DISD 2014

Taking DataFlex to Mobile

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Data Access Worldwide

www.dataaccess.com
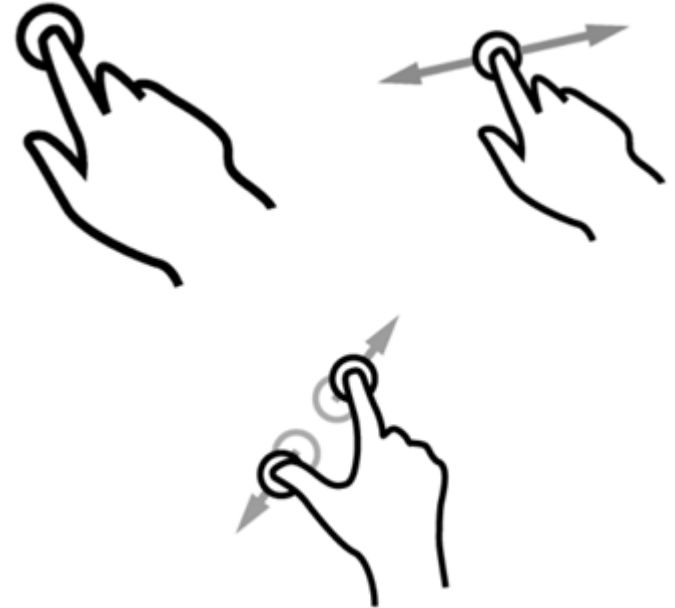
Devices

- Tablet
  - Touch screen
  - On-screen keyboard
- Mobile
  - Touch screen
  - On-screen keyboard
  - Limited screen space

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Differences

- Touch screen
  - Thick fingers
  - No hover
  - Swipe gestures
    - Zoom, pan, scroll, …
- Limited screen space
  - Especially on mobile
- Screen ratio
- On-screen keyboard

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Strategies

Native

- Greater functionality
- Mobile optimized
- Offline capability
- Best user experience
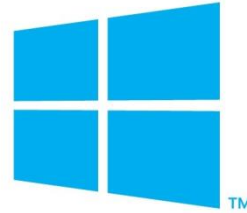

- Platform dependent
- Unknown technology

Browser

- Cross platform
- Easier to deploy
- Known technology

- No offline capability

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Native Apps

- Platform dependent
- Access local API's
- The best user experience
- Different programming environments
  - IOS (Objective C)
  - Android (Java)
  - Windows 8 (C#)
- Major investment!

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Browser Apps

- Single source for multiple platforms
- Centralized maintenance and deployment
- Known environment
  - HTML & CSS
  - JavaScript
- Smaller investment
- Quicker development

Mixed vs Mobile

- Mixed Browser App
  - Single WebApp for all devices
  - Low development & maintenance costs
  - Responsive technology
- Mobile Browser App
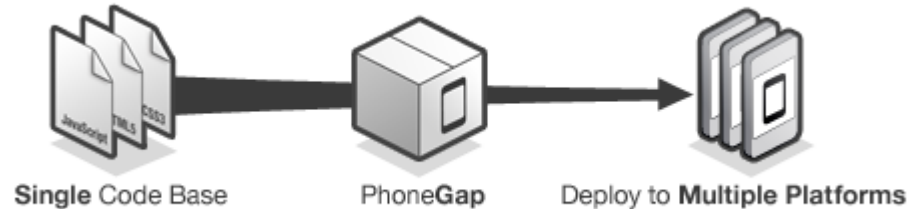 - Optimize for mobile devices
  - Use mobile frameworks

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Browser Frameworks

- Written in JavaScript

- Accesses DataFlex Web Services

- Use frameworks
  - jQuery
  - Sencha Touch
  - DHTMLX Touch

Phonegap

- Wraps a Browser App into a Native App
- Access native API's from JavaScript
- Generate for multiple platforms

Single Code Base   PhoneGap   Deploy to Multiple Platforms

Cases

- ## Existing Browser Application
  - Make accessible from mobile devices

- ## New Browser Application
  - Design for multiple platforms

- ## New Mobile Application
  - Design specifically for mobile devices

Responsive Layout

- Layout that adjusts itself to the horizontal screen space
  - www.educconference.com
  - www.visitlondon.com
  - www.itravelyork.info

Adjustments

- Navigation changes
- Items reposition
- Items resize
- Items disappear

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Breakpoints

- Screen width where layout changes
  - 320px (mobile portait)
  - **400 ----**
  - 480px (mobile landscape)
  - **600 ----**
  - 768px (tablet portait)
  - 1024px (tablet landscape)

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Case study: Using WebApp Framework on mobile devices.

