

**MICHIGAN STATE**  
**UNIVERSITY**

# Project Plan

## Food Safety Audits and Reports

### The Capstone Experience

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

# Project Overview

- Food Safety Auditors currently use paper forms for internal and external audits
- These Forms are currently hand entered into a company database using a decade old GUI
- Internal audits should be done over a web application
- XML file produced from web app will be used in updated GUI
- GUI must also be able to accept hand entered external audits from 3<sup>rd</sup> parties such as the FDA and USDA.



# Functional Specifications

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- Automate Internal Audit process with web app
- Assist in External Audit data entry
- Provide sortable statistics
  - Region
  - Market
  - Store
  - Food type



# Design Specifications

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- Meijer auditors have mobile device to fill out internal audit forms
- External audits will be reported through current paper forms
- Internal audit XML file will auto fill in GUI
- Reports and statistics using SQL information will be generated





# Screen Mockup: Inspection Screen 2

Non Critical Descriptions

Seizure Descriptions

Sample Descriptions

Other Descriptions

Dropdown Values

Agency

State Department of Agriculture

County Health Department

City Health Department

Weights And Measures

USDA

Meijer

Other

InspectionType

30-Day

Complaint

Consultation

Follow-Up

Foodborne

Garden Center

Opening

Pre-Licensing

Pricing/Weights Standard

Temporary

Cool

Egg Board

Seizure

Vendor

Internal Audit

Sample

Other

Temp Control

Hot holding

Cold holding

Cooling procedures

Reheating procedures

Out of temperature foods

Out of temperature equipment

Out of temp deli

Prepackaged

Other

Cleaning/Sanitizing

Cleaning of food surfaces

Cleaning of equipment

Storage of chemicals

Sanitizing techniques

Chemicals misuse

Mislabeling of sanitizer/chemical

Meat Grinder

Timely Cleaning

Other

Pest

Birds

Flies

Fruitflies/Gnats

Moths

Roaches

Rodents

Ants

Other

Hygiene

Hand washing

Glove use

Uniform

Hair restraints

Eating/Drinking w/

Other

Cross Contamination

Food handling

Food equipment

Food storage

Allergens

Food prep techniques

Mislabeling

Bare hand Contact

Drain Lines

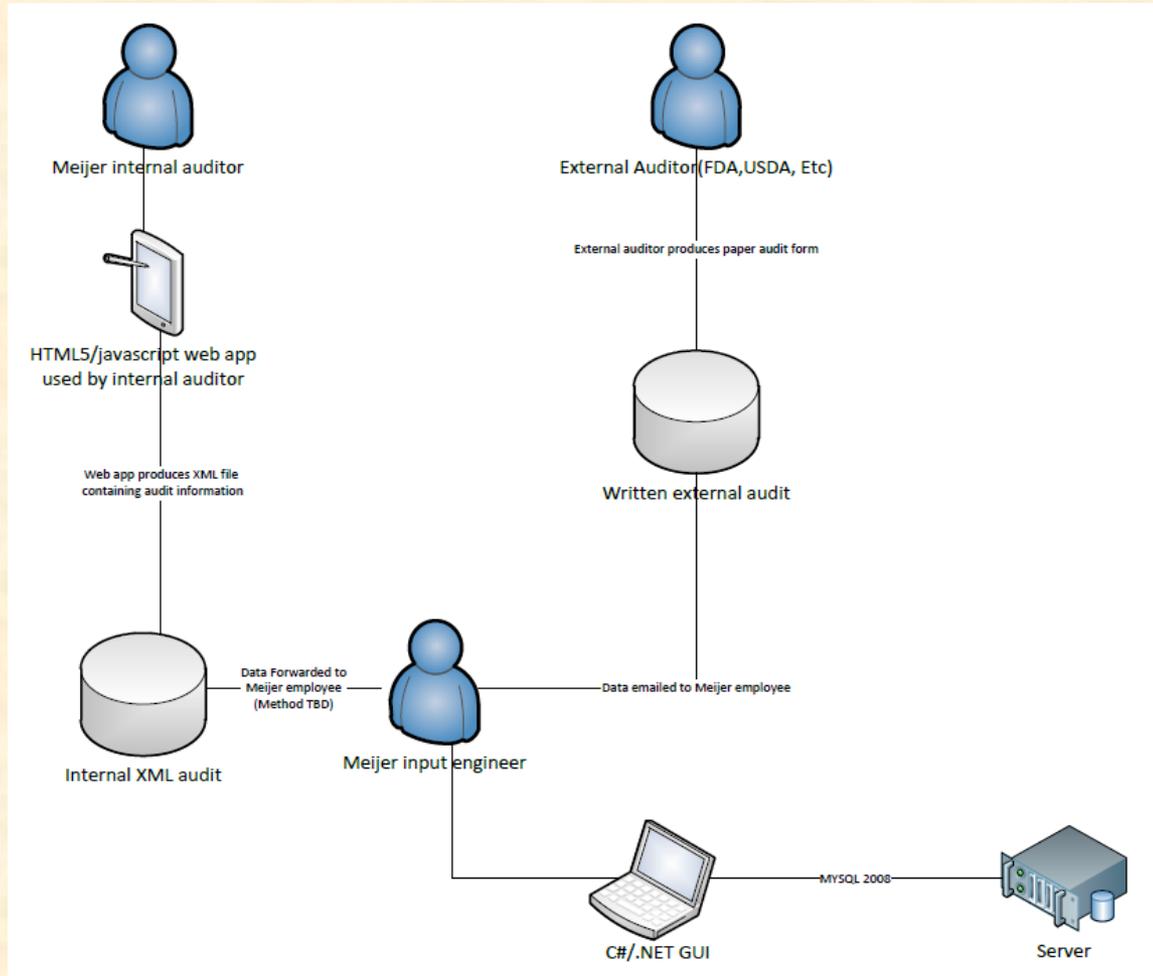
Other

# Technical Specifications

- Meijer employees use tablet to fill out internal audits through HTML 5/JavaScript based web app
- Web app generates specialized audit file to be used with GUI
- Streamline external audit entry through GUI created with C#/.NET
- Communicate through database using SOAP(Simple Access Object Protocol)
- Create reports using SSRS(SQL Server Reporting Services) in GUI



# System Architecture(Adobe PS Sunday)



# System Components

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- Hardware Platforms
  - ASUS PC Tablet
  - Windows 7
- Software Platforms / Technologies
  - MYSQL 2008
  - SOAP
  - C#/.NET
  - SRSS



# Testing

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- Past audits to be used as test cases
- Speed test for effectiveness(old vs. new)
- Cross browser testing(Heavy on the IE )
- Report and statistics generation
- User friendliness



# Risks

- Risk 1
  - Lack of experience with SOAP
  - Learn from tutorials
- Risk 2
  - No experience with Server Reporting Services
  - Discuss expectations with client
- Risk 3
  - Testing web app through both tablet browsers
  - Manage time effectively, allow more time for testing
- Risk 4
  - Two new customers to report to.
  - Increased amount of meetings.

