

**MICHIGAN STATE**  
**UNIVERSITY**

# Project Plan

## HTML5-Based WYSIWYG Label Designer

[The Capstone Experience](#)

Team Plex Systems

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

# Project Overview

- HTML5-based WYSIWYG Label Designer
  - Label designer created with web technologies
  - Allows the intuitive creation of labels with various elements
    - Barcodes
    - Text Labels
    - Text Data
    - Lines
    - Images
  - The created label flows are to be used to trace products during/after manufacturing



# Functional Specifications

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- Accessed through user's web browser
- User may load or manage previously created layouts
- Create elements by selecting an object from the list
- Ability to save the current layout
- Each element may be adjusted by mouse or granularly by element properties

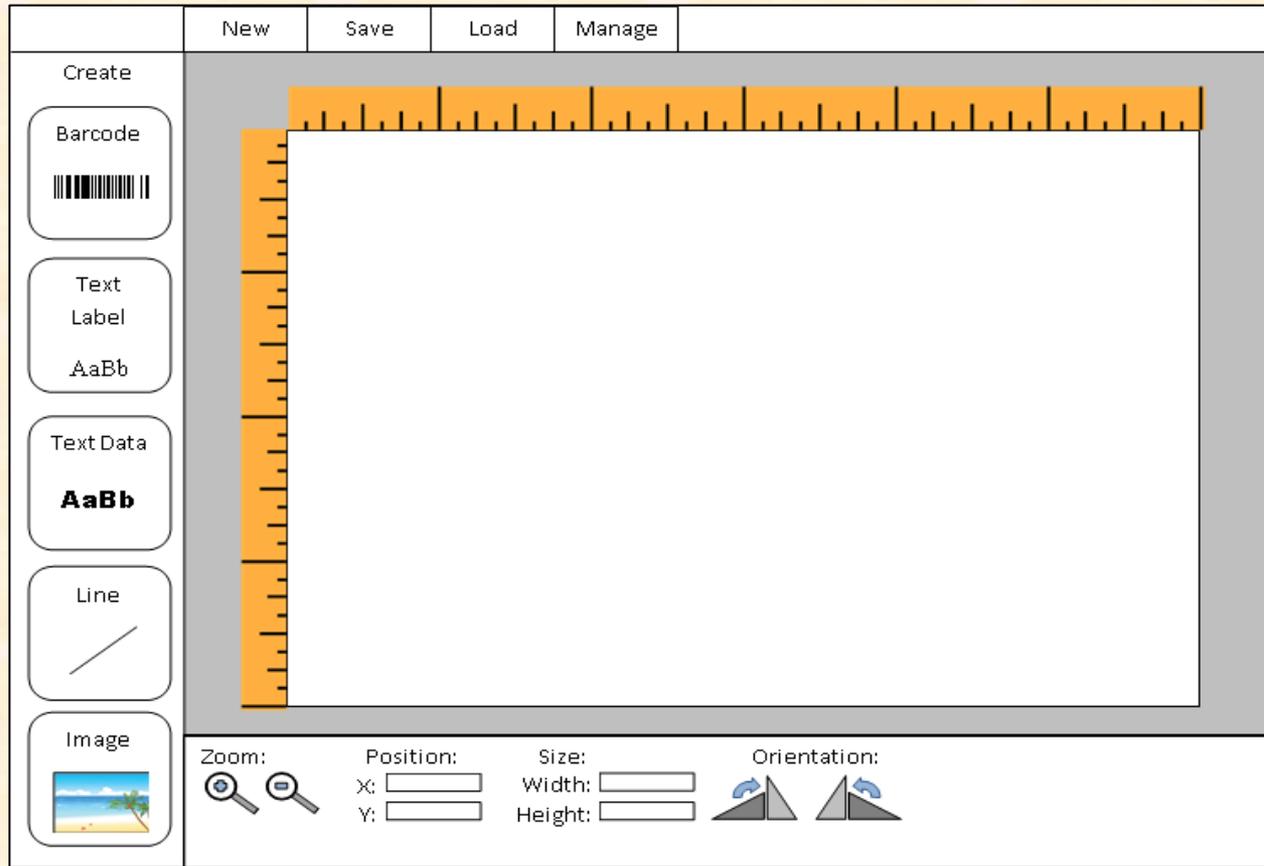


# Design Specifications

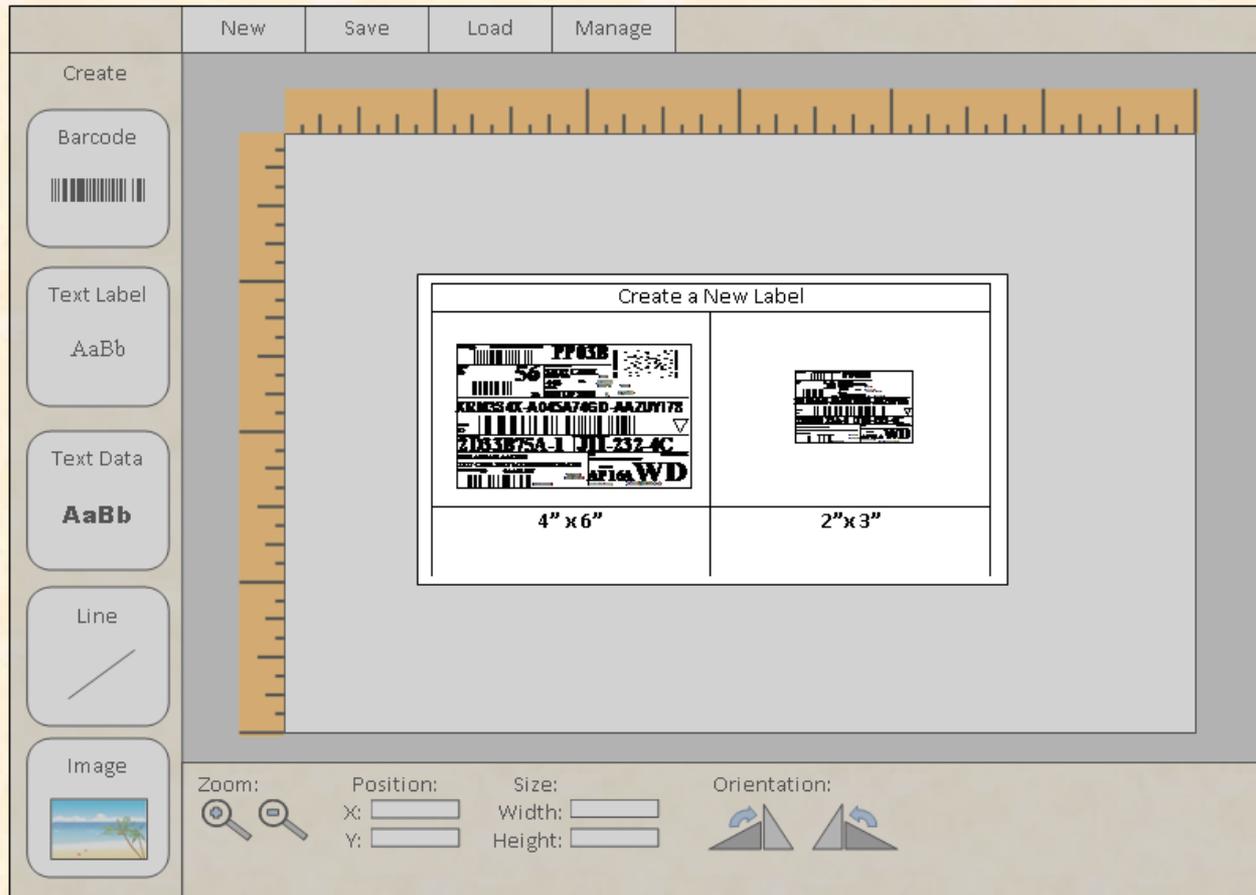
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- Single Webpage
  - Dynamic content on the page
- Content is driven by client side interaction
  - Mouse is the primary interface method
- Finished labels reside server side

# Screen Mockup: App Overview



# Screen Mockup: App Overview



# Screen Mockup: Element Properties

Barcode Object

Zoom:	Position:	Size:	Orientation:	Barcode:
	X: <input type="text"/> Y: <input type="text"/>	Width: <input type="text"/> Height: <input type="text"/>		Type: <input type="text"/> Codeword: <input type="text"/>

Text Object

Zoom:	Position:	Size:	Orientation:	Text:
	X: <input type="text"/> Y: <input type="text"/>	Width: <input type="text"/> Height: <input type="text"/>		Text: <input type="text"/> Font: <input type="text"/> Size: <input type="text"/>

Line Object

Zoom:	Position:	Size:	Orientation:	Line:
	X: <input type="text"/> Y: <input type="text"/>	Width: <input type="text"/> Height: <input type="text"/>		

