

**MICHIGAN STATE**  

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**U N I V E R S I T Y**

**Project Plan**  
**In-Store Price Compare**  
**The Capstone Experience**

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Fall 2015



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

# Functional Specifications

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- Improves Meijer customer experience
  - Easily compare prices to other stores
- Allows Meijer to better understand what customers are looking for
  - Analyze scanning habits of customers
  - Give insight into competitor pricing



# Design Specifications

- Mobile Application
  - Scans barcode
  - Compares Meijer price to other third party store prices
  - Potentially generate coupons to make up for price difference
  - Store results on server
- Web Interface
  - Analyze what items are scanned often
  - Price differences between Meijer and competition
  - Graphs, tables visualizing various data



# Screen Mockup: Mobile Application

**meijer** Price Compare

**meijer**

Email address or mPerks Phone Number

Password

Sign in

Skip log in and scan >

**meijer** Price Compare

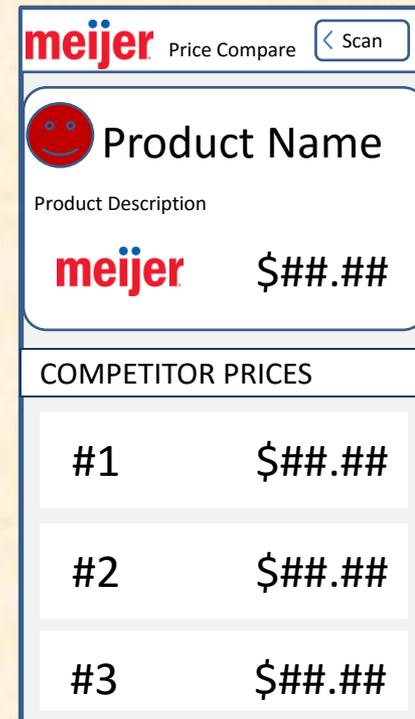
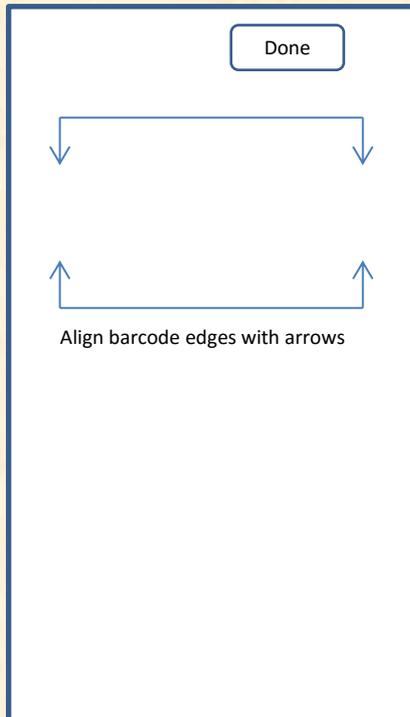
**meijer**

Hello, Customer!

Scan >

[Log Out](#)

# Screen Mockup: Mobile Application



# Screen Mockup: Web Login



meijer

Username:

Password:



# Screen Mockup: Web Data Display

 Logged in as \_\_\_\_\_

Location:

Sort by:

Product Name	Location	Time	UPC	Department	Meijer Price	Walmart Price	Best Buy Price	Target Price



