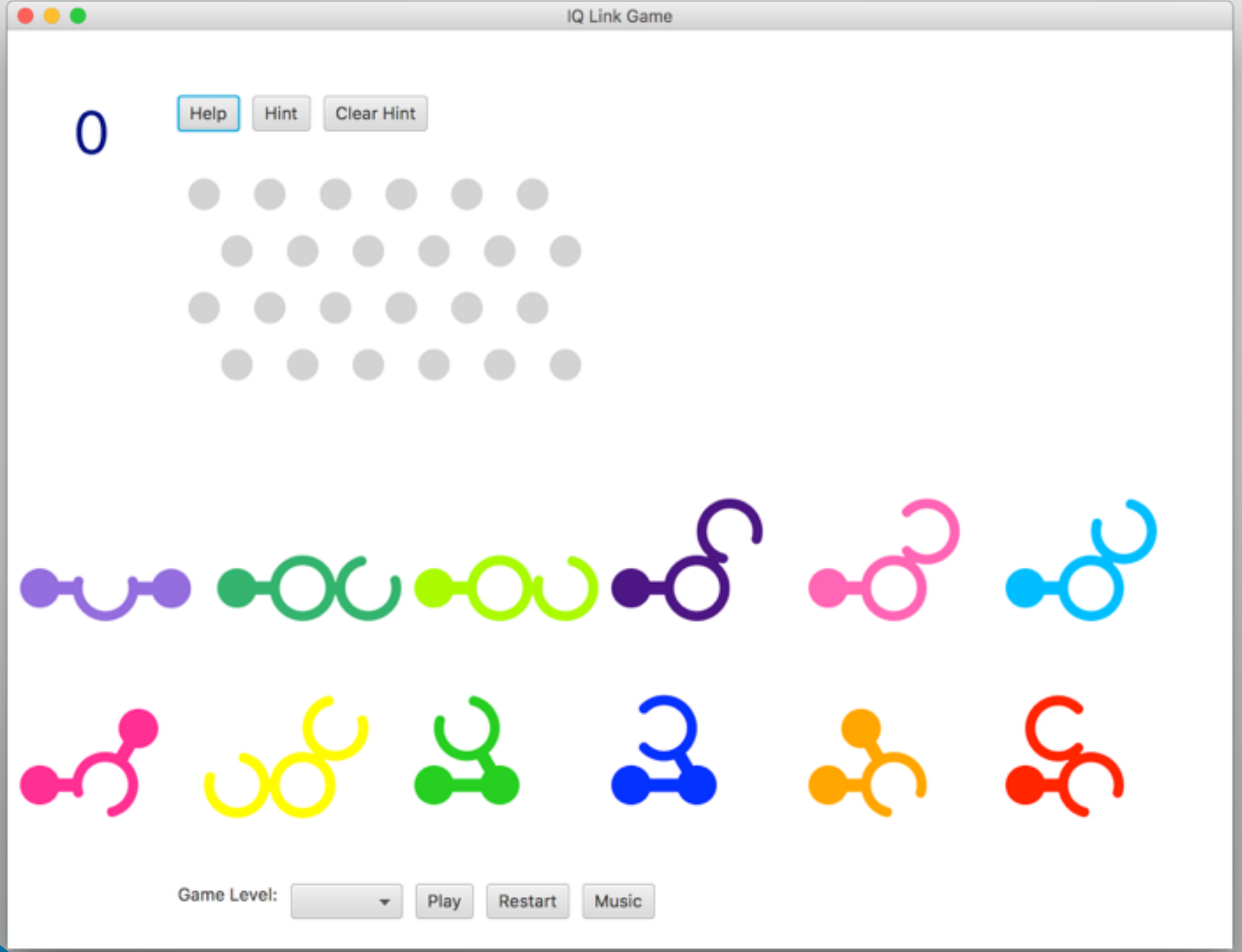
- Use a waterfall methodology to develop our game:
  - Get the requirement first
  - Design the UML diagram
  - Implement the function
  - Develop our program from tests
  - Build game UI
  - Improve user experience

