Flood-It!

Problem Statement: The need for a challenging strategy game that is:

- played on the go
- fun
- incorporates colors

Expected Users:

- Busy individuals who would like to play a strategy game in their “free time”
- Anyone who would like to play a fun short strategy game
- Us

User Journeys:

- Start Game
- Choose color scheme
- Choose difficulty levels
- Play the game
- Advanced:
    - Level play
    - Leaderboard (based on best time)

App Activities:

- Welcome activity
    - Play
    - Settings
    - Instructions
- Main Activity(Play)
- Settings Activity
    - Color scheme
    - Difficulty level
- Instructions Activity
- Win Activity
    - Replay
    - New Game
    - Back button

Levels:

- Easy: 22 steps, 3 colors
- Medium: 30 steps, 5-6 colors
- Hard: 36 steps, 7-8 colors

Back-end

Main Activity

- Properties
    - Button[] colorButtons
    - GridView boardView
    - Board board
- Methods:
    - onCreate()
    - createBoard()
    - floodGrid()
    - checkWon()
    - gameWon()

1. Default Board
    a. 2*2
    b. 2 colors(red and blue)
    c. numSteps =2

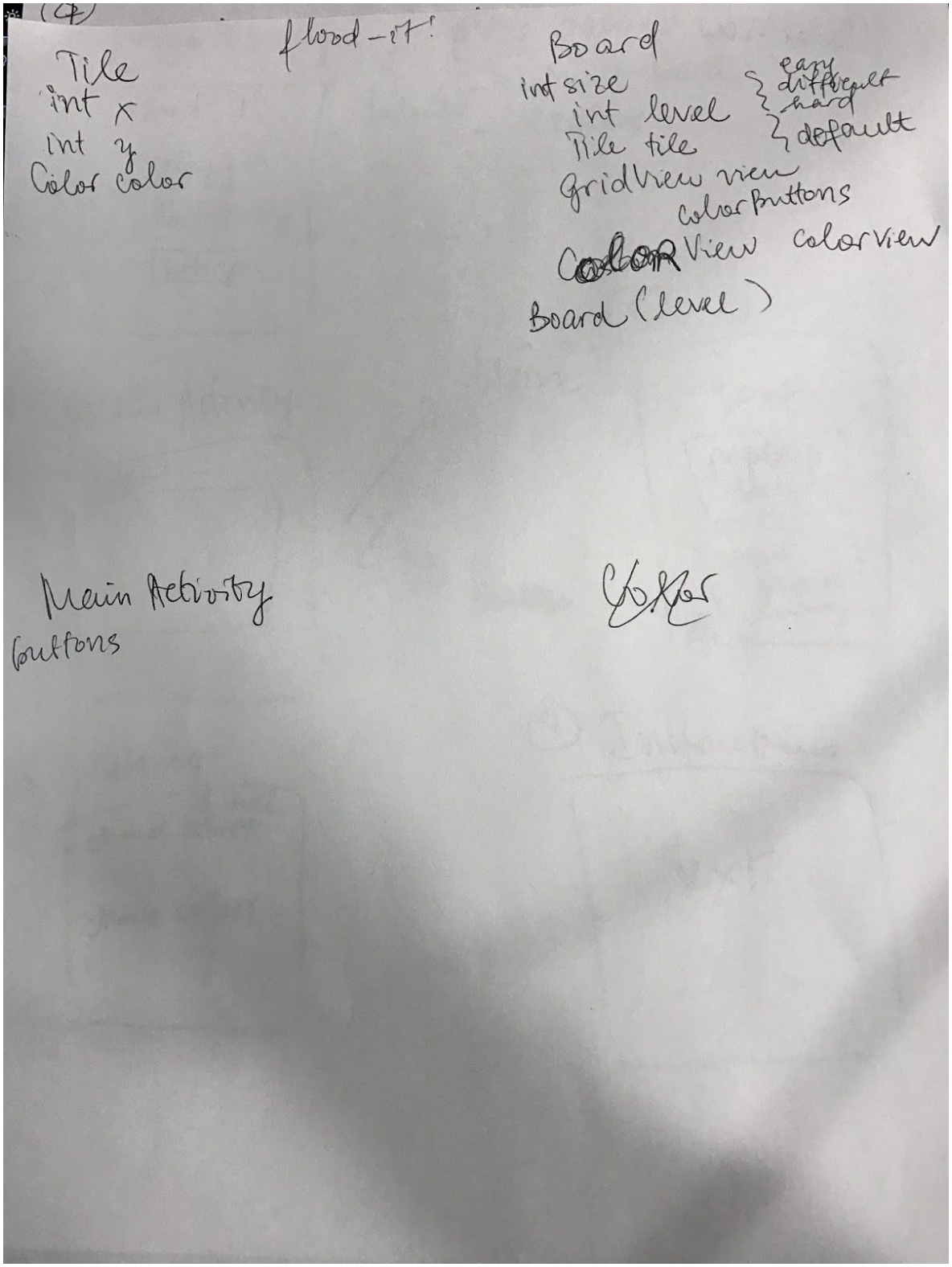
Tile

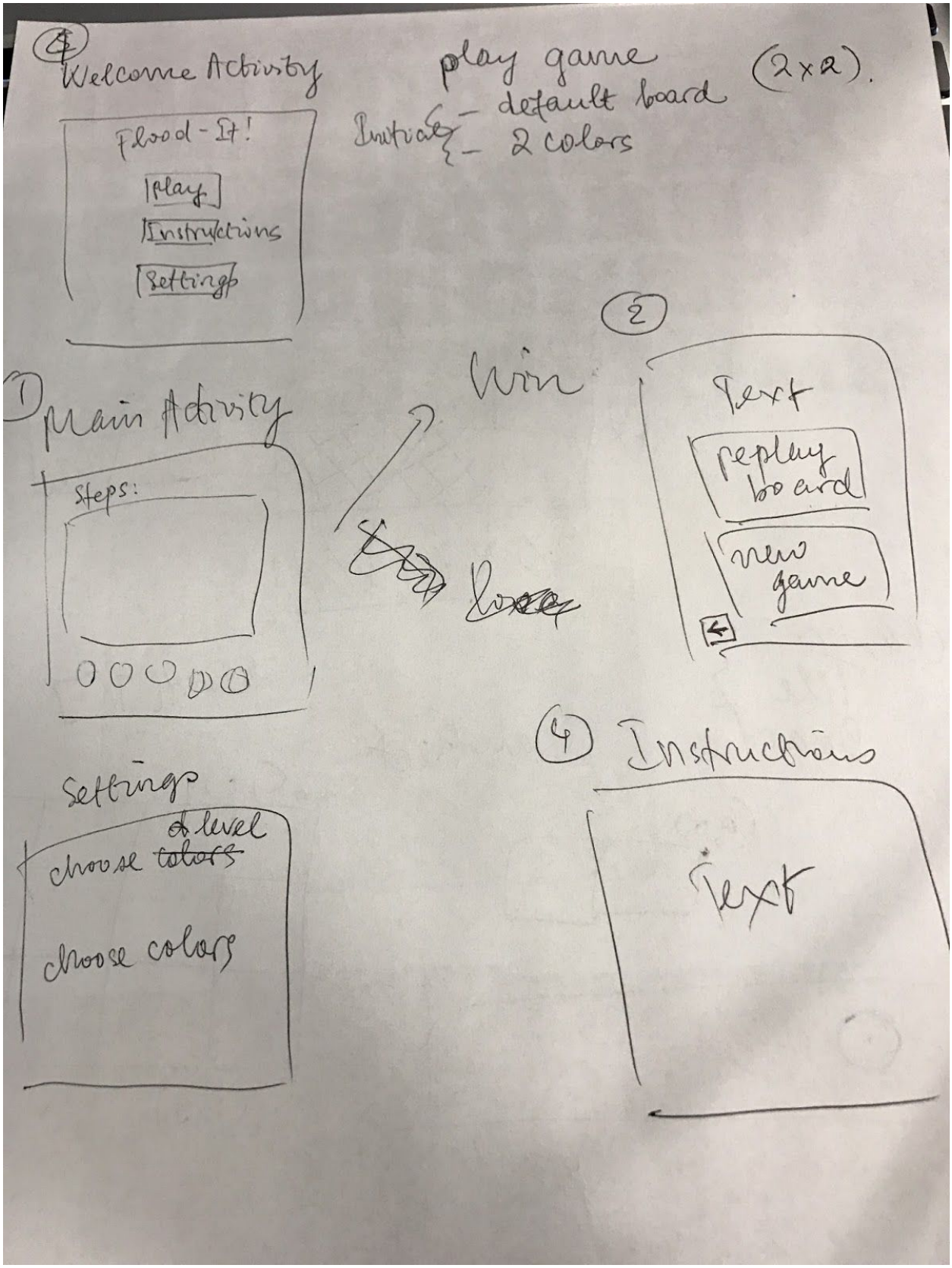
- **Properties**
    - Int x
    - Int y
    - Color color
- **Constructor**
    - tile(int x,int y,Color color)
- **Methods**
    - getColor()
    - setColor()
    - getX()
    - getY()
    -

