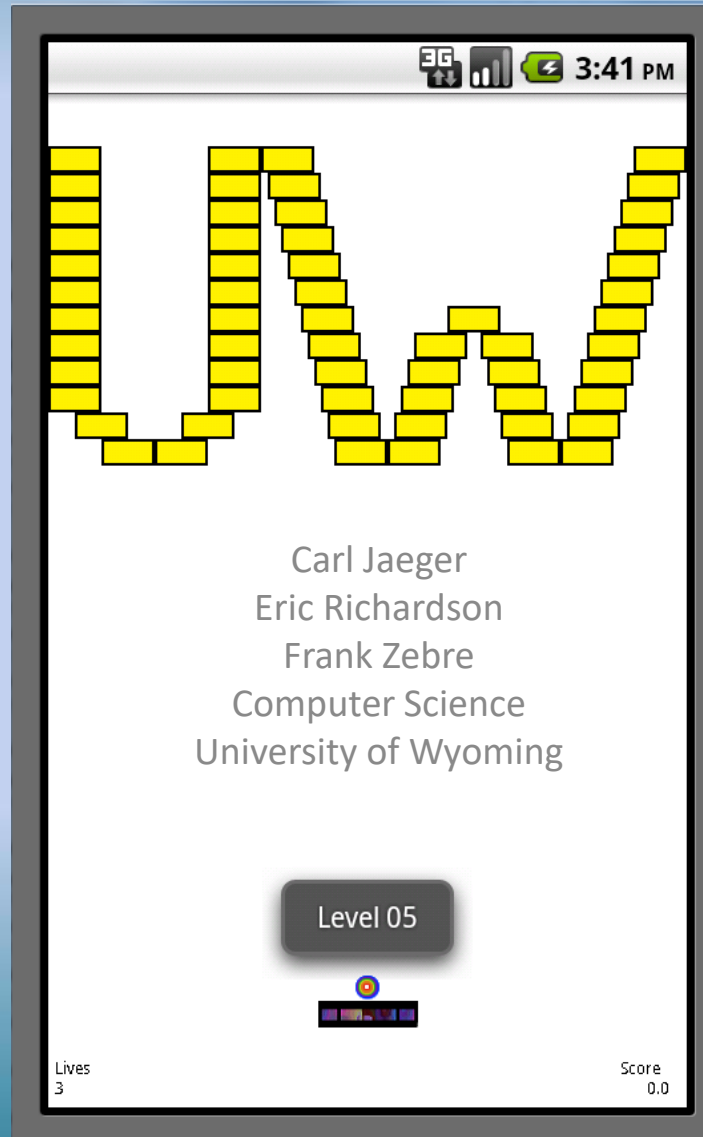


# Android Mobile OS: “Breakout” Application



# Target Application/Development

- Android API level 8
- Eclipse
- Tested on Droid 1 and Nexus One

# Concept

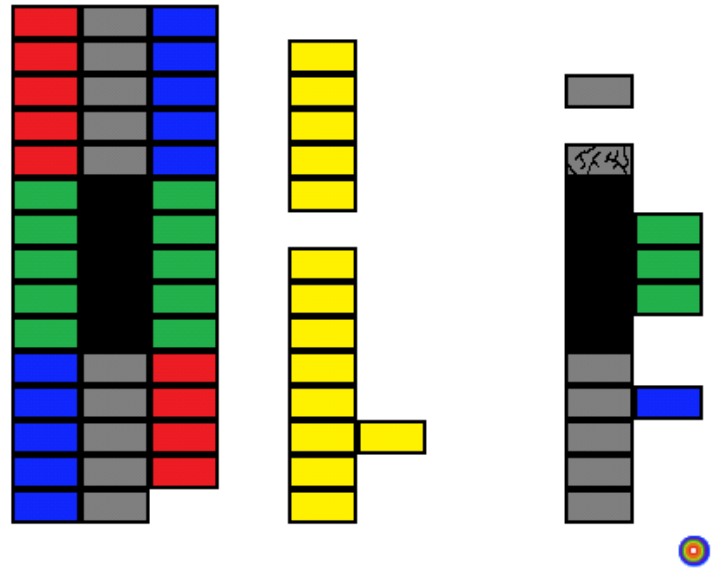
- Classic Breakout
- Idea's generated from old school NES games
- Something simple and easy to play
- Time killer

