

MICHIGAN STATE
UNIVERSITY

Project Plan
Money Smash Chronicle

The Capstone Experience

Team MSUFCU

Wyatt Hillman
Cory Madaj
Brandon Max
Amy Leung
Yuming Zhang

Department of Computer Science and Engineering
Michigan State University

Spring 2016



From Students...
...to Professionals

Functional Specifications

- A match-three puzzle game modeled after Candy Crush
- Educate players about financial information using finance quizzes and gameplay obstacles that represent real-life scenarios
- Appeal to a wide range of ages through gameplay that is easy to learn but difficult to master



Design Specifications

- Pieces will be denominations of currency
- Players' score will be the money they've saved by clearing pieces, and will fill a meter on the screen that could be used when "life events" occur
- When all lives have been lost, the player will either wait for the lives to replenish or will be able to answer financial quiz questions to earn another life



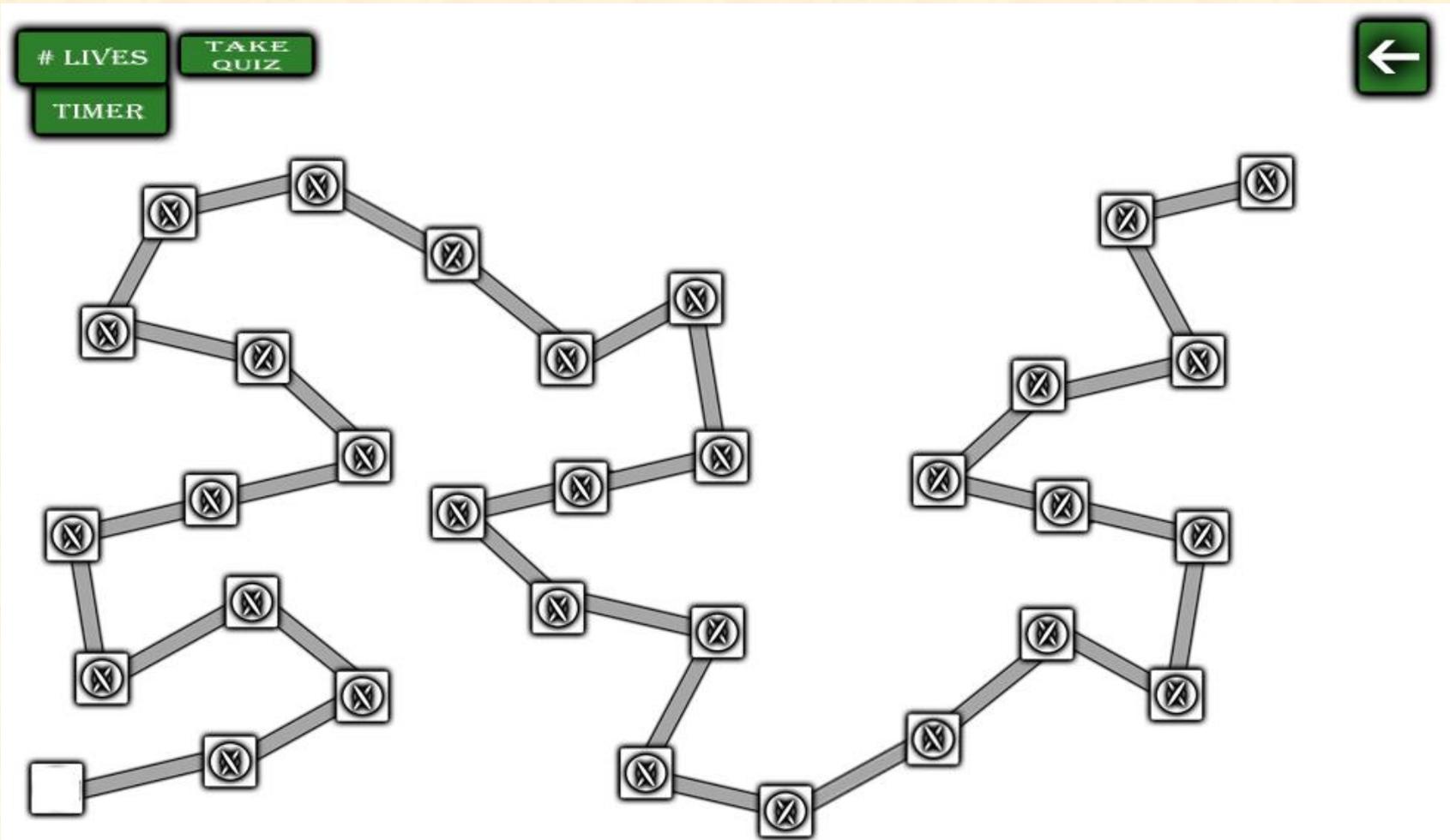
Screen Mockup: Startup Screen



Screen Mockup: Startup Screen (web)



Screen Mockup: Level Selection



Screen Mockup: Gameplay

*This is overall score - earnings from the level *+ money earned & - money spent on events

MOVES **SCORE** **TIMER** **MONEY BALANCE**

Rank Meter?

Keeps track of life events
List of ones that come out
are they completed or not

Power ups

The mockup features a central 10x10 grid. Above the grid are four green buttons labeled MOVES, SCORE, TIMER, and MONEY BALANCE. To the left of the grid is a vertical bar labeled Rank Meter?. To the right of the grid are two white boxes with black borders. The top box contains the text 'Keeps track of life events' and 'List of ones that come out are they completed or not'. The bottom box contains the text 'Power ups'. At the top of the mockup, there are two explanatory notes: '*This is overall score - earnings from the level' and '*+ money earned & - money spent on events'. A question mark icon is located in the top left corner.



Screen Mockup: Financial Quiz

FINANCIAL QUIZ

Answer a couple of questions to re-gain lives for more play time

1/5
QUESTIONS

0/5
LIVES

What is the correct term when you are putting money in the bank?

