

Project Plan Presentations Today

September 30, Anthony 1279

- Team Learning A-Z
- Team Accenture
- Team Michigan State University ITS
- Team GM



MICHIGAN STATE
UNIVERSITY

Project Plan

Robot Builder Word Guessing Game

The Capstone Experience

Team Learning A-Z

Jerod D'Epifanio

Peyton Ritchie

Renee Wines

Namhee Choi

Enliang Zhao

Department of Computer Science and Engineering

Michigan State University

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From Students...
...to Professionals

Functional Specifications

- Give kids an individualized learning experience for grammar education. Educational game for vocabulary learning.
- Hangman game with dynamic difficulty, as you guess the correct letters in the word you build your robot piece by piece.
- Building on existing infrastructure aimed at grades K through 5
- Able to generate statistics for users

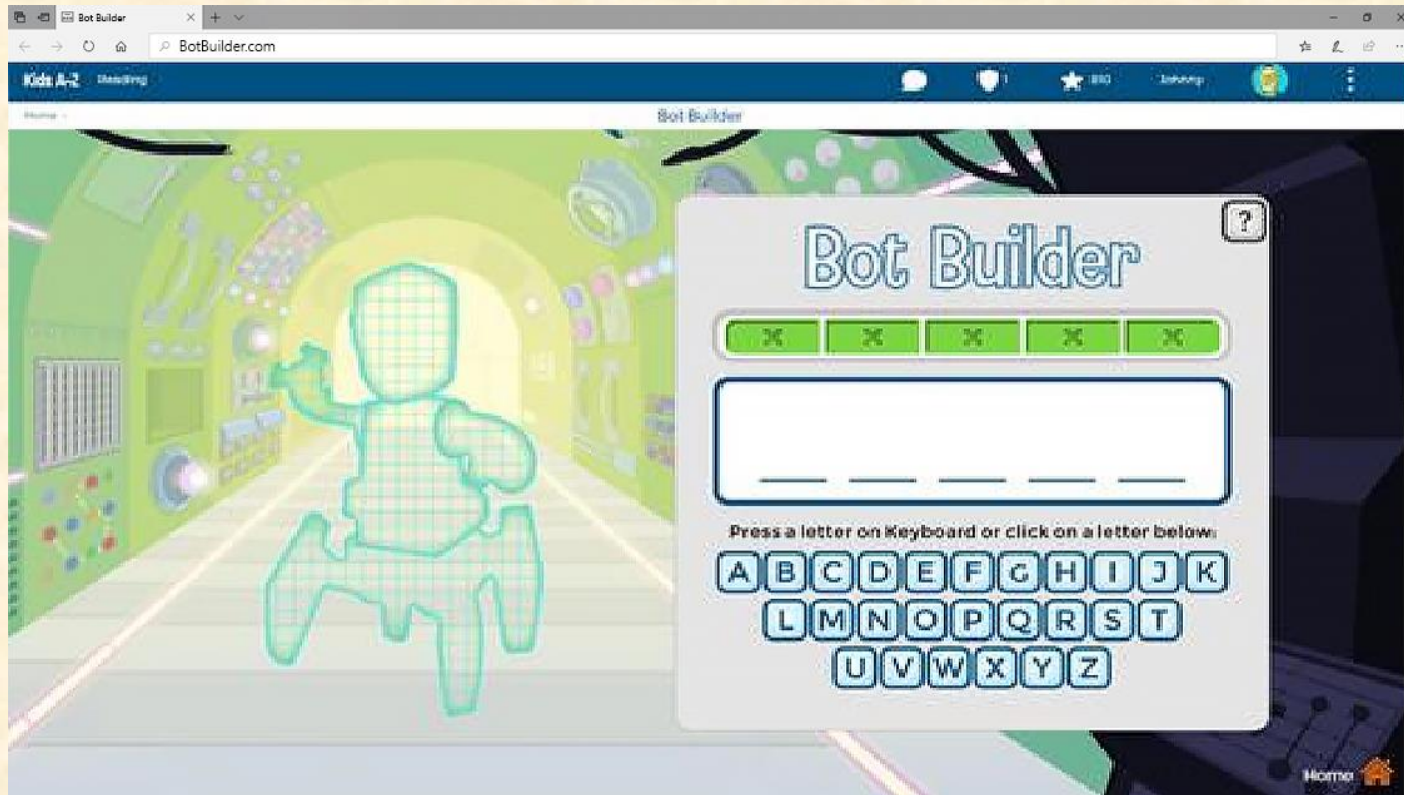


Design Specifications

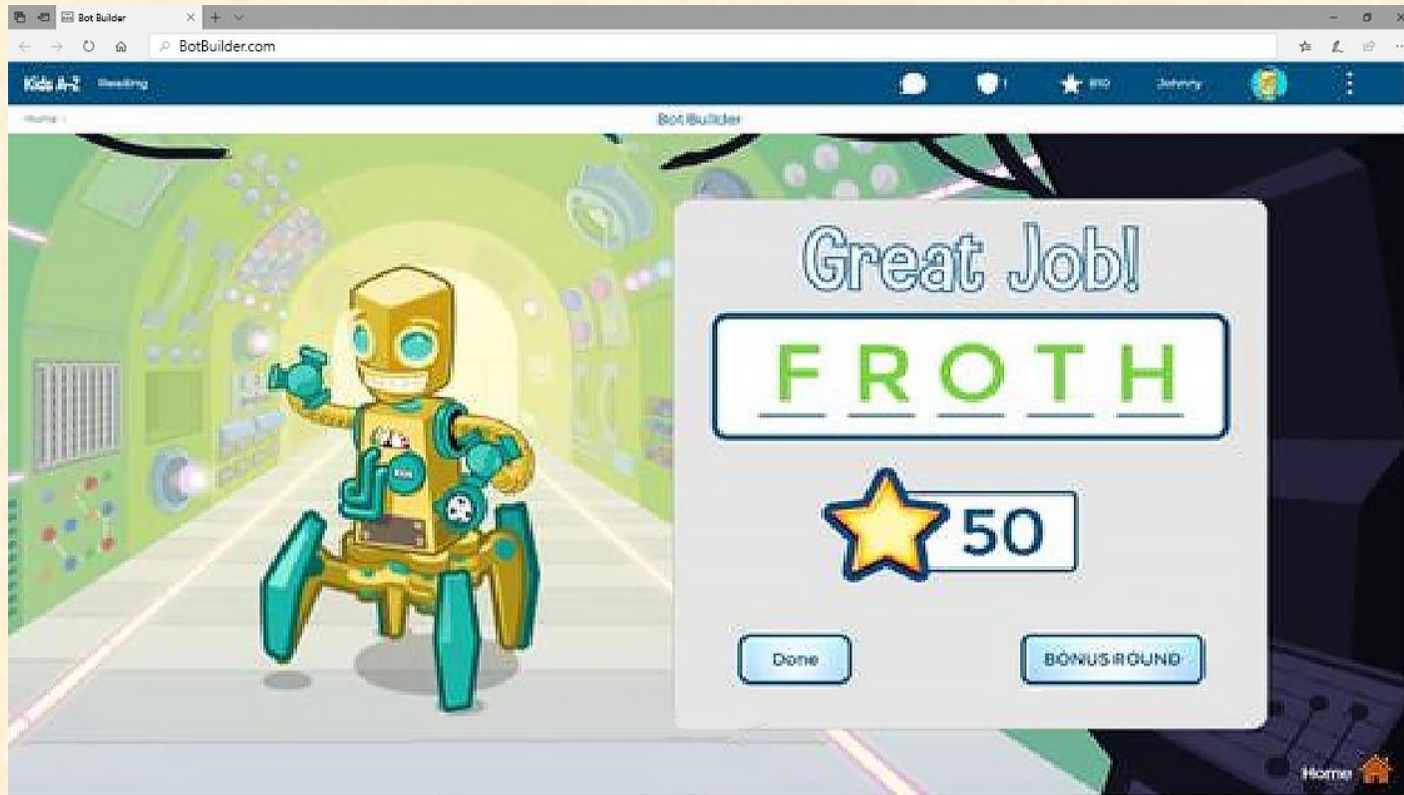
- Two main components, a Screen and a Robot
- Screen Component Contains:
 - Title of the game
 - Status bar that indicates how many incorrect guesses they have used
 - Word view that shows the current word they are guessing
 - Keyboard used for guessing the letters in the word
- Robot Component:
 - Shows the robot pieces as the game progresses and correct letters are guessed