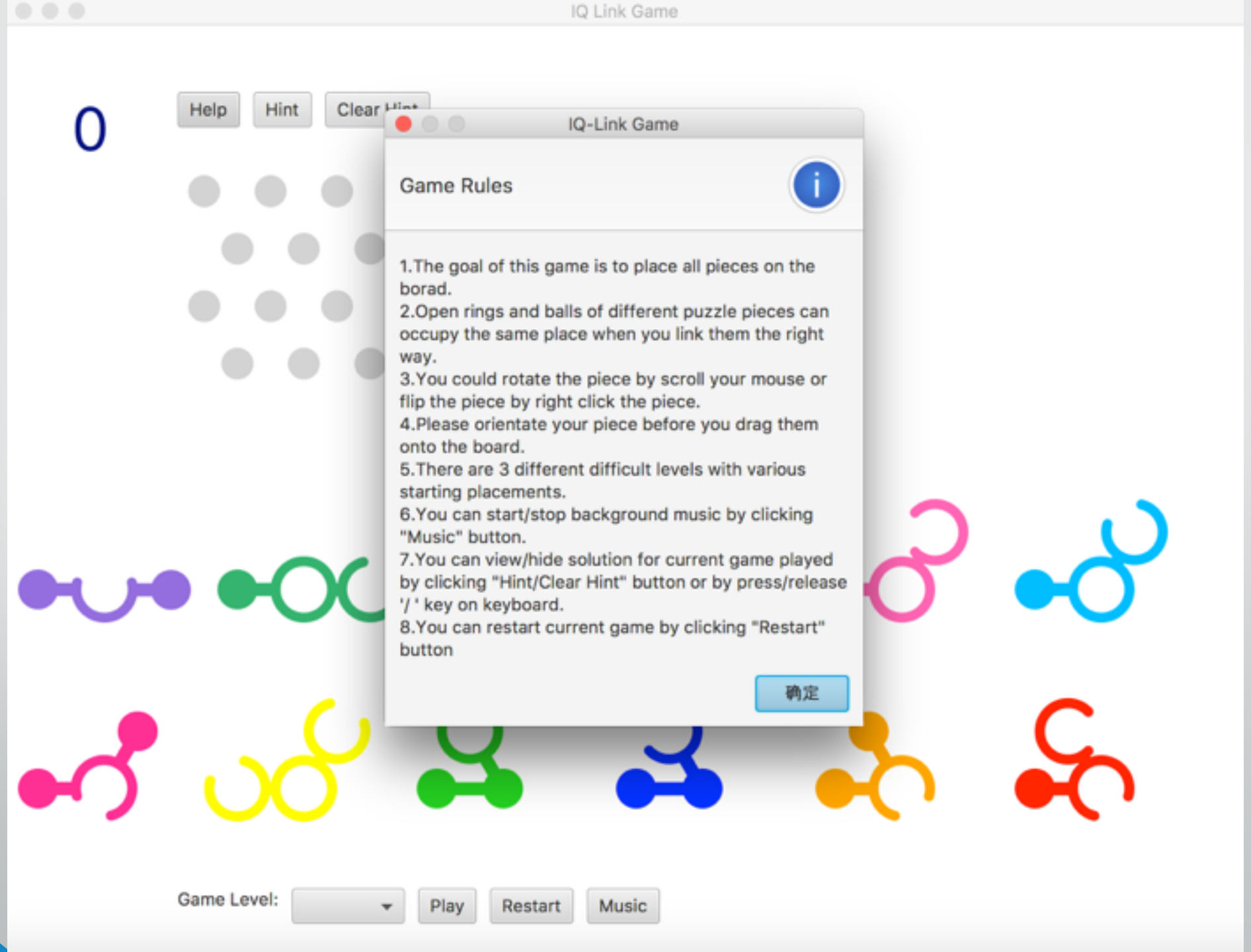
Class Diagram

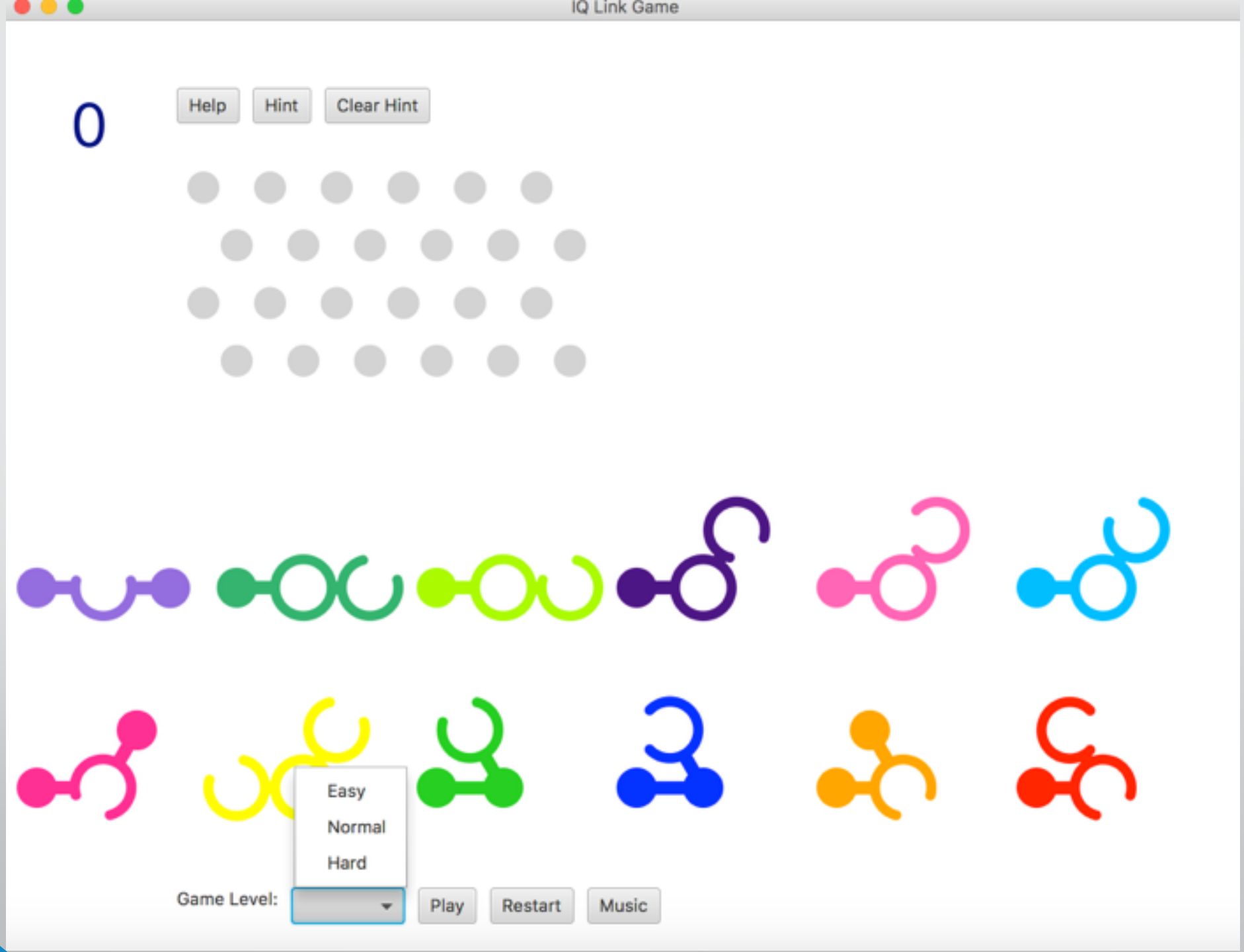

Piece
Unit
BALL
RING
Orientation
A
B
C
D
E
F
G
H
I
J
K
L
Puzzle
Viewer
SQUARE_SIZE
PIECE_IMAGE_SIZE
VIEWER_WIDTH
VIEWER_HEIGHT
URL_BASE
root
controls
textField
start(Stage)

