MICHIGAN STATE
U N I V E R S I T Y

Project Plan
Mobile Whirlpool Product Catalog

The Capstone Experience

Team Whirlpool

Can Gokcek
Cam Merrill
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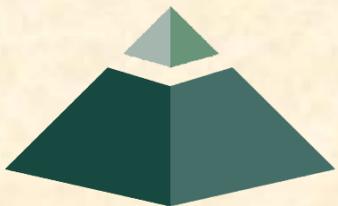Joseph Schoenherr
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From Students…
…to Professionals

Functional Specifications

- Mobile application for iOS and Android for Whirlpool vendors
- Catalog of Whirlpool appliances
- View detailed appliance specifications, photos, compare appliances, share appliances with customers through email, text message, Bluetooth
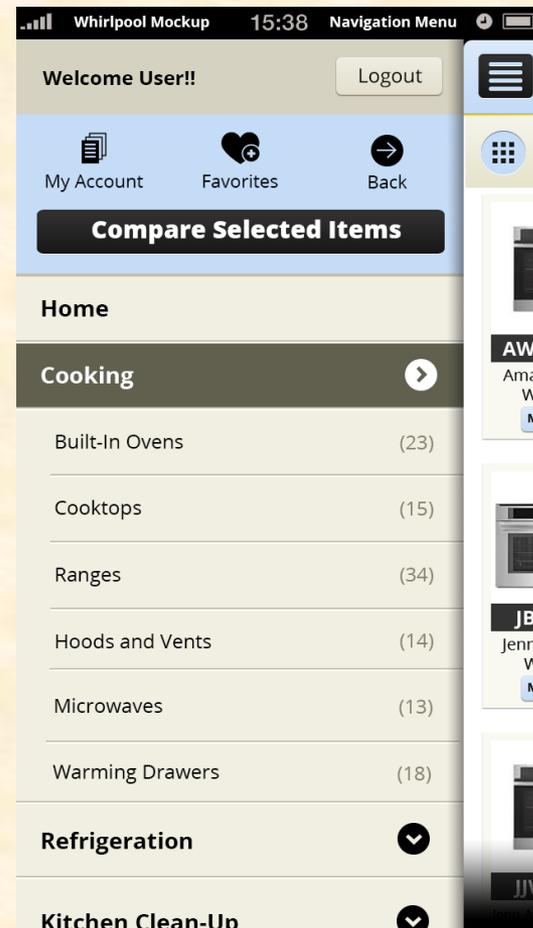- User able to log in and save products
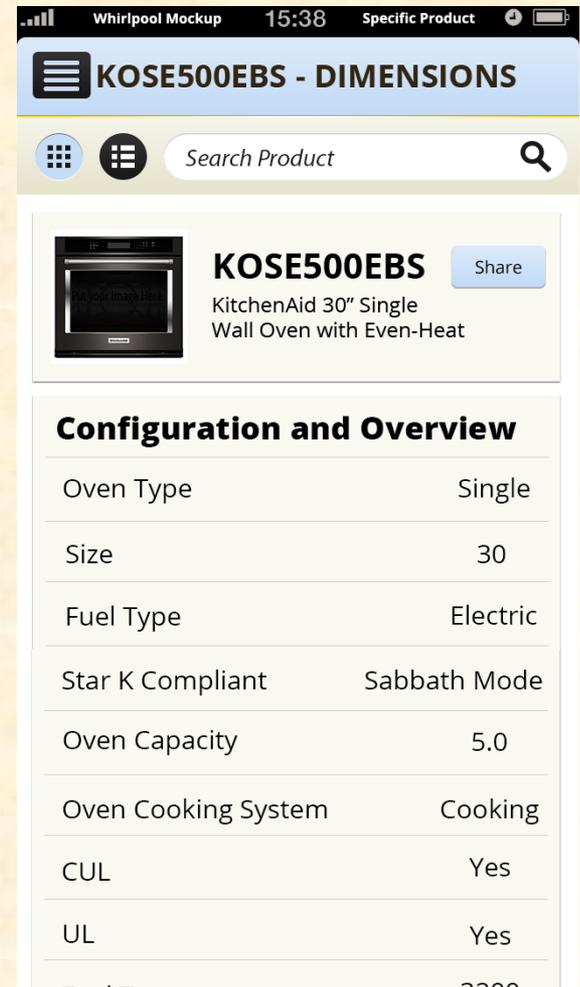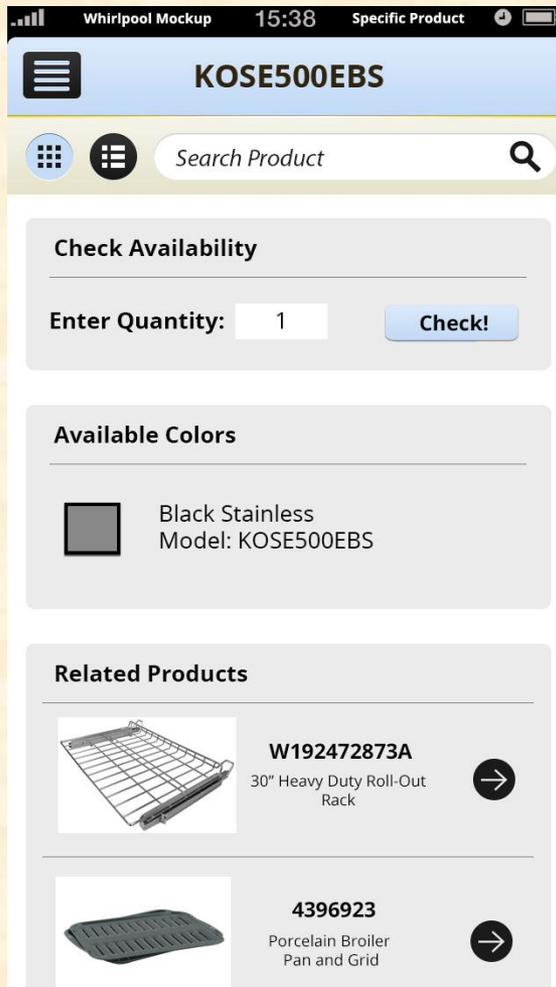
Design Specifications

