Project Plan
Visual Hierarchy Selection

The Capstone Experience

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Project Overview

• User-friendly Visual UI
  ▪ Displays the hierarchy in a rows in which each row has a series of items with text and photos.
  ▪ Replace current text based tree structure

• Quick search function
  ▪ Ability to search for a single node within the tree
Functional Specifications

• Search
  ▪ All-Level
  ▪ Current Level

• Navigation
  ▪ Mouse/touchscreen or keyboard
  ▪ Scrolling

• Appearance
  ▪ Pictures & Text

• Items
  ▪ Each item can fall into multiple categories as well as be a category within itself
Design Specifications

• Appearance
  ▪ Tree will be displayed in an overlay
  ▪ Categories will appear in rows
  ▪ Rows will shift up as the user navigates across categories
  ▪ The selected item/category will be displayed in the center of the overlay
  ▪ Quick search bar
Screen Mockups
Screen Mockups
Technical Specifications

• Server
  ▪ ASP.NET web component
  ▪ Responds to AJAX queries
  ▪ Retrieves information from SQL database

• Client
  ▪ HTML5 Canvas in an overlay
  ▪ JavaScript to draw the UI
  ▪ Uses local storage to cache data
System Architecture

![Diagram showing system architecture with HTML5 enabled browser communicating with ASP.NET server and database server through JSON data and AJAX requests. The Internet acts as a中介 connecting all components.]
System Components

• Hardware Platforms
  ▪ ASP.NET Server
  ▪ HTML5 compatible browser
  ▪ SQL Database

• Software Platforms / Technologies
  ▪ ASP.NET
  ▪ HTML5
  ▪ JavaScript
Testing

• Browser compatibility testing
  ▪ Graceful failure
• Speed testing
• Large data sets
  ▪ Many level hierarchy
  ▪ Many items on each level
• Multiple input methods intuitive
  ▪ Keyboard
  ▪ Mouse
  ▪ Touchscreen
Risks

• Browser Compatibility
Making the component work with multiple browsers, including mobile browsers.

• Database Retrieval
Difficulty in retrieving information from the databases could vary depending on the sizes of the databases.

• HTML5 and ASP.NET
Web development is unfamiliar.