A

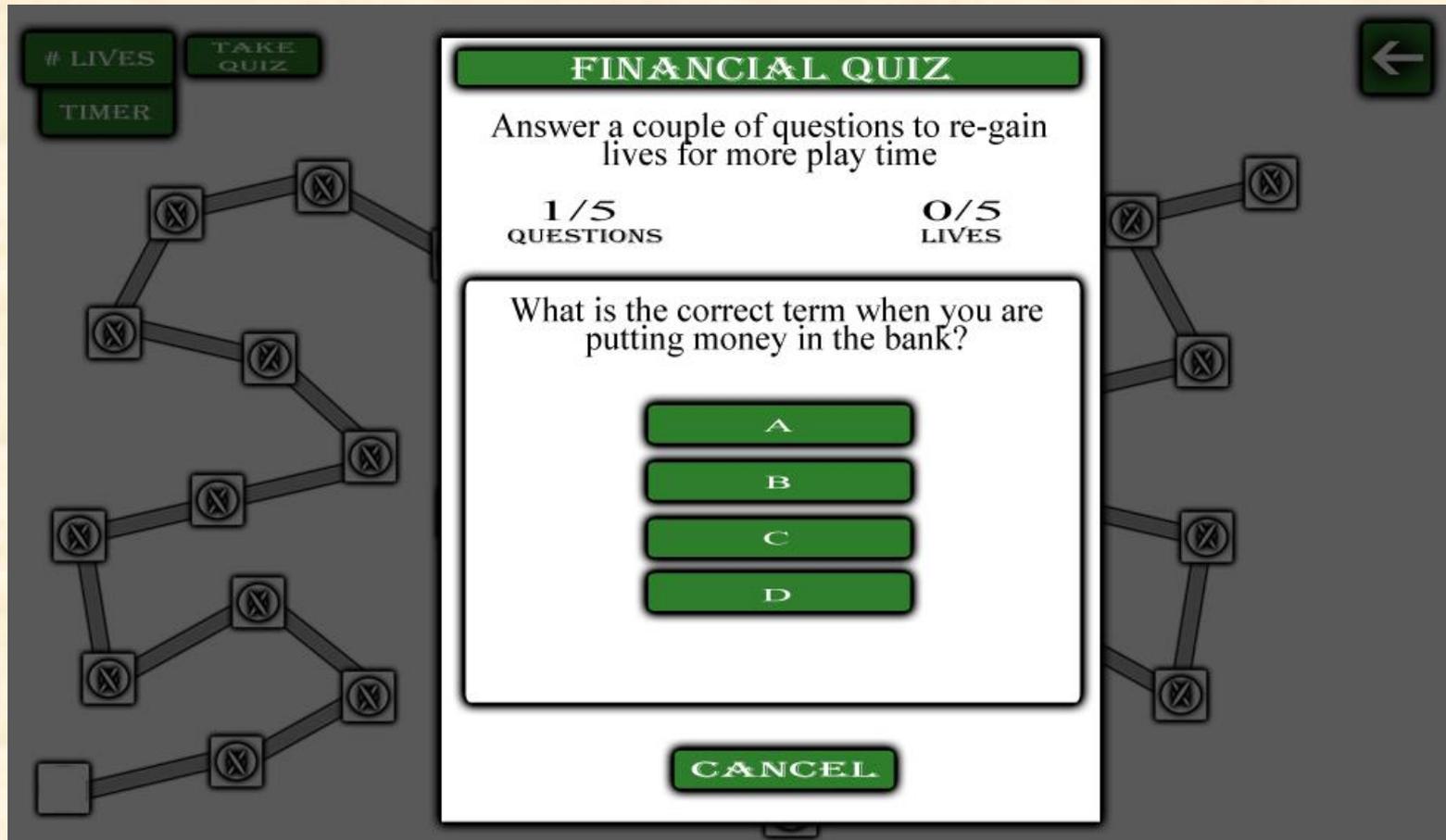
B

C

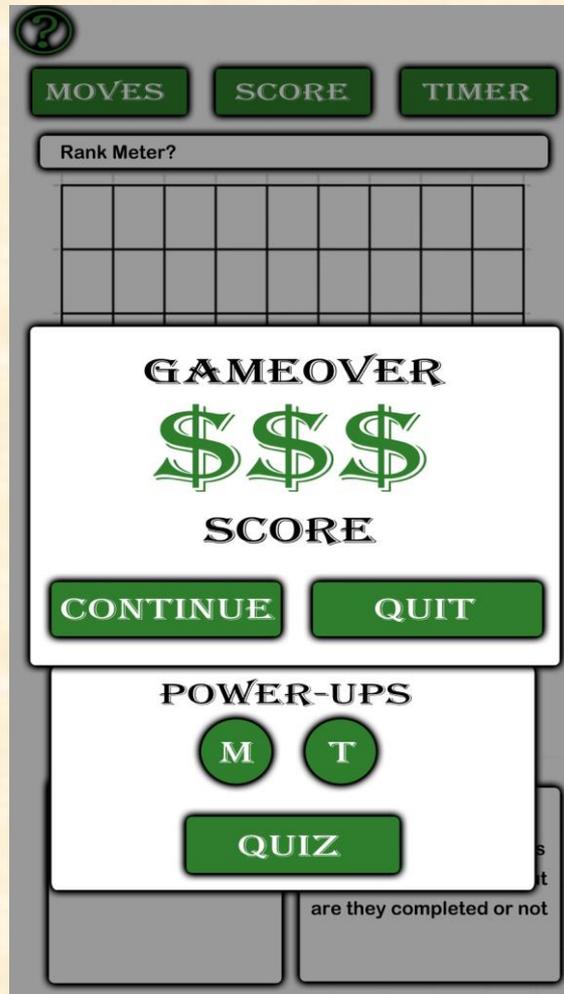
D

CANCEL