# !BREAKOUT!

Version 1.0

Play

Tutorial



Lives  
3

Score  
5445

# Construction

## Breakout\_Activity

Handles Activity specific functions

Menu Items stored here

Controls and initializes specific views



## Breakout\_VIEW

Controls High level Game Logic

Acts as the placeholder view for the game  
thread

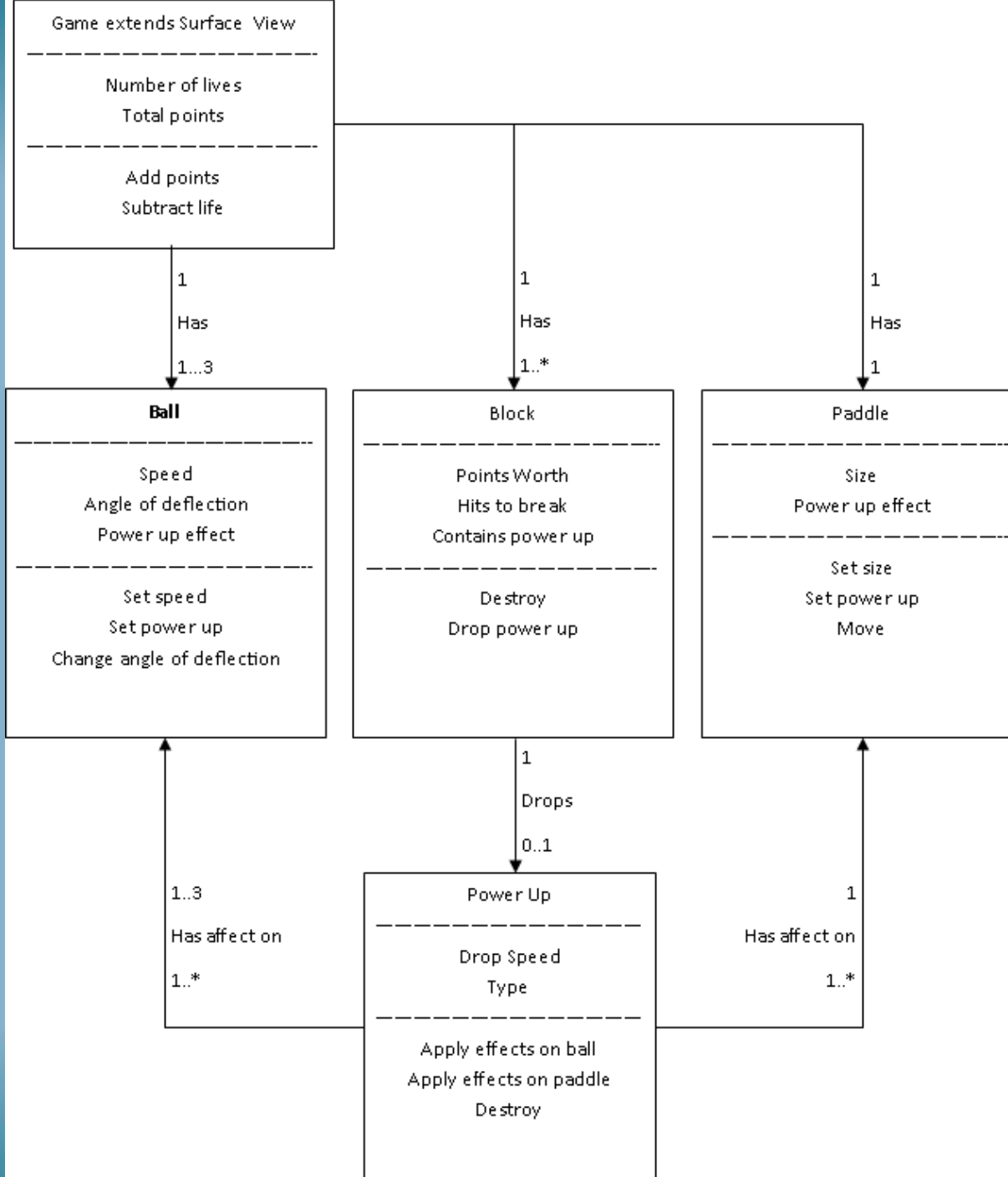
Controls onTouch events for the game

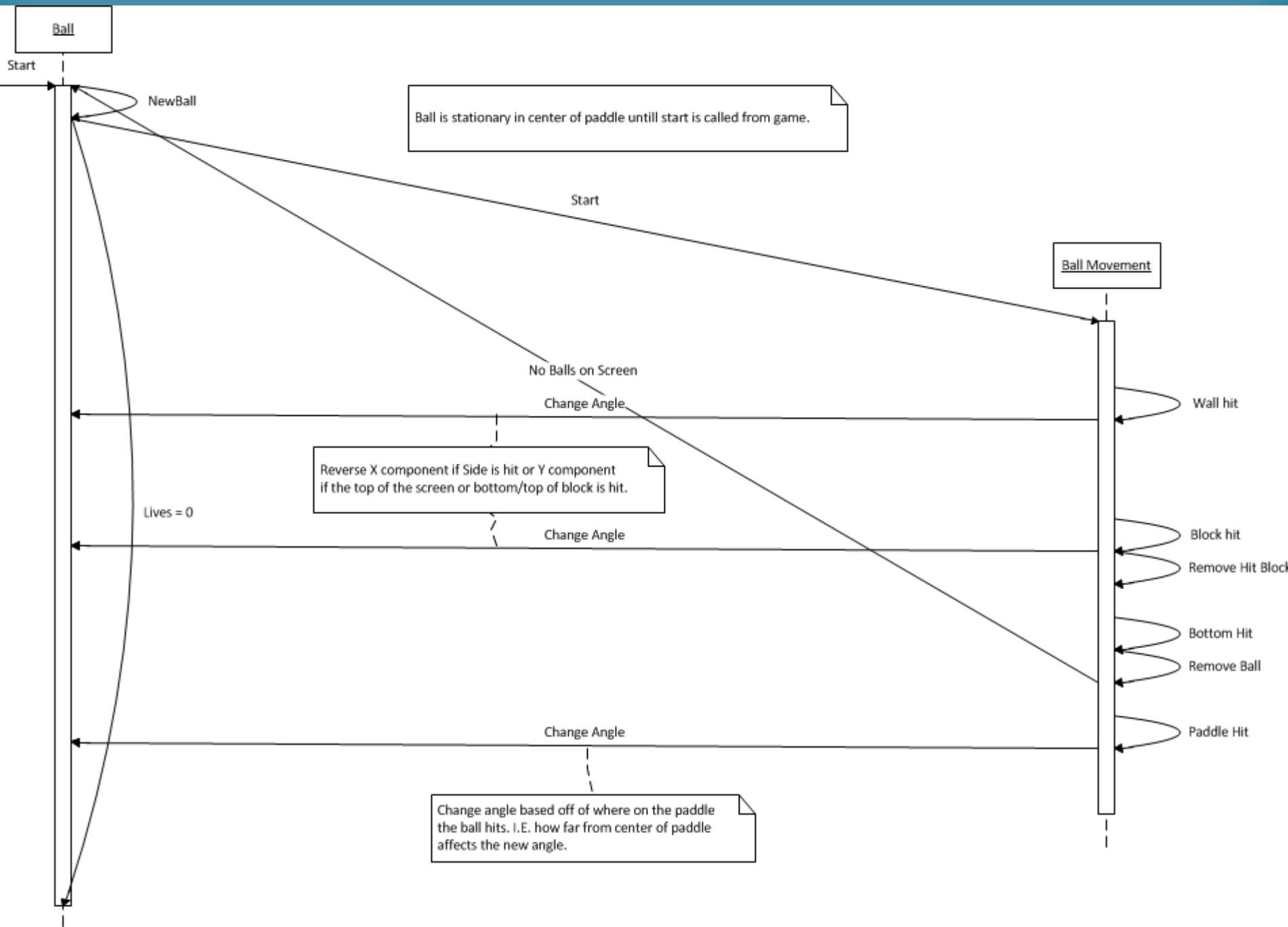


## Game\_Thread

Draws

Controls low-level interaction of game objects  
and logic





Ball

Start

NewBall

Ball is stationary in center of paddle until start is called from game.

Start

Ball Movement

No Balls on Screen

Change Angle

Wall hit

Reverse X component if Side is hit or Y component if the top of the screen or bottom/top of block is hit.

Lives = 0

Change Angle

Block hit

Remove Hit Block

Bottom Hit

Remove Ball

Change Angle

Paddle Hit

Change angle based off of where on the paddle the ball hits. I.E. how far from center of paddle affects the new angle.