- Adapt current Web World product catalog for mobile devices
- Intuitive design for non-technical users
- Quick navigation
  - Emphasis on speed
- Responsive design
  - Landscape and portrait modes for various devices
  - Adaptive information portrayal
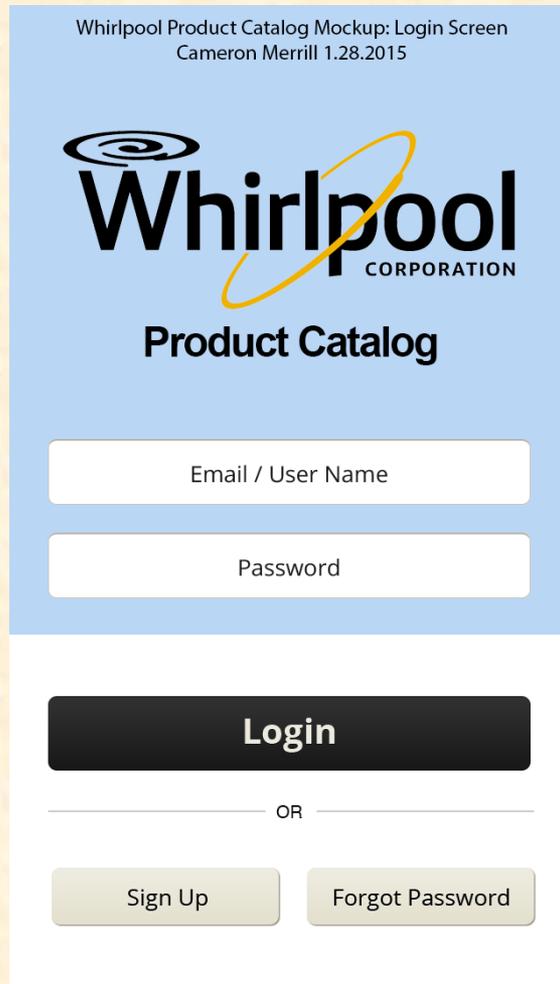
Screen Mockup: Grid View & Menu