Image Object

Zoom:	Position:	Size:	Orientation:	Image:
	X: <input type="text"/> Y: <input type="text"/>	Width: <input type="text"/> Height: <input type="text"/>		

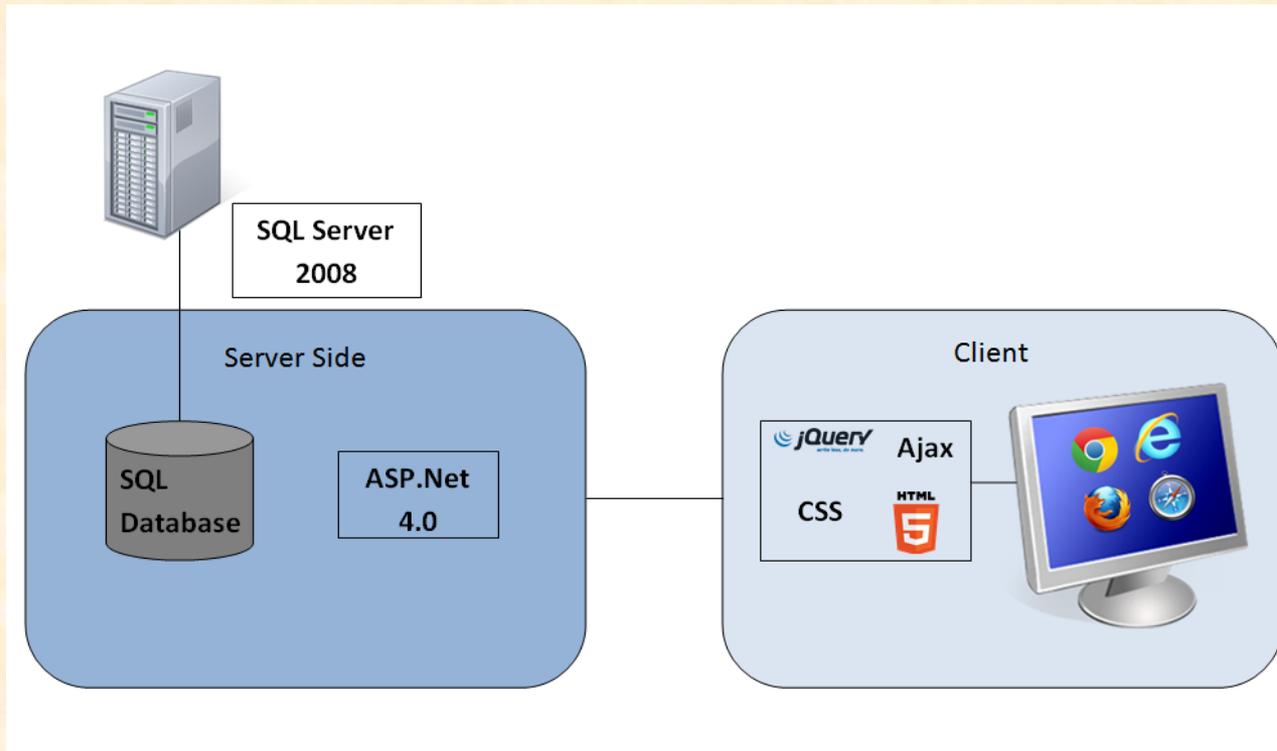
# Technical Specifications

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- Web application is primarily executed on the user's machine
  - HTML5/CSS Directs Layout
  - JavaScript / jQuery Directs App Behavior
- Backend Systems Provide
  - C#/ASP.Net Barcode Representation
  - SQL Server Database Access using ASP.Net



# System Architecture



# System Components

- Hardware Platforms
  - Windows server
    - SQL Server 2008
  - Client Side does not require a specific platform
- Software Platforms / Technologies
  - Client Side
    - HTML5/CSS for the general layout
    - jQuery, JavaScript, and Ajax for dynamic content
  - Server Side
    - ASP.Net



# Testing

- Browsers
  - Chrome 7+
  - Firefox 4+
  - Internet Explorer 9+
  - Safari 5+
- UI
  - Needs to be intuitive
  - Independent user testing
- Granular Testing
  - Possibility of breaking the app
- Stability/Stress
  - 1000s of elements on a label



# Risks

- Limited experience with web technologies
  - No team member has done extensive web development
  - Slowly picking up the necessary skills
- Project specification
  - Design was very open
  - Provided an example mock-up to understand their desires
- HTML5 is not uniformly supported
  - Each browser implements HTML5 in its own way
  - Verify each major feature before implementation

