

MICHIGAN STATE

UNIVERSITY

Project Plan Presentation

clUML: Browser-Based UML Editor

The Capstone Experience

Team Michigan State University CSE

Blake Bement

Ryan Chang

Bella Ciagne

Jacob Rutkowski

Will Wilson

Department of Computer Science and Engineering

Michigan State University

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*From Students...
...to Professionals*

Project Sponsor Overview

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

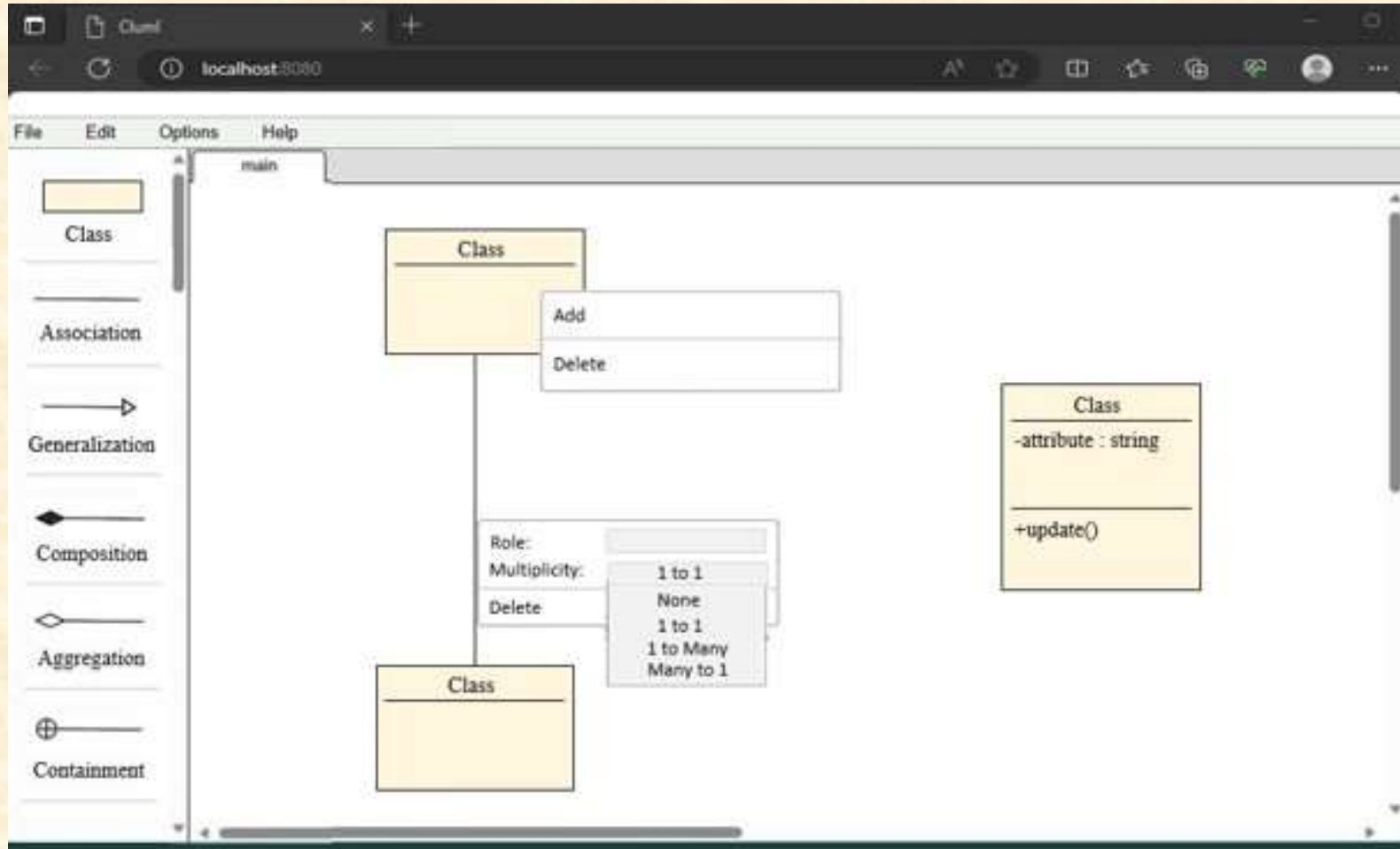


Project Functional Specifications

- 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

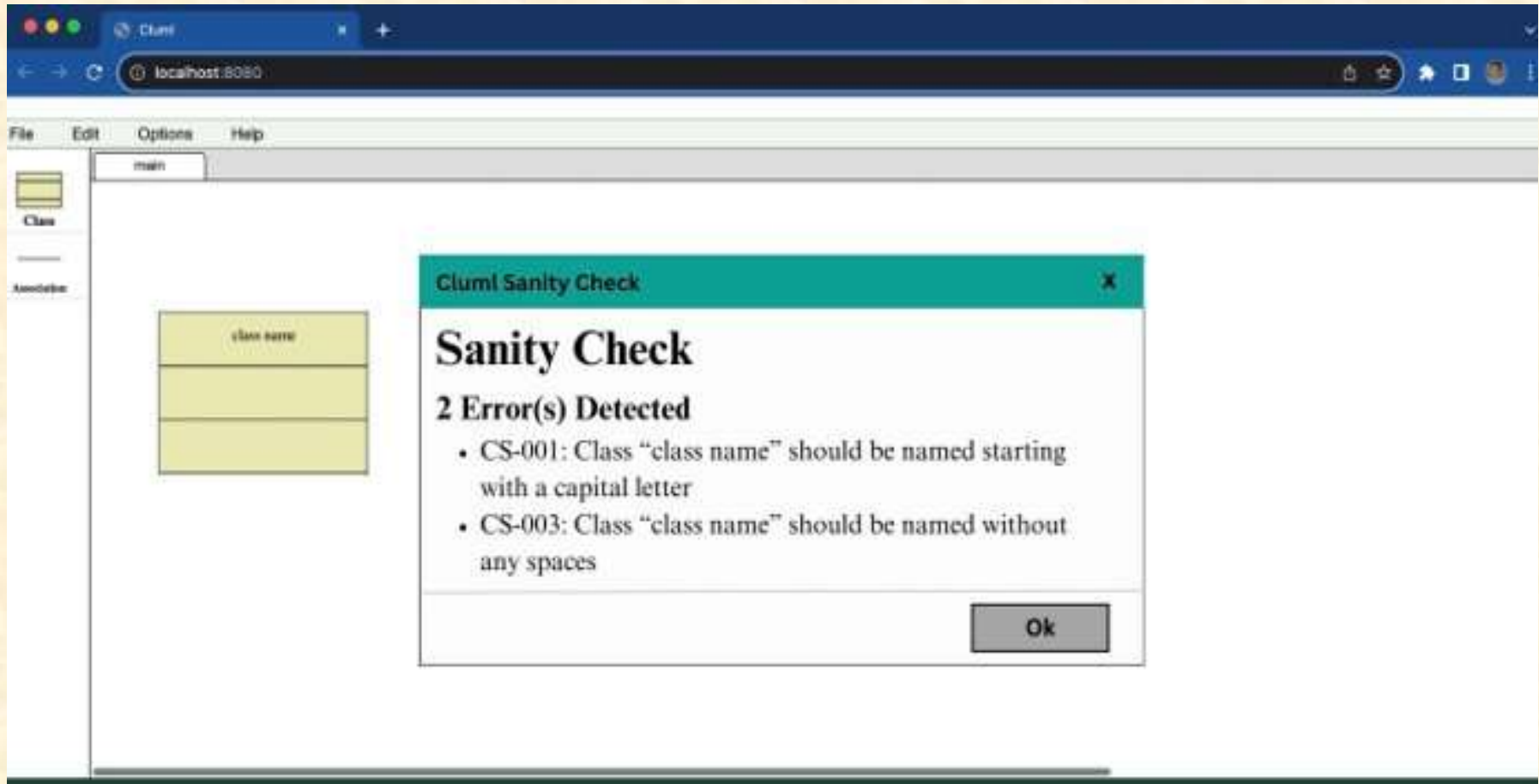
- Embedded in CourseLib-based websites
- Allows for diagram imports/exports as inline JSON
- Supports both mouse and touch-screen devices
- Includes a sanity check for common mistakes