Game

Level Selected

Load Level

TouchStart

Collision detected

Change Angle

Remove Block

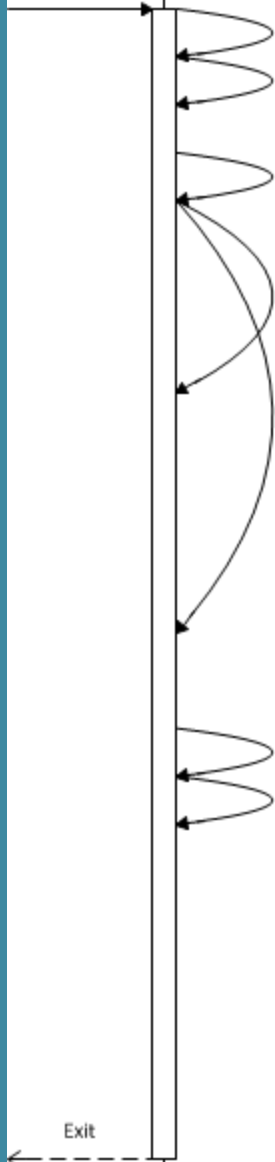
Pause

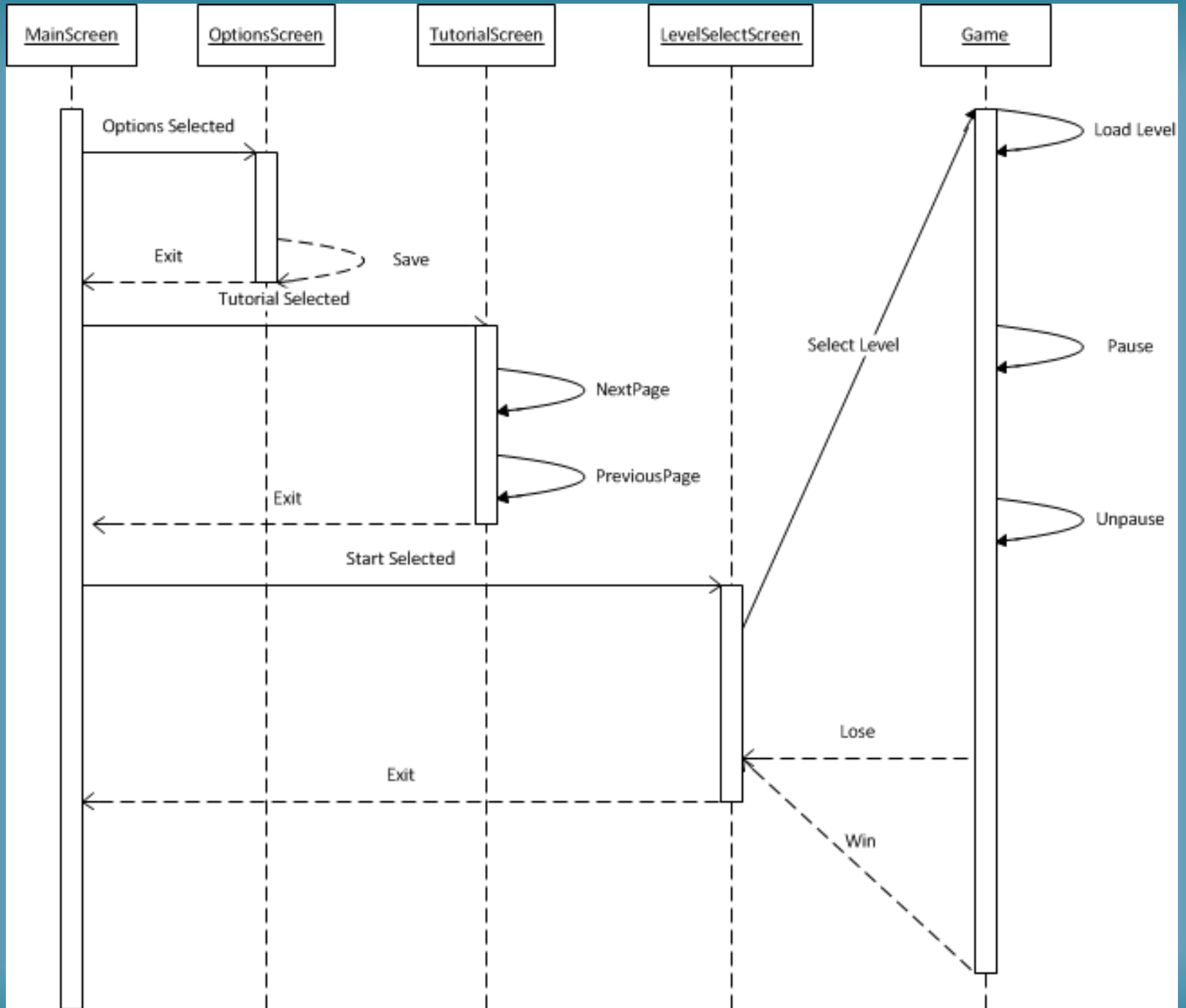
Unpause

Exit