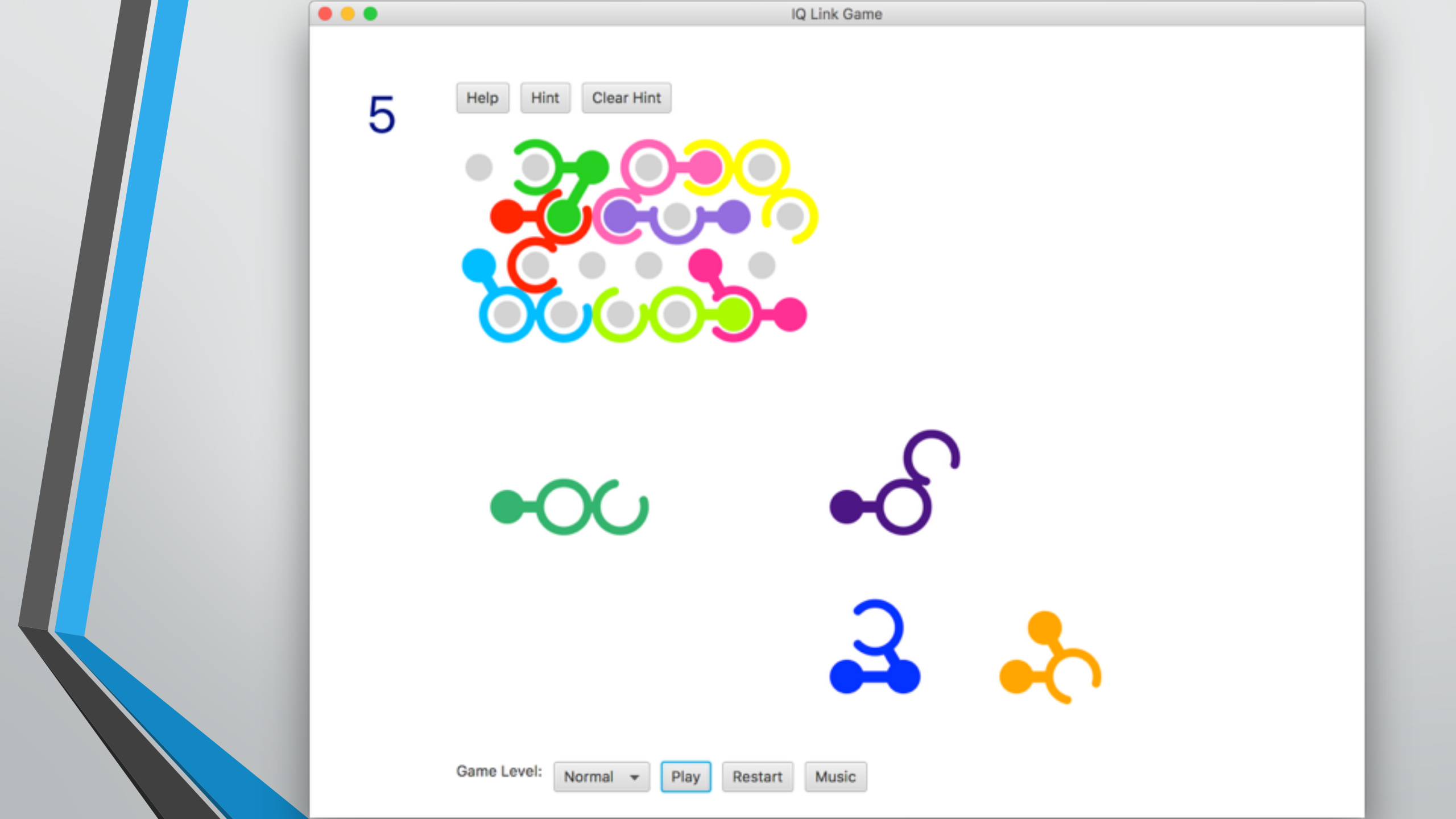

FXPiece
FXPiece(char)
FXPiece(String)
DraggableFXPiece
DraggableFXPiece(char)
hideCompletion() void
snapToGrid() void
snapToHome() void
rotate() void
flip(String) void
checkMove(String) void
setPosition() void
toString() String
Peg
Peg(double, double, double)
«create»
«create»
«create»
1
*
Board
makeCompletion() void
hideCompletion() void
showCompletion() void
Starting_placements(String) void
newGame() void
startGameLevel() void
hint() void
makecontrols() void
start(Stage) void
LinkGame
isPiecePlacementWellFormed(String) boolean
isPlacementWellFormed(String) boolean
getPegsForPiecePlacement(String) int[]
isPegOutsideRange(int, int) boolean
isPlacementValid(String) boolean
getSolutions(String) String[]
FindNextValidPieces(String[]) ArrayList<String>
isNextPiecePlacementValid(String) boolean
isPlacementComplete(String) boolean
isAllPieceUsed() boolean
FindNextSubSolutions(ArrayList<String>) ArrayList<String>
Unit
Unit(boolean, boolean, boolean, boolean, boolean, boolean)
setBalls() void
setRings() void
convert(int) void
flip() void
«create»
1
*
Piece
Piece(Unit, Unit, Unit)
orientation(Orientation) void
Package assets
Orientation