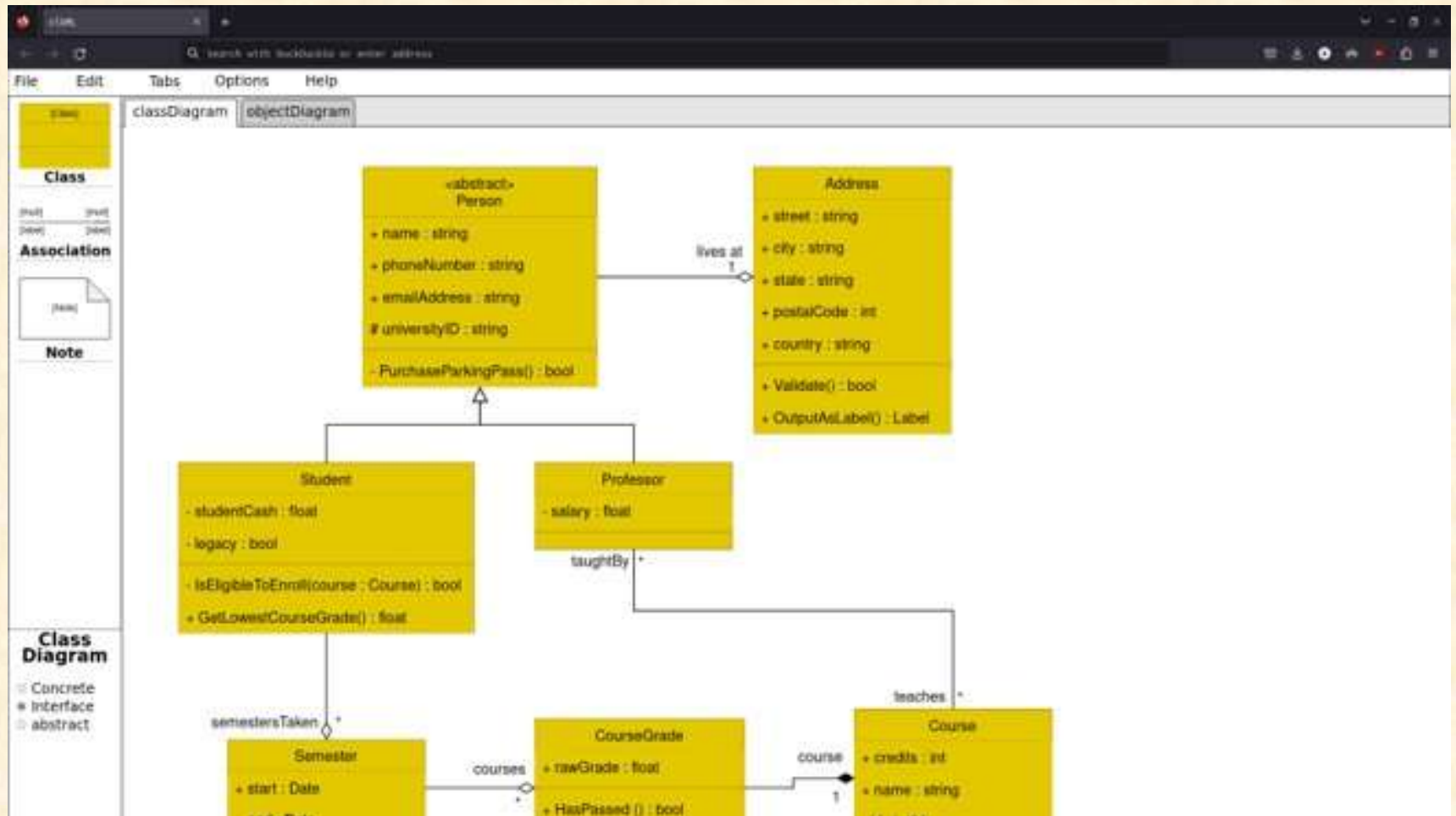
Screen Mockup: Drawing Associations



Screen Mockup: Sanity Check



Screen Mockup: Diagram Example

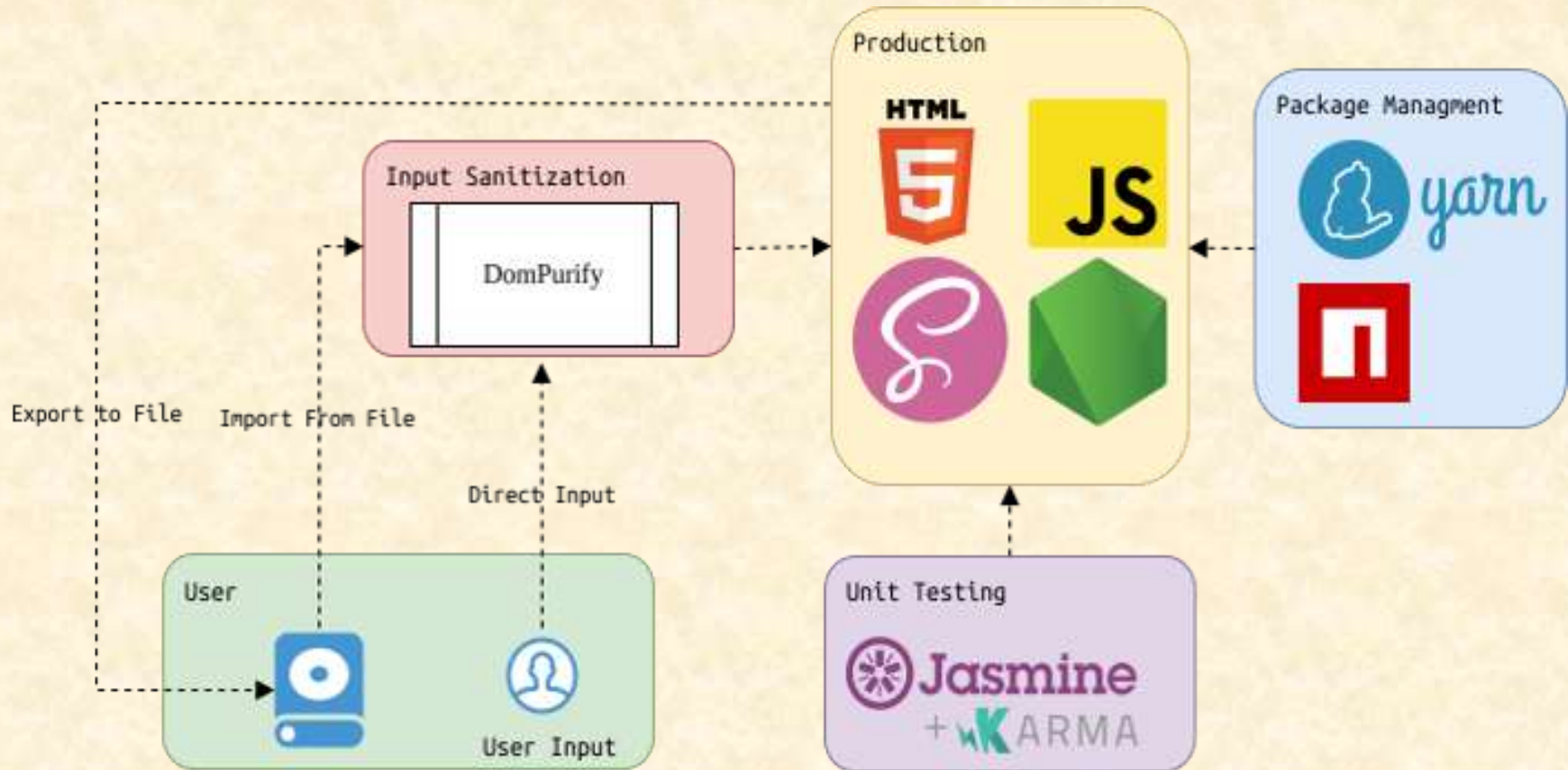


Project Technical Specifications

- 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?

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