Deliverable 2

Group 13

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Class #1 - Player Class

By Zsanett

*Design Document:* The Player class holds the information of the Player, including an array containing its Pieces (this will be implemented to determine the remaining number of pieces of a player later on) and the Player's colour.

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| Player |
| + MAX\_PIECES: static final int |
| + playerColour:Colour |

*Test Document:* The PlayerTest file initializes two new players to ensure they are correctly initialized to the proper colour.

Class #2 - Board Class

By Dylan, Daniel

*Design Document:*

The function of the Board class is to create our main player board which our game will take place on. We set our number of rows and our number of columns needed to create our board. We then create an array of Piece objects, which holds a single instance of a Piece (or the null instance). Board also holds the methods to move pieces around the board, and will eventually contain more advanced moves such as jumping and taking pieces.

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| Board |
| + BOARD\_ROWS: static final int  + BOARD\_COLUMNS: static final int |
| + initializeBoard(): Piece()  + moviePiece(Location start,Location end):void  + checkSquare(Location square):Piece  + printArray():void |

*Test Document:* We have created a test class for Board, which initializes our board and moves a piece across the board according to locations given, if the locations are valid. Currently we do not have any implementation of taking other pieces.

Class #3 - Piece Class

By James

*Design Document*: This class is the checkers Piece. It holds information on piece colour, along with King status. This is important to our game since once a piece becomes a king it has the ability to move forwards as well as backwards. This class will be used across almost every other class, and is designed for simplicity and functionality.

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| Piece |
| * king: boolean   + colour: Colour |
| + makeKing():void  + isKing():Boolean  + toString():String |

*Test Document:* We have created a test class for Piece, which generates new pieces (using both possible constructors), and ensures that they have been correctly generated. Kinging is also tested.

Extra Classes

By James

This enumeration class creates a way of organizing colours for our project, BLACK(1) or RED(2). Colour is held in instance variables for both the Player and the Piece classes.

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| Colour |
| * id : final int |
| + getID(): int  + fromID(int x): Colour |

This Location class holds X,Y values on the board in their desired position. This is used to keep a single location instanced and its coordinates paired.

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| Location |
| * xCoordinate : final int * yCoordinate : final int |
| + getX() : int  + getY(): int |