

MICHIGAN STATE

U N I V E R S I T Y

Project Plan

Market Share Viewer Application

The Capstone Experience

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

Functional Specifications

- Collect and visualize market share and dealer statistics for marketing managers
- Drill down capability
- Role-based user hierarchy: global regional manager, country manager, CEO
- Administrative web interface with data upload



Design Specifications

- Application accessible via mobile tablet (Android & iOS) and web
 - Authentication
 - Landing Page
 - Market Share Stats View
 - Dealership Stats View
 - Admin Web Mode
- Administrative functionality accessible from web application



Screen Mockup: Authentication



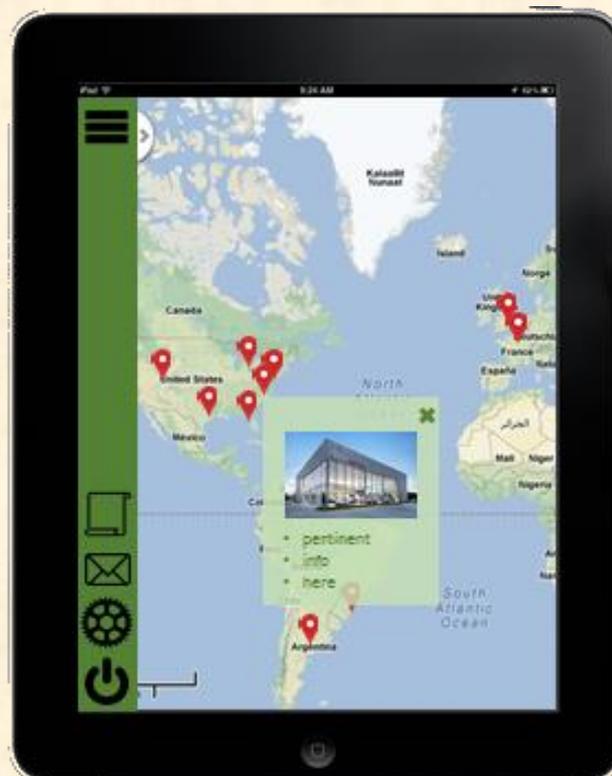
Screen Mockup: Landing Page



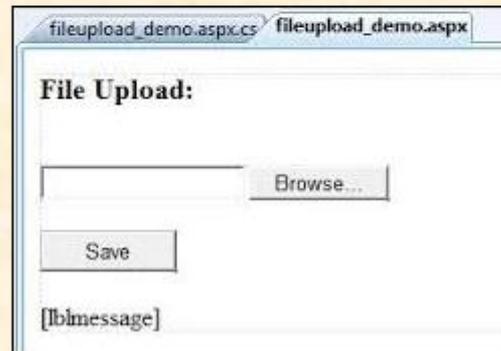
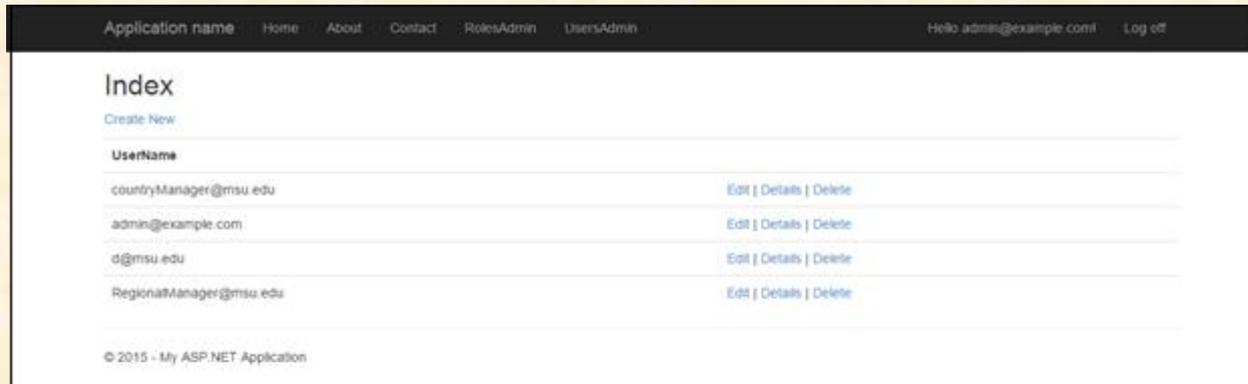
Screen Mockup: Market Share Statistics View



