

**MICHIGAN STATE**  

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**UNIVERSITY**

# Project Plan

## Enterprise Architecture Visualizer

### The Capstone Experience

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

# Project Overview

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- Easy to use, modeled overview of enterprise architecture.
- Web-based application
- Visualization of dependencies
  - Applications
  - Servers
  - Databases
  - Supporting teams



# Functional Specifications

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- Display enterprise architecture
- Manage dependencies
- View future/past states
- Search for specific entities



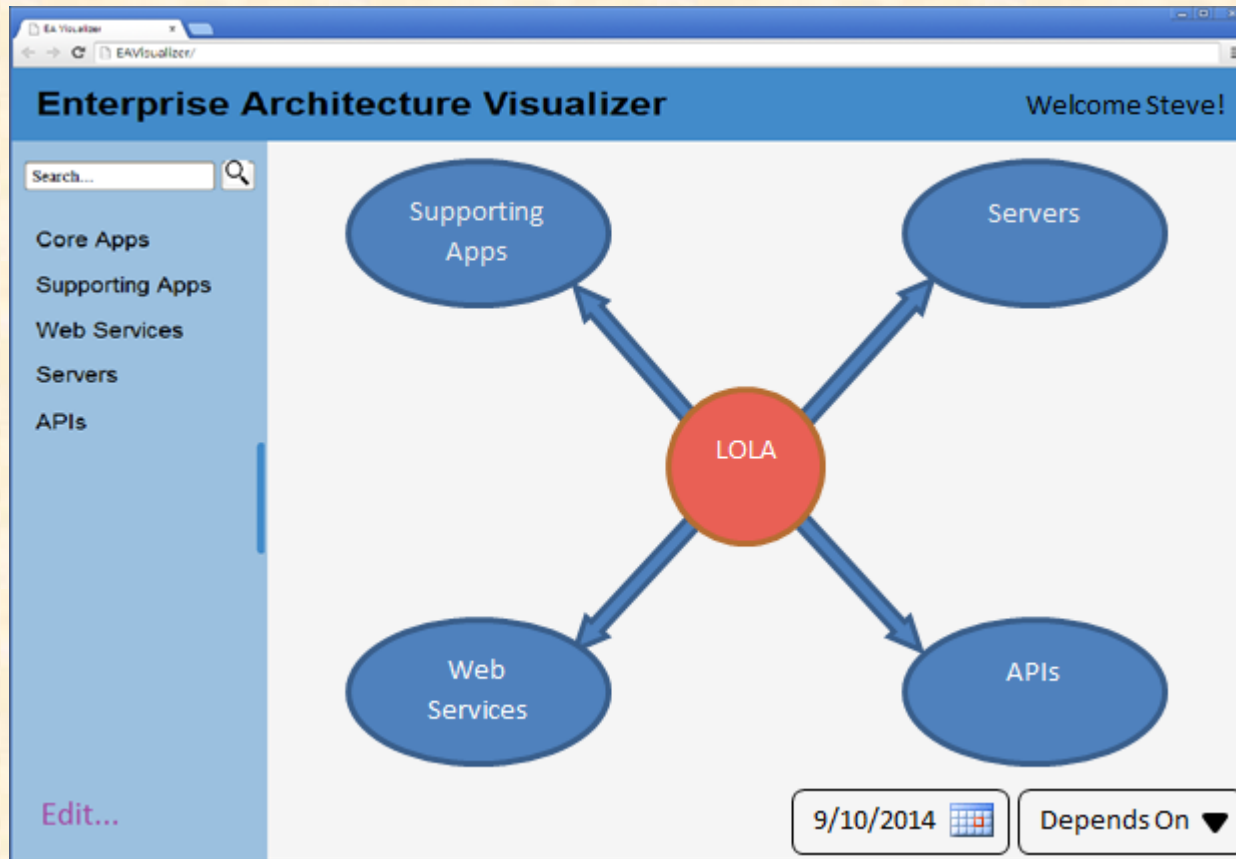
# Design Specifications

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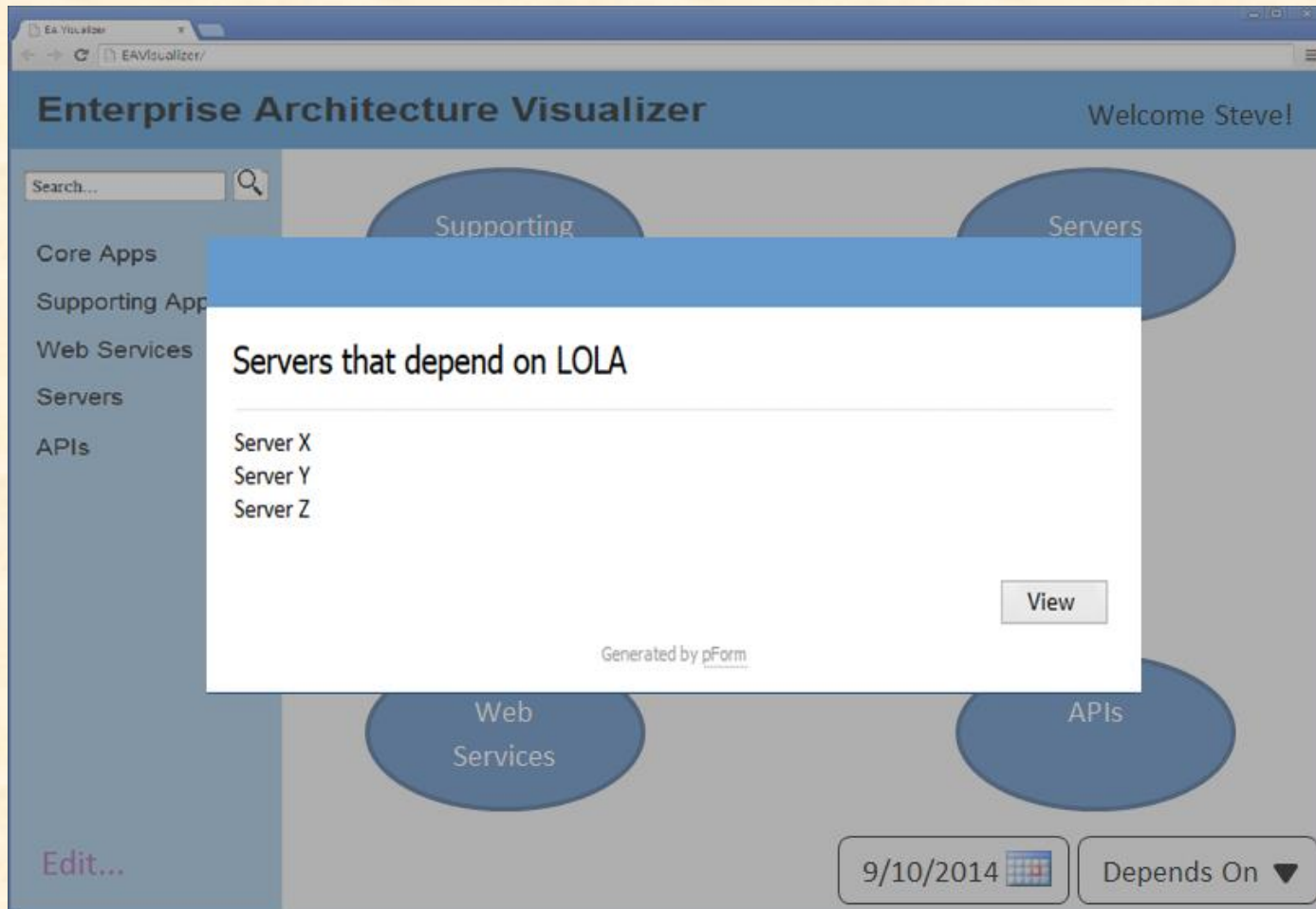
- Easy to use, interactive diagram
- Categorized dependencies
- Add/remove/edit dependencies in edit mode
- Switch between states using specialized calendar