Board

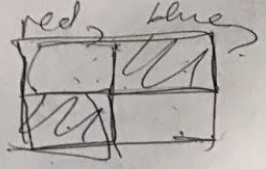
- Properties:
    - Int size
    - Level level: easy, medium, hard, default
    - Tile[][] tiles
- Constructor:
    - Board(level)
- Methods:
    - createBoard()
    - floodGrid() //fills color of upper left area with color passed it
    - checkWon()
    - setLevel() / or getLevel() from Parcelabel...

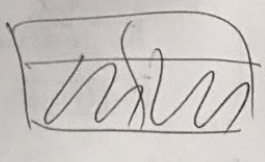
DESIGN DOCS

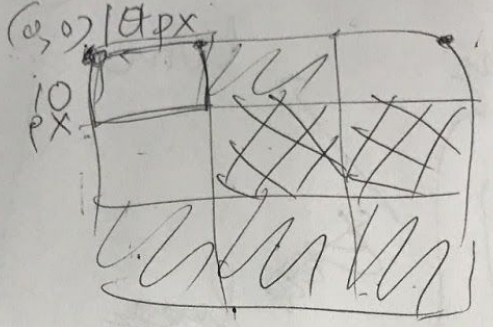

Tile
int x
int y
Color color
flood-it!
Board
int size
int level
Tile tile
GridView view
ColorButtons
ColorView colorview
Board (level)
easy
difficult
hard
default
Main Activity
buttons

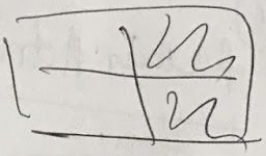

4
Welcome Activity
Flood-It!
play
Instructions
Settings
play game (2x2).
Initial
- default board
- 2 colors
1
Main Activity
Steps:
Win
2
Text
replay board
new game
Settings
choose ~~colors~~ level
choose colors
4
Instructions
Text

red → blue
adjacent to the top-left area
if blue
add to the area

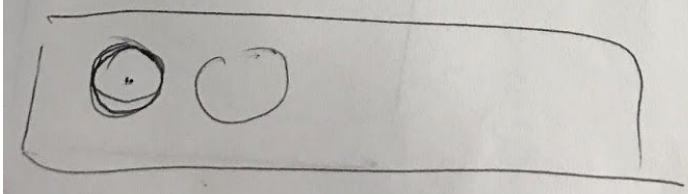
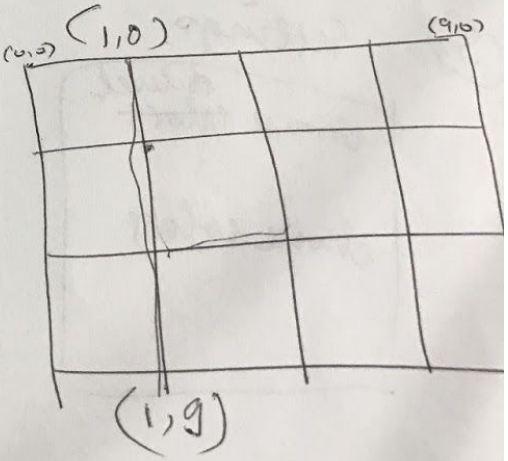








class:
Tile
Board

Board[][]

drawRect