

# **New Millenium Building Systems Estimate**

Nick Amor, David Hoot, AJ Karnitis,  
Danny Martin, Alex Myers, Shelby Timbrook

# New Millenium Building Systems

- New Millenium Building Systems is trusted as the preferred provider for steel joists, castellated beams and metal decking
- [www.NewMill.com](http://www.NewMill.com)

# New Millennium's Need

- Web application for NMBS estimators that will replace an Excel based workbook
- Application that allows estimating the overall cost of the materials the company can supply for a project

# Project Goal

- Create a web application to easily allow estimators the ability to create and modify different levels of an estimate
- Estimate Structure:
  - Estimate
    - Bid
      - Joist
      - Deck
      - Bridging
      - Accessory

# Idea

- Online web form using MVC 4
- Separate the application based on the different types of materials
- Store the estimates in a Microsoft SQL database
- This application is for internal use only

# Planning

- Met with David Hauze
- Examined the currently existing Excel workbooks
- Contacted the employees at New Millenium for clarification on the structure and functionality of the workbooks

# Database Construction

- Designed structure based upon the current Excel worksheets
  - Modified the design to fit desired functionality
- Stored dimensions in terms of millimeters
- Converted our design into scripts that can efficiently create the database

# User Interface

- Experimented with various methods for displaying forms and settled on a modified MVC approach
- Each object has an index page and a details page.
  - The index page lists all of the items of a specific type.
  - The details page lists the details of a specific item and all of its children items.



# UI Example

## Estimates

	Job Diff.	Type	Name	Location	Bid Date	Customer	Delivery Date	NetUplift	Joist Spacing	Joist Deflection	Girder Deflection	Eng/Arch	Estimator	Drawing Location
<a href="#">View</a>	3	Budget	America	America	1/3/2013 12:00:00 AM	America	1/1/2013 12:00:00 AM	14 psf	12 psf	LL: L/240 TL: L/360	LL: L/240 TL: L/360	America	An American	1
<a href="#">View</a>	4	Budget	Estimate Numero Uno	Warez, Mexico	5/1/2013 12:00:00 AM	San Pablo	5/31/2013 12:00:00 AM	15 psf	12 psf	LL: L/240 TL: L/360	LL: L/240 TL: L/360	CLAYCO	George	Office

[Create](#)

[Estimates](#) -> [America](#)

## Estimate

Name	<input type="text" value="America"/>	Job Difficulty	<input type="text" value="3"/>
Type	<input type="text" value="Budget"/>	Location	<input type="text" value="America"/>
BidDate	<input type="text" value="2013-01-03"/> <input data-bbox="562 853 658 872" type="text" value="8:00 AM"/>	Customer	<input type="text" value="America"/>
DeliveryDate	<input type="text" value="2013-01-01"/>	Net Uplift	<input type="text" value="14 psf"/>
Joist Spacing	<input type="text" value="12 psf"/>	Deflection Limit - Joist	L/ <input type="text" value="240"/> L/ <input type="text" value="360"/>
Deflection Limit - Girder	L/ <input type="text" value="240"/> L/ <input type="text" value="360"/>	Engineer or Architect	<input type="text" value="America"/>
Estimator	<input type="text" value="An American"/>	Drawing Location	<input type="text" value="1"/>

[Update](#)

[Delete](#)

## Bids

	Name	Description
<a href="#">View</a>	Base	the base bid.
<a href="#">View</a>	Alternate1	The first alternatel

[Create](#)

# Data Access

- Implemented a basic CRUD (Create, Read, Update, Delete) interface for each level of an estimate
- Verified that data integrity was maintained when modifying records

# JQuery

- Ensures that the data is displayed with the correct formatting
- Handles asynchronous loading on forms
- Forms the objects sent to the controllers

**Live presentation**