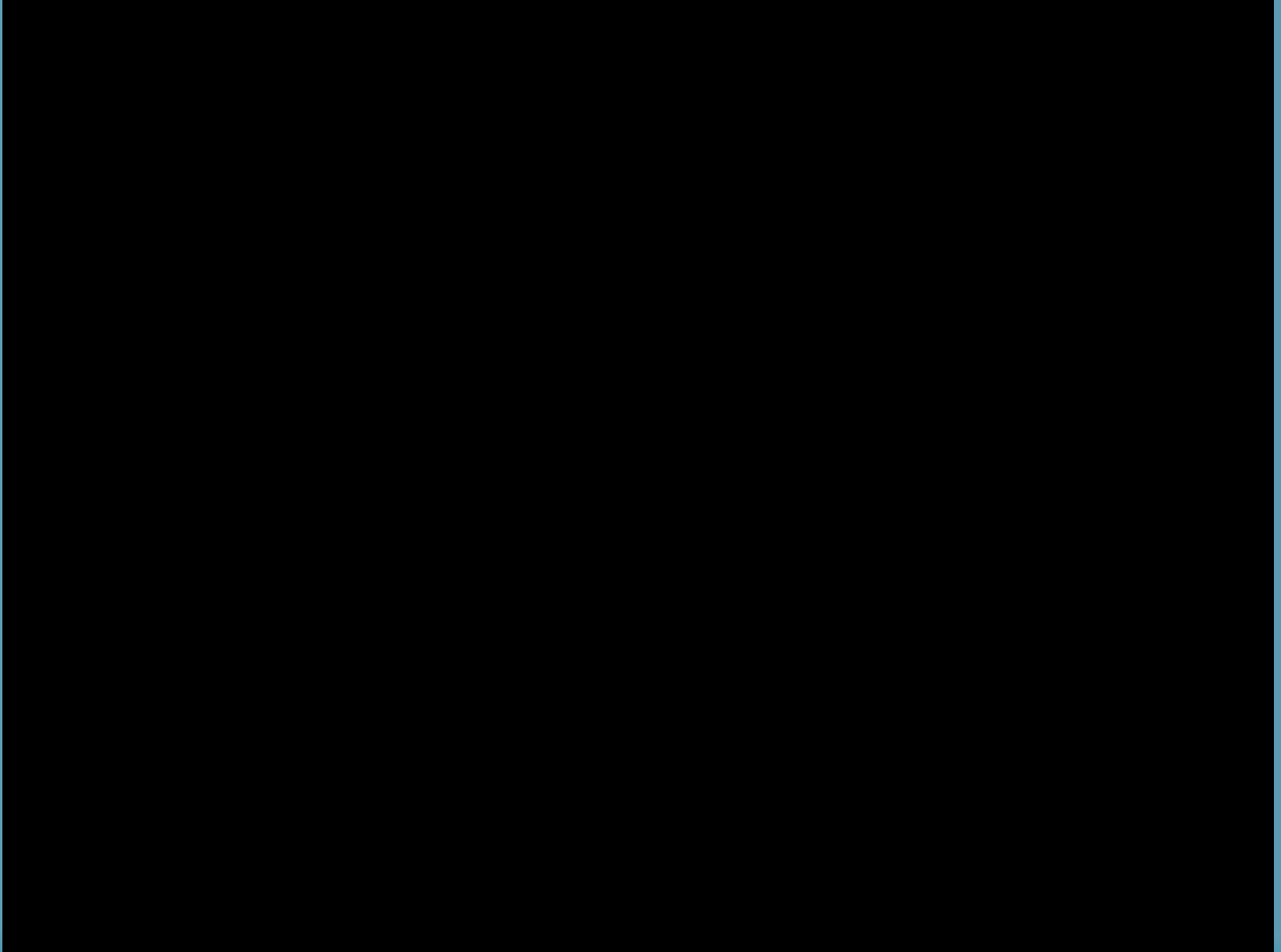
If the ball hits a wall or block we just reverse the angle.  
If it instead hits the paddle we change the angle based  
off of how far away from the center of the paddle the ball hits.