Screen Mockup: Specific Product View
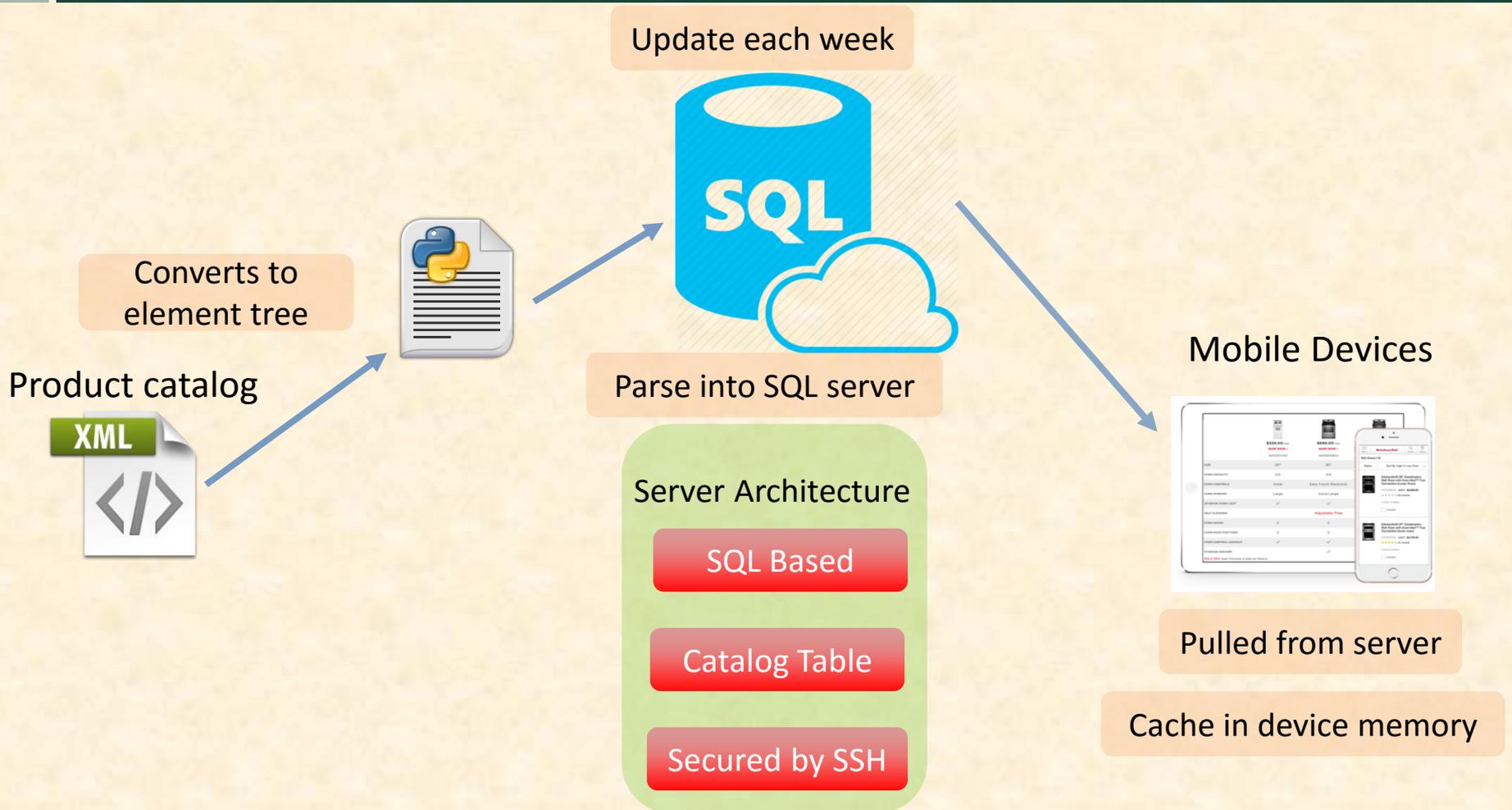
Screen Mockup: Login & Home

Technical Specifications

- XML parser

- SQL database

- Application pulls from database

- Responsiveness/latency
  - Image caching

System Architecture

Update each week

Converts to element tree

Product catalog

Parse into SQL server

Server Architecture

SQL Based

Catalog Table

Secured by SSH

Mobile Devices

Pulled from server

Cache in device memory

System Components

- Hardware Platforms
  - iPads & iPhones
  - Android phones and tablets
  - SQL database server
- Software Platforms / Technologies
  - SQL database
  - iOS 9 (84%) Android 4.1 Jelly Bean (81%)
  - Picasso and Haneke libraries for application image caching

Testing

- Rapid prototyping
- Unit testing
  - Android Studio
  - XCode
- MySQL Workbench
- Instrumented testing
- Field testing
  - In-store user walkthroughs

Risks

- Application Latency / Responsiveness
  - Mitigation: Image cache libraries for iOS and Android. Network calls used conservatively

- Non-technical Audience
  - Mitigation: Design with end users in mind, utilize Whirlpool partners in mockup iteration process. Thorough field testing.

- Whirlpool Catalog XML
  - Mitigation: Assign team member with backend experience to parse XML, prepare for storage in database.

- Developing for iOS with Swift
  - Mitigation: Online tutorials, Apple's documentation, books