Project Plan Presentation

cUML: Browser-Based UML Editor

The Capstone Experience

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Project Sponsor Overview

• CSE Program here at MSU
• Designs custom interactive lessons and programs to facilitate student learning
• Program ranked 79th by Niche.com
Project Functional Specifications

- An easy-to-use web-based and CourseLib integrated UML class editor
- Design as close to existing Cirsim interface as possible
- Streamlines MSU CSE student design experience
- Used for quizzes, assignments, and diagram examples
Screen Mockup: Adding Values
Project Design Specifications

• Embedded in CourseLib-based websites
• Allows for diagram imports/exports as inline JSON
• Supports both mouse and touch-screen devices
• Includes a sanity check for common mistakes
Screen Mockup: Drawing Associations
Screen Mockup: Sanity Check

Sanity Check

2 Error(s) Detected
- CS-001: Class “class name” should be named starting with a capital letter
- CS-003: Class “class name” should be named without any spaces
Screen Mockup: Diagram Example
Project Technical Specifications

- JavaScript-based browser application, using Node.js
- Karma and Jasmine for unit testing
- Implement import/export files with JSON
Project System Architecture
Project System Components

• Hardware Platforms
  • Both keyboard/mouse and touch devices
  • User PCs, Macs, smart phones, tablets

• Software Platforms / Technologies
  • Modern browsers (Firefox, Chromium, etc.)
  • HTML, CSS, and JavaScript
  • Using tools such as SASS, Node.js, etc.
Project Risks

- Creating an undo feature
  - Implement undo feature so that users can fix mistakes
  - Store state of diagram when changed, restore state on undo
- Adding a sanity check feature
  - Highlight and describe simple errors in the diagram
  - Use regex and maintain distinction between different attributes
- Adding touch screen support
  - Support touch screens, maintain similar experience to mouse/keyboard
  - Hold meetings w/ client to discuss best implementations
- Implementing connections between classes
  - Program needs to support generalizations, associations, etc.
  - Hold meetings w/ client to discuss best implementations
Questions?