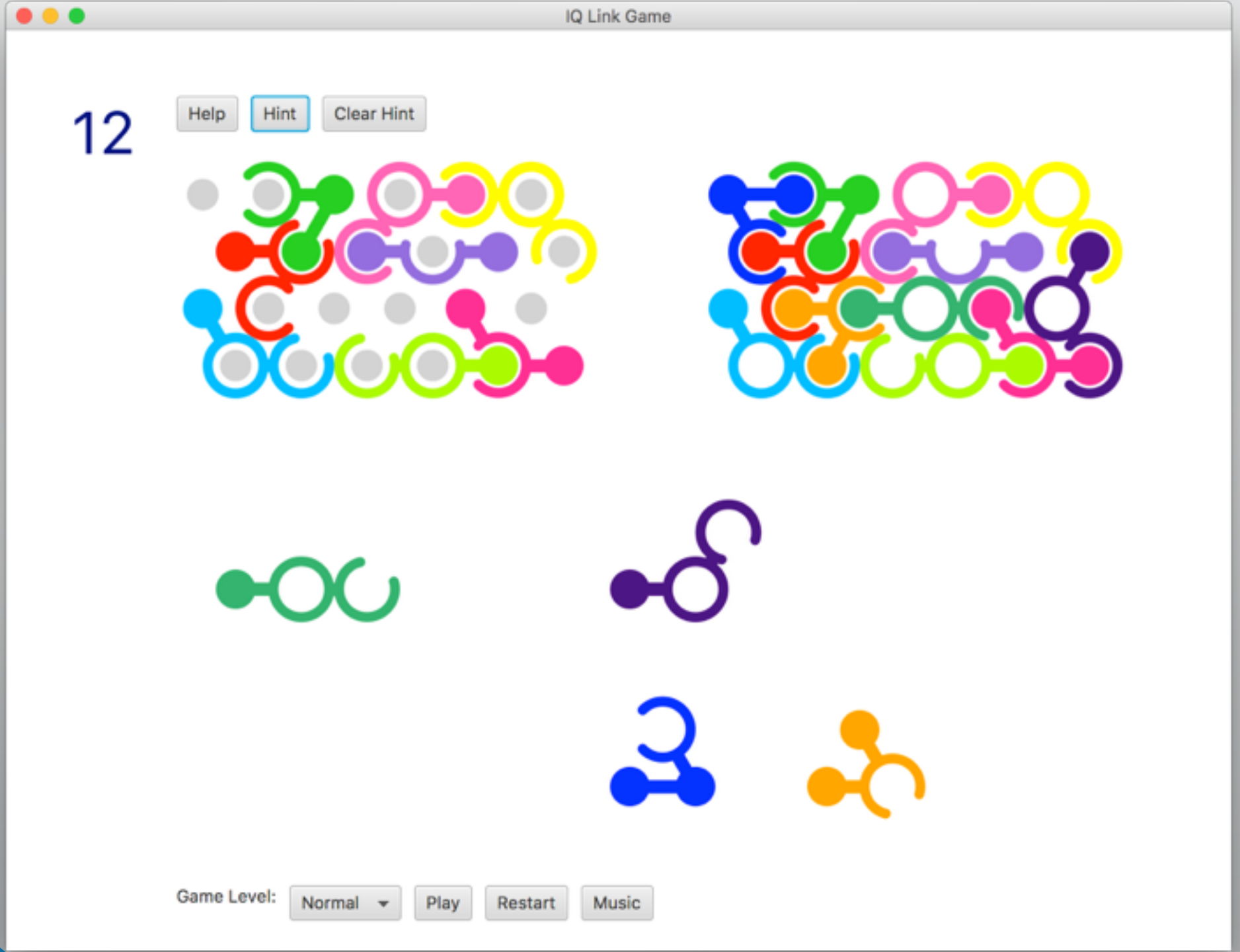
Screen of games


IQ Link Game
0
Help
Hint
Clear Hint
Game Level:
Play
Restart
Music


IQ Link Game
0
Help
Hint
Clear Hint
IQ-Link Game
Game Rules
1.The goal of this game is to place all pieces on the borad.
2.Open rings and balls of different puzzle pieces can occupy the same place when you link them the right way.
3.You could rotate the piece by scroll your mouse or flip the piece by right click the piece.
4.Please orientate your piece before you drag them onto the board.
5.There are 3 different difficult levels with various starting placements.
6.You can start/stop background music by clicking "Music" button.
7.You can view/hide solution for current game played by clicking "Hint/Clear Hint" button or by press/release '/ ' key on keyboard.
8.You can restart current game by clicking "Restart" button
确定
Game Level:
Play
Restart
Music


IQ Link Game
0
Help
Hint
Clear Hint
Easy
Normal
Hard
Game Level:
Play
Restart
Music


IQ Link Game
5
Help
Hint
Clear Hint
Game Level:
Normal
Play
Restart
Music


IQ Link Game
12
Help
Hint
Clear Hint
Game Level:
Normal
Play
Restart
Music

IQ Link Game

34

Help | Hint | Clear Hint

Well Done!

Game Level: Normal | Play | Restart | Music