Remove the block that the ball collided with if it collided with a block.





# Demonstration



# Conclusions

# In Hindsight...

- Had more constructive time for developing game logic schema
- Graphics
- Standard for coding

# Improvements

- Add more levels, power ups, and blocks
- Better graphics / animation
- Change level select and other buttons to be more user friendly
- Game Logic
- Activity Stability

Q&A





### Tutorial 1 - Meet the Blocks



This Block is Unbreakable!



This Block Takes Two Hits.



This Block Takes One Hit.



This Block Takes One Hit.



This Block Takes One



This Block Takes One Hit.

Play

Next

## Tutorial 2 - PowerUps and You!



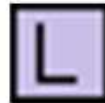
This PowerUp gives Bonus Points!



This PowerUp Puts Multiple Balls on the Screen!



This PowerUp Shortens Your Paddle.



This PowerUp Lengthens Your Paddle!

Prev

Play

Next

### Tutorial 3 - How to Play - The Basics

Touch the screen to start.

Control the paddle by moving your finger  
Left or Right across the screen.

Object of Game: Keep the ball from  
leaving the bottom of the screen by  
bouncing it off of your paddle.


Remove all blocks to complete the level.

Prev

Play

# !BREAKOUT!

Level Select	Pause	
Play		
Restart	Sound On/Off	Home

 Choose a Level

Level 01



Level 02



Level 03



Level 04



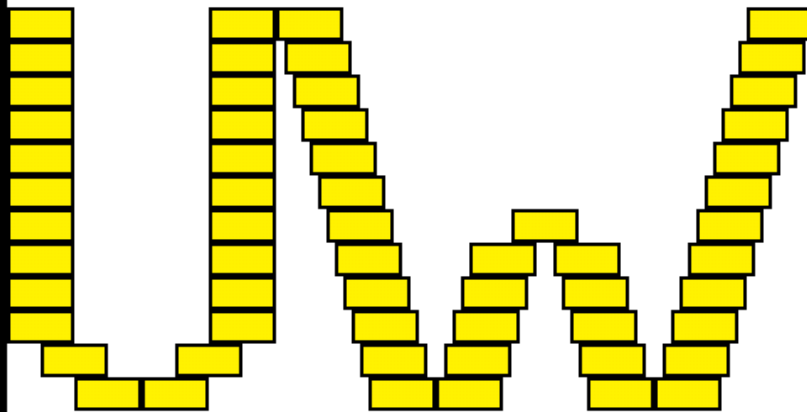
Level 05



Select

Cancel

Tutorial

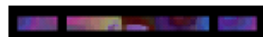
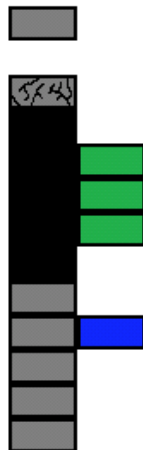
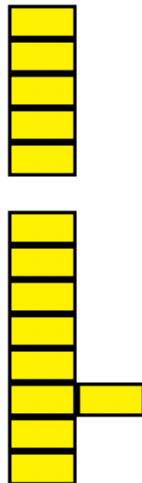
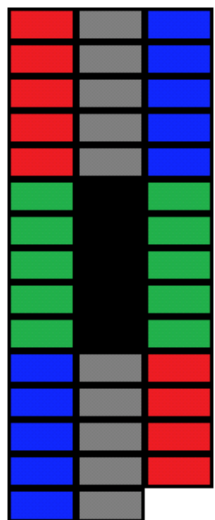


Level 05



Lives  
3

Score  
0.0



Lives  
3

Score  
5445

# YOU WIN!

Select a new level to continue playing!



Lives  
3

Score  
0.0