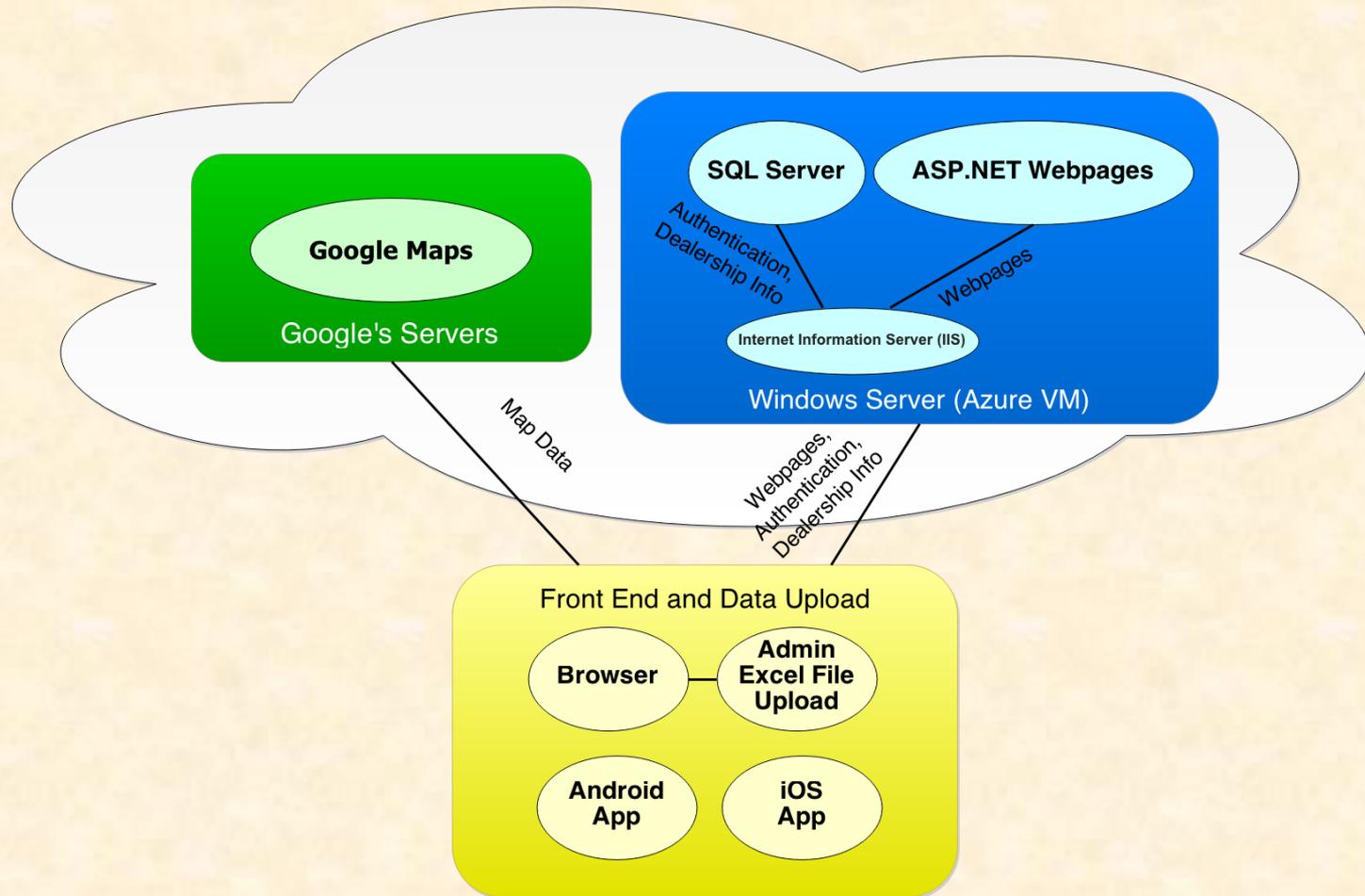
Screen Mockup: Dealership Statistics View



Screen Mockup: Admin Web Mode



Technical Specifications & System Architecture



Database Schema

Table: Dealership

<u>DID</u>	Brand	Telephone Number	Street Number	Zip Code	Street Name	Latitude	Longitude	Name
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Table: Brand

<u>BID</u>	Region	Country	Sales Group	Brand Name
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Table: Quarterly Sales

<u>QID</u>	Year	Quater	Sales
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Table: Join Brand and Sales

<u>BIDQID</u>	BID	QID
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Table: User

<u>UID</u>	Username	Password*
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Table: Roles

<u>RID</u>	Admin	Country Manager	Regional Manager
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Table: Join User and Roles

<u>UIDRID</u>	UID	RID
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System Components

- Hardware Platforms
 - Samsung Galaxy Tab 3 10.5" (Android)
 - Apple iPad 3 9.7" (iOS)
- Software Platforms / Technologies
 - Visual Studio 2013
 - Microsoft SQL Server 2012
 - Android Studio 1.02 / Xcode 6.1.1
 - ASP.NET MVC Framework
 - Google Maps API



Testing

- Authentication by user role
- Checking network traffic for secure data
- Extensive testing drill down and map view functionality
- Latency considerations



Risks

- Database Servers and Authentication Process
- Developing three applications on three different platforms
- Transferring data in easy-to-parse format to mobile applications
- Data visualization/design considerations