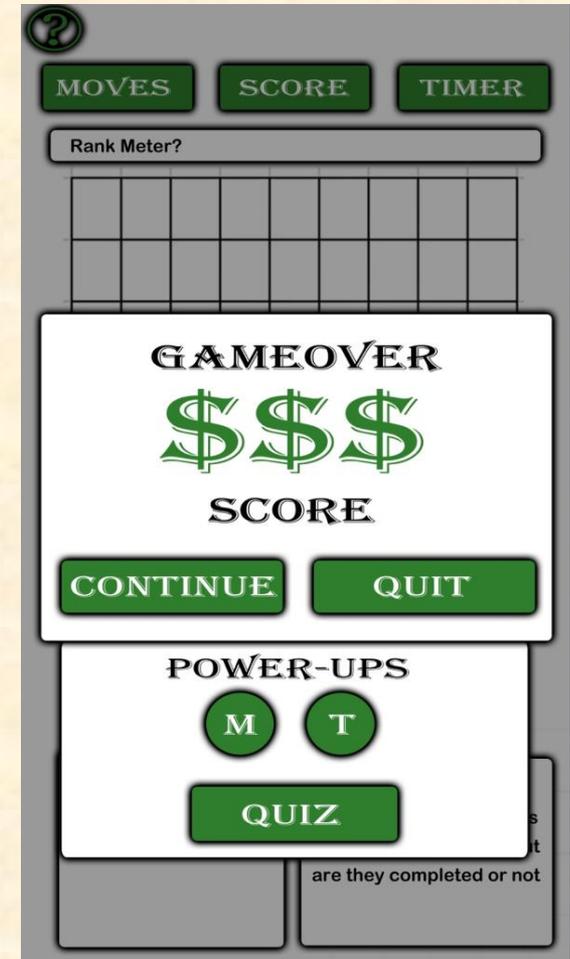
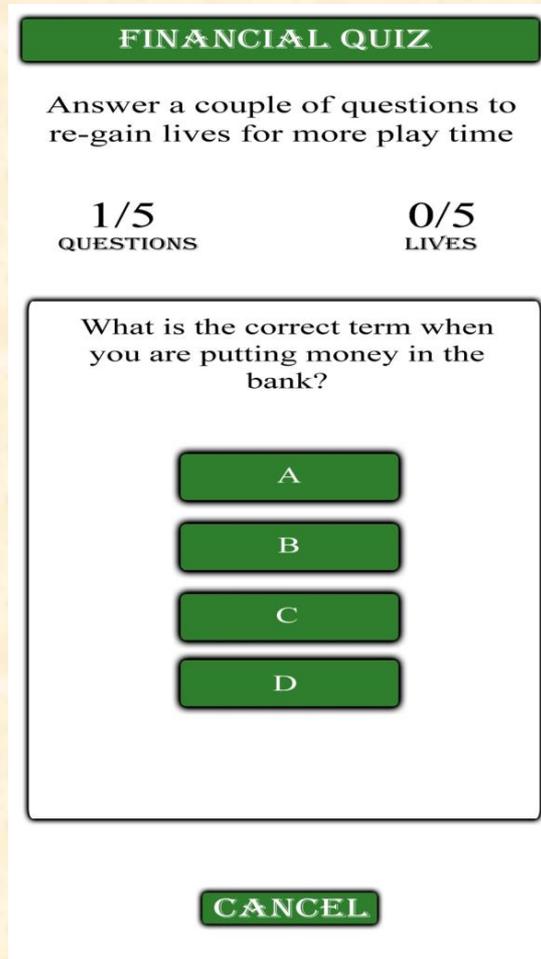
Screen Mockup: Financial Quiz (web)



