Project Plan
Learning A-Z

The Capstone Experience

Team Learning A-Z
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Functional Specifications

• Vocabulary word-definition game
• Easily accessible web application
• Helps PreK-6 students learn new words
• Available to any student with internet access
Design Specifications

• Web-based UI
• Draggable words at the top
• "Enemies" with definition along some number of columns
• Match words with the correct definition for a new "enemy"
• Game is over once all words are matched with correct definition or an enemy reaches the top of the column
• End screen gives the student stars based on performance.
Screen Mockup: Game State
Screen Mockup: Game Over Condition
Screen Mockup: Dragging to Correct Slot
Screen Mockup: Game Over Screen
Technical Specifications

• Development environment is PHPStorm by JetBrains
• Using HTML/CSS and AngularJS to create our front-end UI
• Using PHP to make requests to MySQL database
• Composer to manage PHP dependencies
• MySQL stores the word-definition pairs
System Architecture

Developed on

Front End UI
- HTML
- CSS
- JS
- AngularJS

Back End API
- PHP
- Composer

Database Source
- MySQL
System Components

• Hardware Platforms
  ▪ Our personal computers running...
    o phpMyAdmin
    o PhpStorm
    o GitHub

• Software Platforms / Technologies
  ▪ PHP
  ▪ AngularJS
  ▪ MySQL
  ▪ HTML/CSS
  ▪ Composer
Risks

• Application Interaction with Browser Functions
  ▪ How does our application interact with the refresh button, the back button, or closing button?
  ▪ Look into caching to resume application from where user has left off.

• Designing Scalable UI Elements
  ▪ Making sure UI elements can fit a variety of screens, for more accessibility.
  ▪ Design UI elements to dynamically adapt to screen size, to a minimum.

• Moving Elements Without Refreshing Page
  ▪ How to graphically show the word moving in response to being clicked and then dragged.
  ▪ Using AngularJS to respond to elements moving in the background without user seeing.

• Integrating Database with UI
  ▪ Pulling a certain number of word-definition pairs from the database and telling the user when they have won.
  ▪ Using PHP to pull word-definition pairs into a separate table that we can check to tell if the user has won.
Questions?