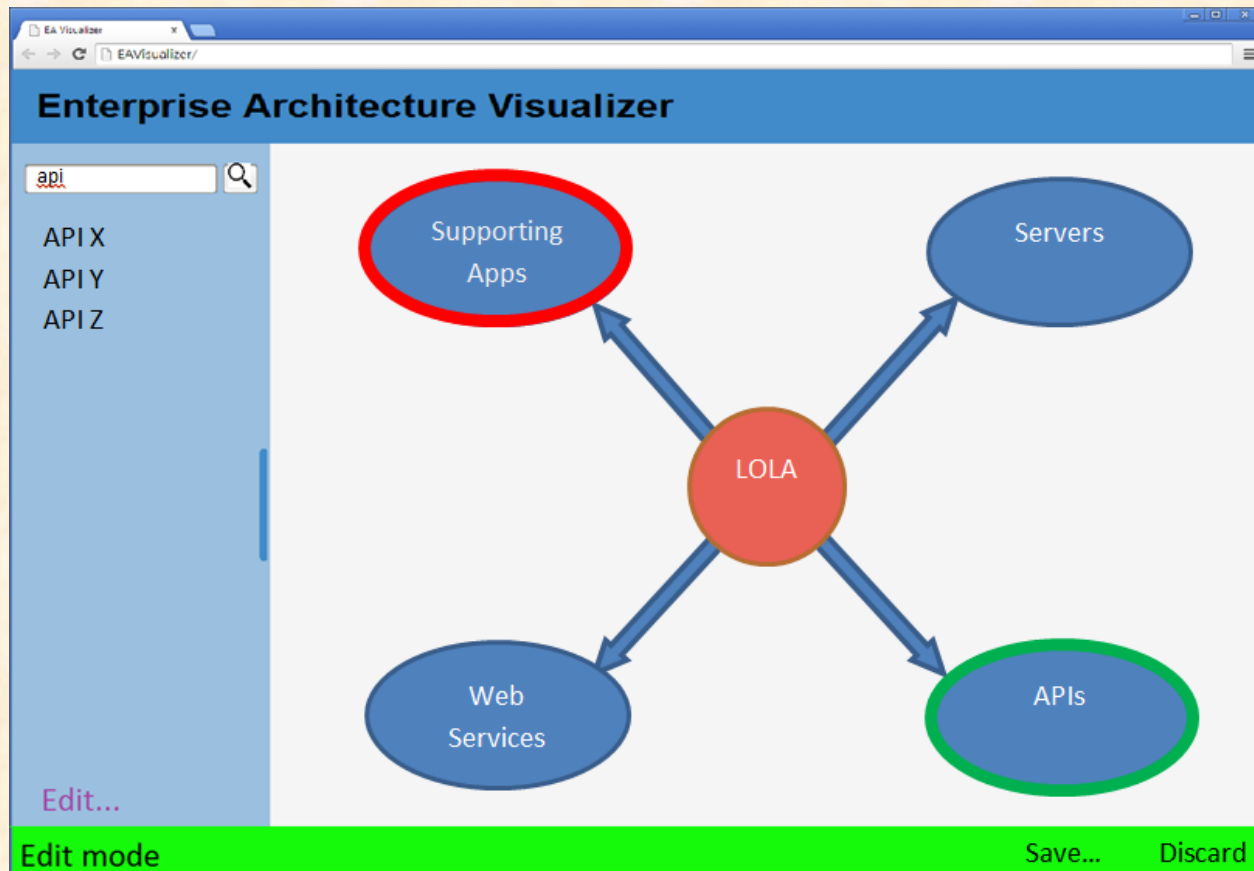
# Screen Mockup: Main page



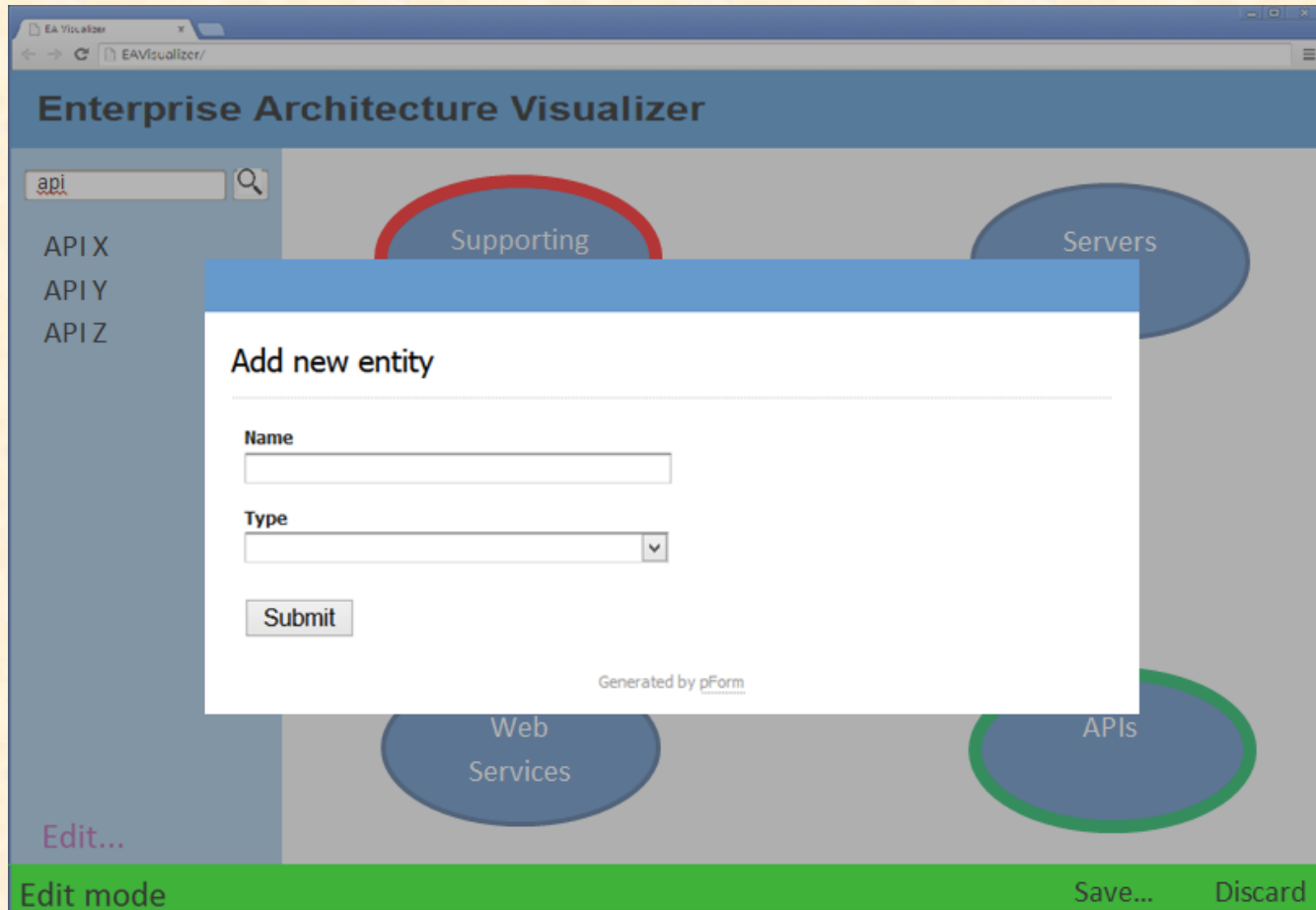
# Screen Mockup: Details



# Screen Mockup: Edit mode



# Screen Mockup: Add new entity





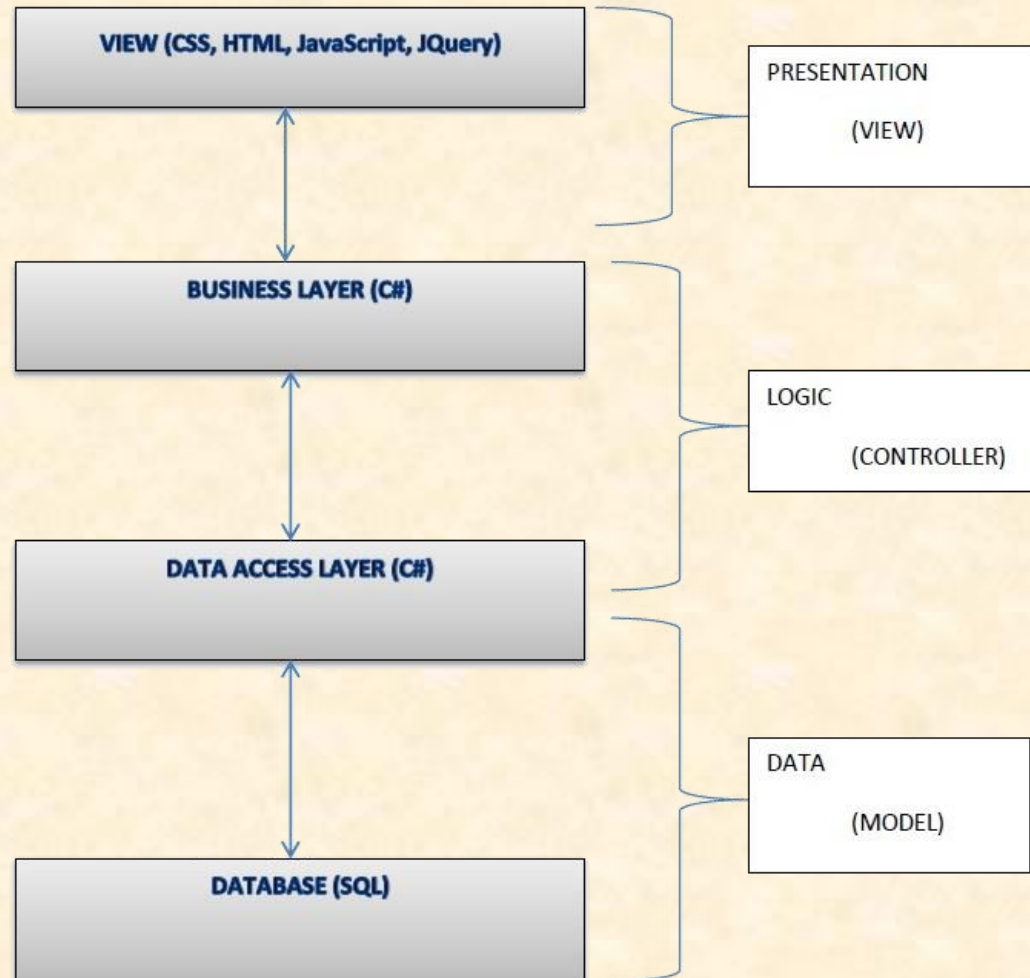
# Technical Specifications

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- The application will use a classical three-tier architecture as depicted in the next slide.
- The front end of the MVC 4 web application will use ASP .NET framework and utilize HTML, CSS, JavaScript and JQuery.
- The backend database of the application will be built using Microsoft SQL 2008.
- The team will use Microsoft Team Foundation Server for source control.
- The application will be hosted on Microsoft Internet Information Services.



# System Architecture



# System Components

- Hardware Platforms
  - Workstations: iMacs, running Windows 7 VM
  - Server: Dell Poweredge R210
- Software Platforms / Technologies
  - Microsoft SQL server 2008 R2
  - Team Foundation Server 2012
  - Visual Studio 2012
  - Microsoft Internet Information Service 7
  - HTML, CSS, Javascript, C#



# Testing

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- Functional testing:
  - Built-in Visual Studio Unit Test Framework
- Manual testing
  - Focused on Chrome browser for testing front end, with Internet Explorer and Safari as second priority
- Selenium
  - Used to test front end



# Risks

- Risk 1: High priority, high difficulty
  - Simplistic way to visualize a vast number of dependencies and applications
  - Mitigation: Client approved initially design, but unsure if testing will reveal more needs.
- Risk 2: High priority, medium difficulty
  - Implementing past and future state of the dependencies map
  - Mitigation: Research online resources and develop a strong database to handle multiple states
- Risk 3: Medium priority, medium difficulty
  - Portability from our system to theirs
  - Mitigation: Application will be standalone. A possible feature in the application may be a button to connect to a server.