Screen Mockup: Game Over



Screen Mockup

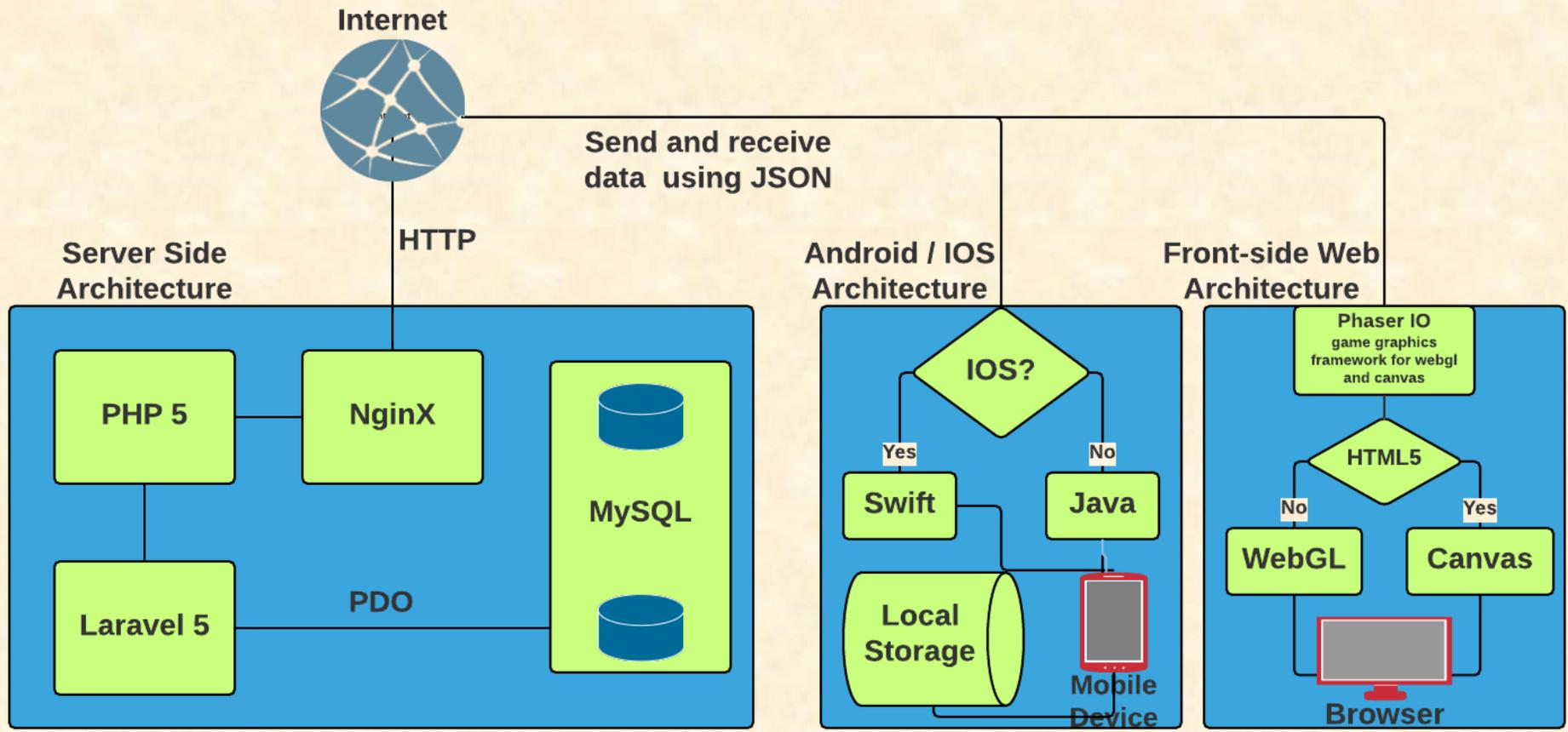


Technical Specifications

- Java for Android App
 - Using Android Studio for Native Android App
- Swift for iOS App
 - Using Xcode for Native Apple App
- PHP/HTML5/HTML/CSS/JavaScript/WebGL
 - PhpStorm for web design
- Phaser IO



System Architecture



System Components

- Hardware Platforms
 - Ubuntu Server 14
 - iOS phone & Android phone/tablets
 - Computer with browser
- Software Platforms / Technologies
 - Swift on Xcode, Java on Android Studio, PhpStorm
 - WebGL with Phaser IO framework
 - Github for organization



Testing

- Xcode for iOS phone
 - Debug and run program in Xcode
- Android Studio for Android phone
 - Debug for Android phone
- JavaScript and PHP testing
 - Test for JavaScript to make sure there is no mistake or bug on the website.
- Cross-platform testing
 - Using multiple devices to ensure it works



Risks

- Gameplay Issues
 - Figuring out how realistic the game should be – the amount each puzzle piece is worth
 - A few ideas are in development, working with clients
- No iOS or WebGL experience
 - Currently looking over tutorials and using them as guidance for the basic implementation
- Resource Issues
 - Project is asset heavy, currently have rough images in use
 - Talking with client and working with their designer
- Cross-platform and cross-version issues
 - Created mockups as guidelines in making the game look and feel similar across the platforms