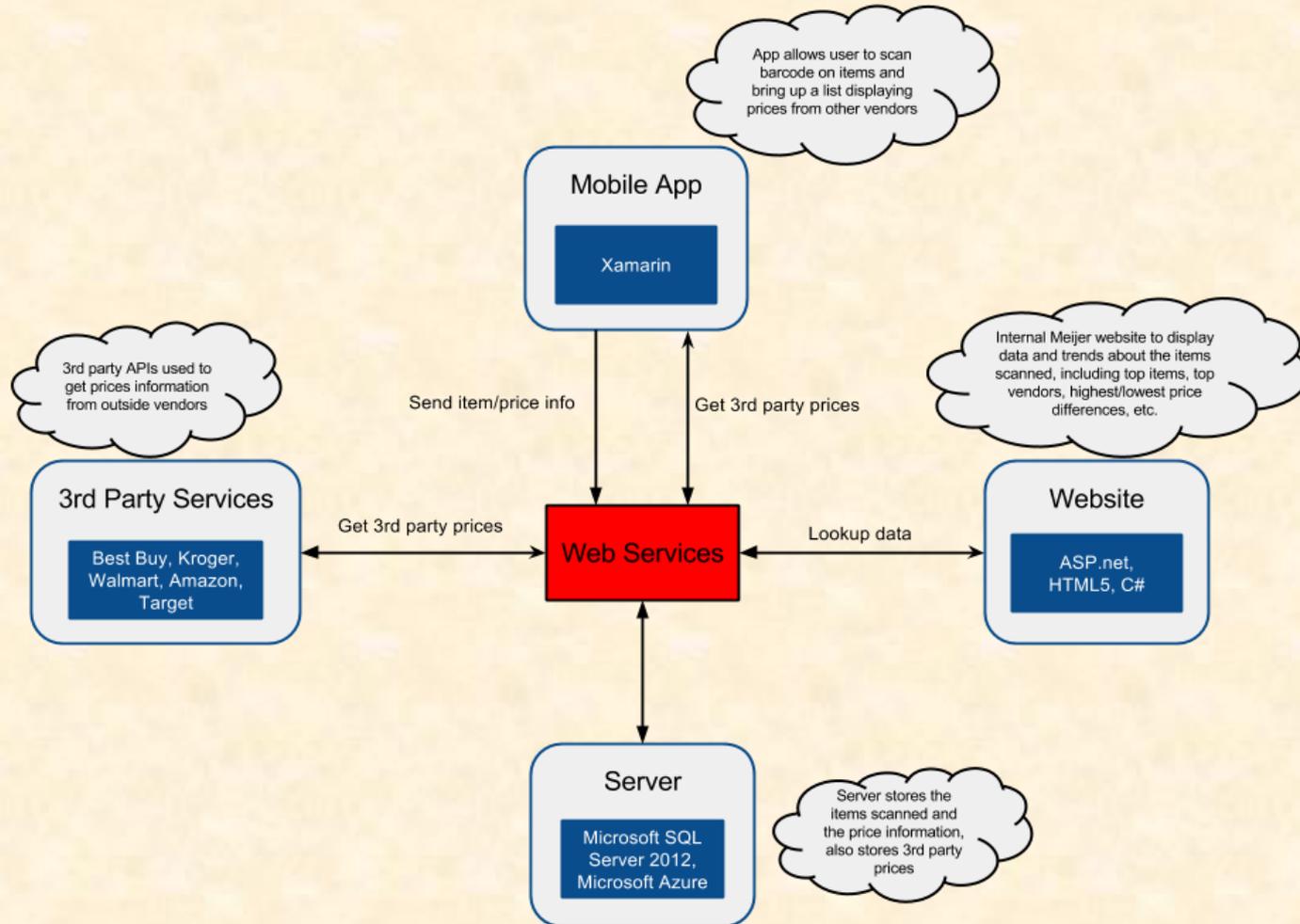
# Technical Specifications

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- Use Xamarin to develop iOS (and possibly Android) app
- SQL Server hosted on Microsoft Azure
- Web app will use HTML5/CSS, ASP.net
- 3<sup>rd</sup> party APIs to get prices from 3<sup>rd</sup> party vendors



# System Architecture



# System Components

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- Hardware Platforms
  - Apple Mobile Device
  - Server running Microsoft SQL Server 2012
- Software Platforms / Technologies
  - Xamarin
  - Windows Azure
  - Microsoft SQL Server 2012
  - GitHub – Source control
  - HTML5, ASP.net



# Testing

- 3<sup>rd</sup> party stores
  - Test that APIs can accurately return price given UPCs
- Mobile App
  - Scans items, displays all necessary prices
- Server
  - Create mock data to test requests to server
- Website
  - Login, different ways to display data



# Risks

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- iOS Development
- Connect app to database
- Comparing prices with third party stores
- Microsoft Azure

