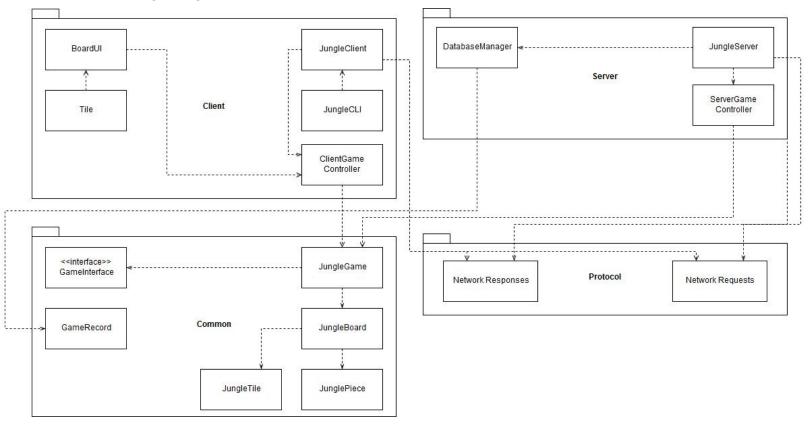# P4 Design Document

CS414 - And Yet it Compiles
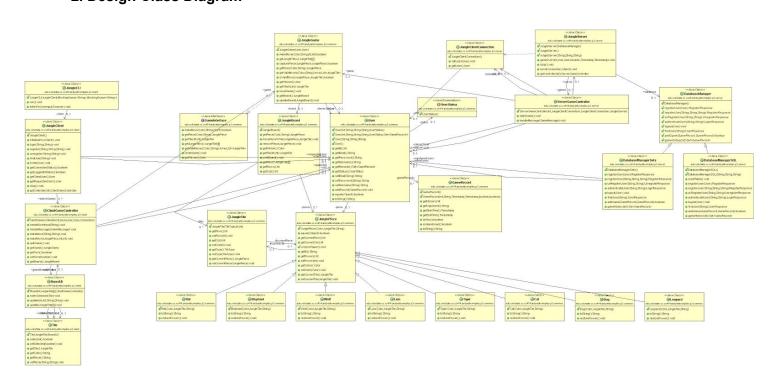
Laura South, Isaac Mauro, Brian Larson, Yan Wang, Duck Keun Yang

* High-resolution design class diagram can be found in the Github repository
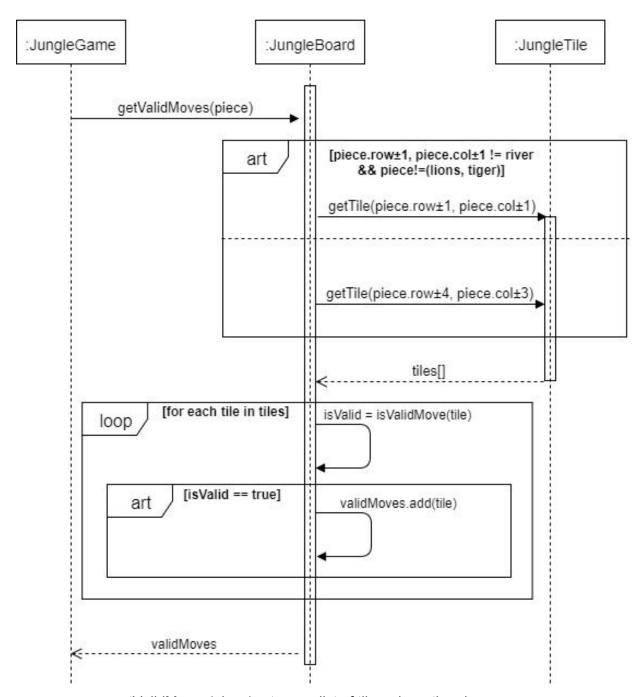
1. Package Diagram
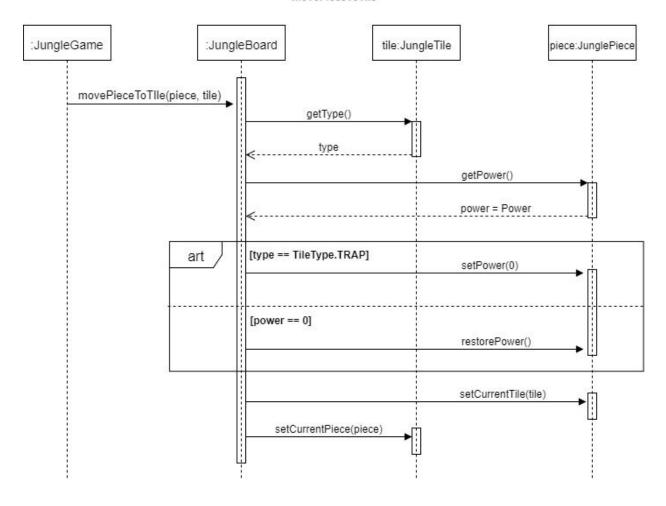

2. Design Class Diagram

3. Sequence Diagrams

getValidMoves

```
:JungleGame              :JungleBoard              :JungleTile

      getValidMoves(piece)
  ─────────────────────────►│
                            │
         art    [piece.row±1, piece.col±1 != river
                    && piece!=(lions, tiger)]
                            │
                    getTile(piece.row±1, piece.col±1)
                            │─────────────────────────►│
                            │
                            │
                    getTile(piece.row±4, piece.col±3)
                            │─────────────────────────►│
                            │
                            │          tiles[]
                            │◄─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─│

         loop   [for each tile in tiles]   isValid = isValidMove(tile)
                            │↺
                            │
               art   [isValid == true]   validMoves.add(tile)
                            │↺
                            │
         validMoves
  ◄─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ │
```

getValidMoves(piece) returns a list of tiles where the piece can move

movePieceToTile


```
:JungleGame          :JungleBoard         tile:JungleTile        piece:JunglePiece

movePieceToTIle(piece, tile)
                            getType()
                            type

                            getPower()
                            power = Power

        art    [type == TileType.TRAP]
                            setPower(0)

               [power == 0]
                            restorePower()

                            setCurrentTile(tile)

               setCurrentPiece(piece)
```

movePieceToTile(piece, tile) moves the piece to the tile within the JungleBoard

getPiece

:JungleGame	:JungleBoard	:JunglePiece

getPiece(color, id)

loop [for each piece in JungleBoard]

getColor()

pieceColor

getID()

pieceID

break [pieceColor == color && pieceID == id]

piece

getPiece(color, id) returns a piece based on the color and piece id