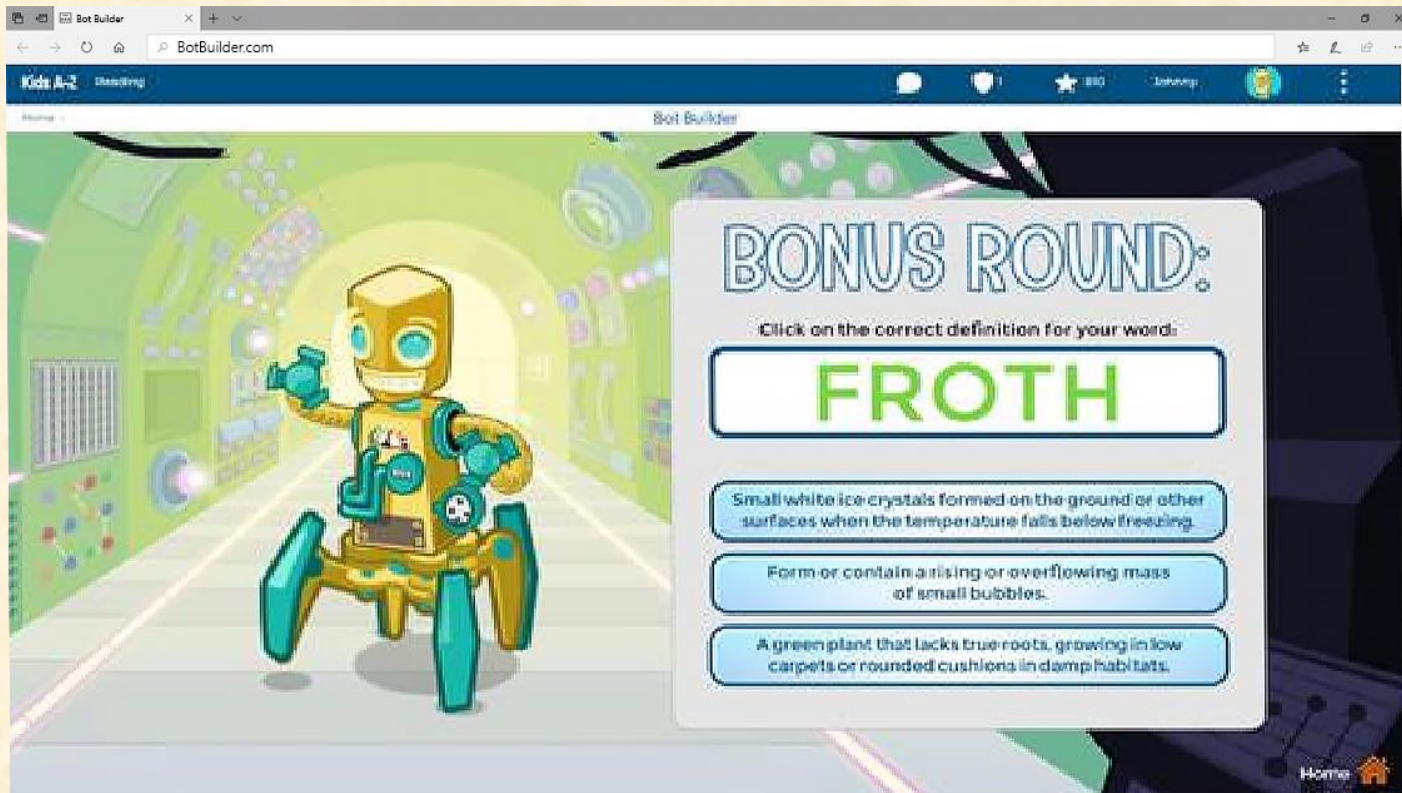
Screen Mockup: Game Screen



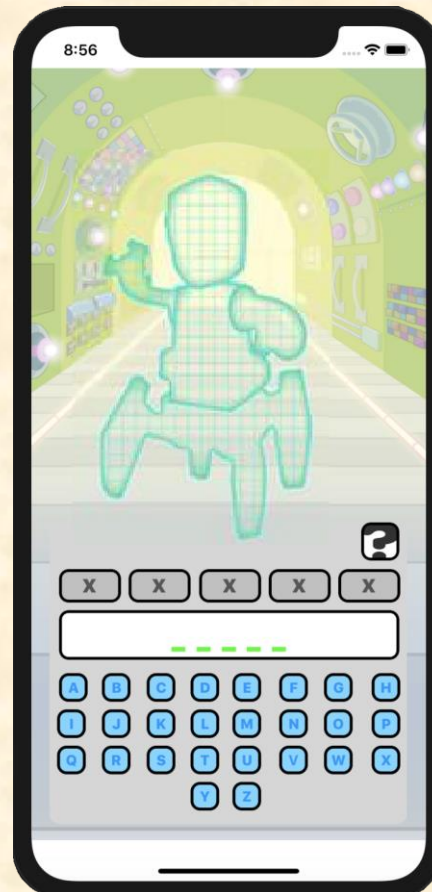
Screen Mockup: Win Screen



Screen Mockup: Bonus Round Screen



Screen Mockup: iOS Application

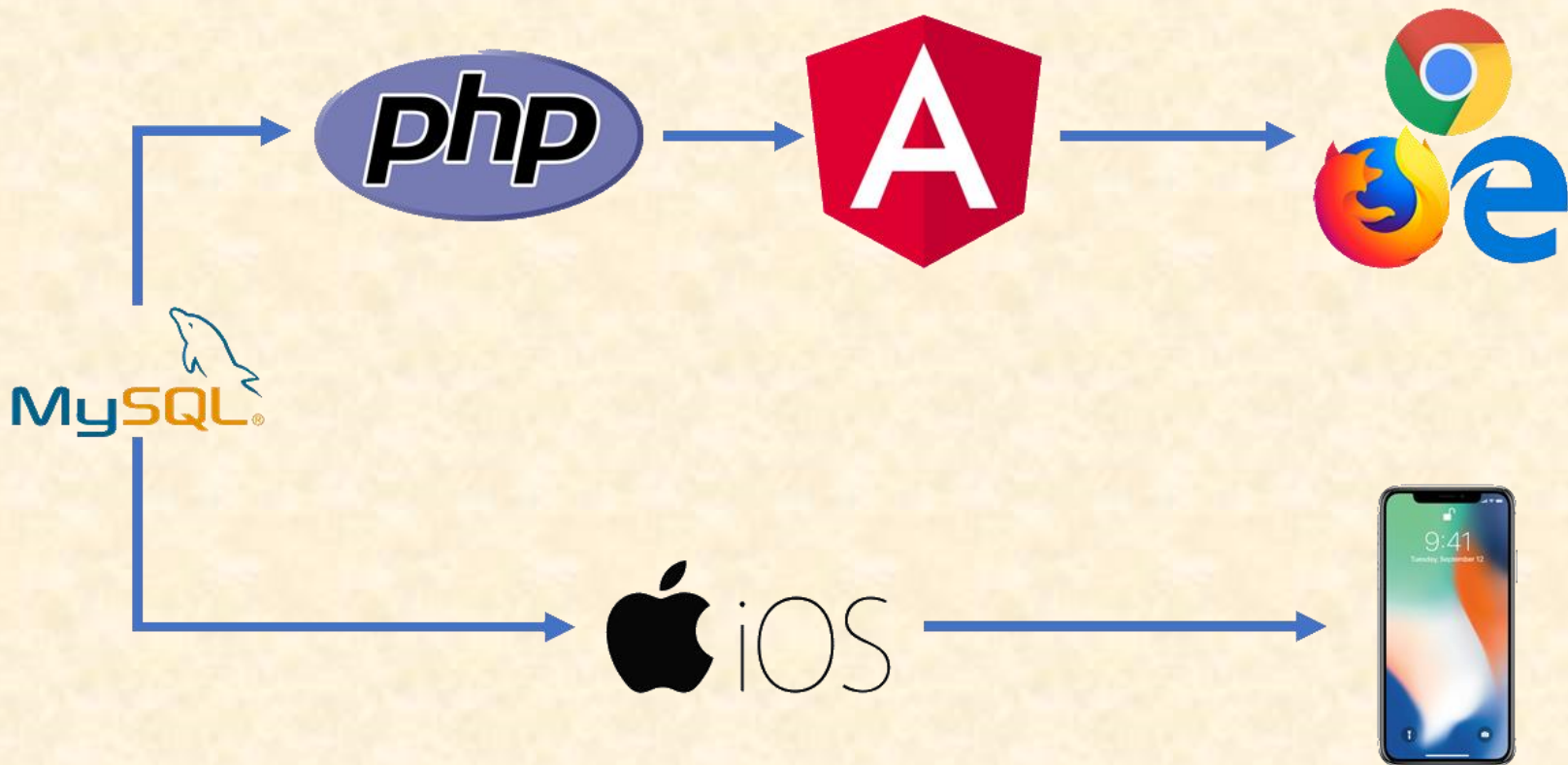


Technical Specifications

- Web App
 - Front-end
 - Angular: for the front-end development
 - HTML/CSS: for the design and template
 - Back-end
 - MySQL Database
 - PHP: for MySQL contact
- iOS
 - Swift (Front-end)
 - PHP (Back-end)



System Architecture



System Components

- Hardware Platforms
 - iPhone
 - iPad
 - Dell Server Rack
 - Any internet accessible computer
- Software Platforms / Technologies
 - MySQL Workbench
 - PHP Storm
 - Visual Studio Code
 - Ubuntu Server
 - XCode



Risks

- **Connecting Angular to a MySQL Server**
 - Problem: Never pulled information from a MySQL Server to an Angular based application. We need to pull data for words and images for game play
 - Mitigation: Dedicated one person to learn how to setup a library for easy communication to MySQL Server
- **Setting Up A Test Server Rack**
 - Problem: To run proper testing and easy access for the client, we need a server rack set up for PHP and MySQL. This way the MySQL server can be populated and set up like a production environment and we can have consistent Q&A.
 - Mitigation: Member who is also setting up the MySQL server is to seek some outside help from someone with experience doing this
- **Developing with iOS**
 - Problem: No one in the group has developed with iOS or used X-code before.
 - Mitigation: Assign one person to this task who has experience with mobile development in Android and have them focus on learning Swift and X-code from the start.
- **Potential Issues with Angular**
 - Problem: Since Angular is a newer library, it can be prone to the occasional difficult error. If we run into one of these it could slow down our development significantly.
 - Mitigation: Making sure we keep ahead of schedule. If one comes up, we can spend the time finding an alternate way to tackle a problem



Questions?

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