MOBILE WEBORDER

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Case Study

- DataFlex WebApp on Mobile
  - Find inconveniences
  - Test improvements
  - Develop responsiveness

- Mobile version of good old Order Entry
  - http://localhost/WebOrderMobile_18/

Responsive in DataFlex

- Reduce piColumnCount
  - Controls get pushed to the next line
  - Controls grow relatively to the view size
- piWidth to 0
  - View stretches to the full width

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Event to implement

- OnWindowResize event
  - Triggered on initialization and on window resize
  - Triggers on oWebApp and on the view(s)
  - WebSet properties like piColumnCount, pbShowLabel, pbRender, …

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Added HTML Meta Tag

- Controls WebApp size & zoom
  - Prevents from rendering like a desktop
  - Initial zoom level reset
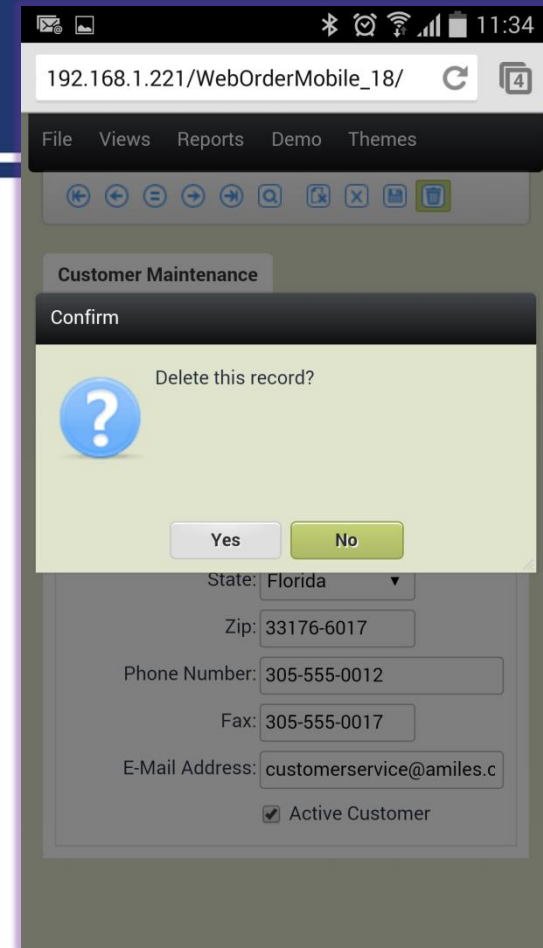 - Optionally restrict zoom (max-scale)

```
<meta name="viewport" content="width=device-width, initial-scale=1.0;">
```

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USABILITY IMPROVEMENTS

Modal Dialogs

- Panning dialogs while zoomed
  - Did not work
  - Forms disappeared behind the keyboard
- Improved centering logic
  - Orientation change pushed dialog off screen
  - More towards top on mobile devices

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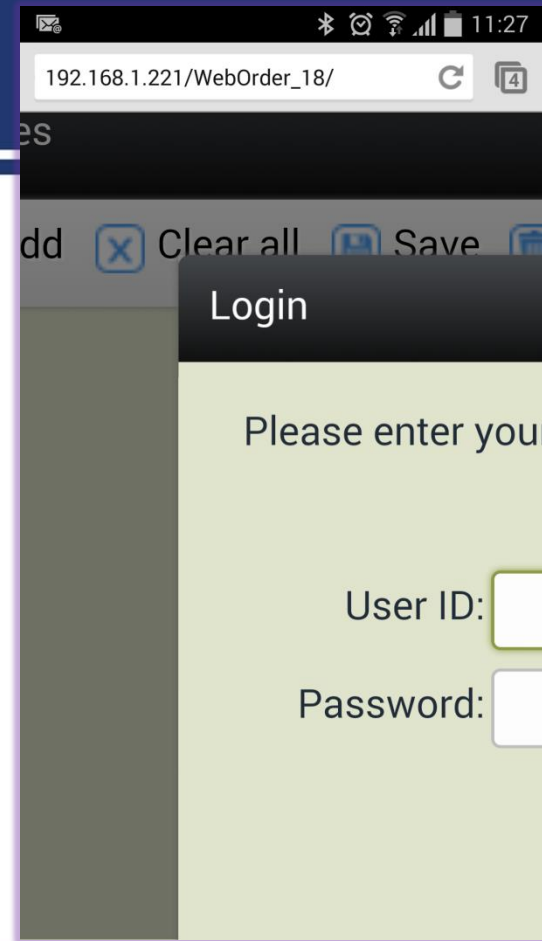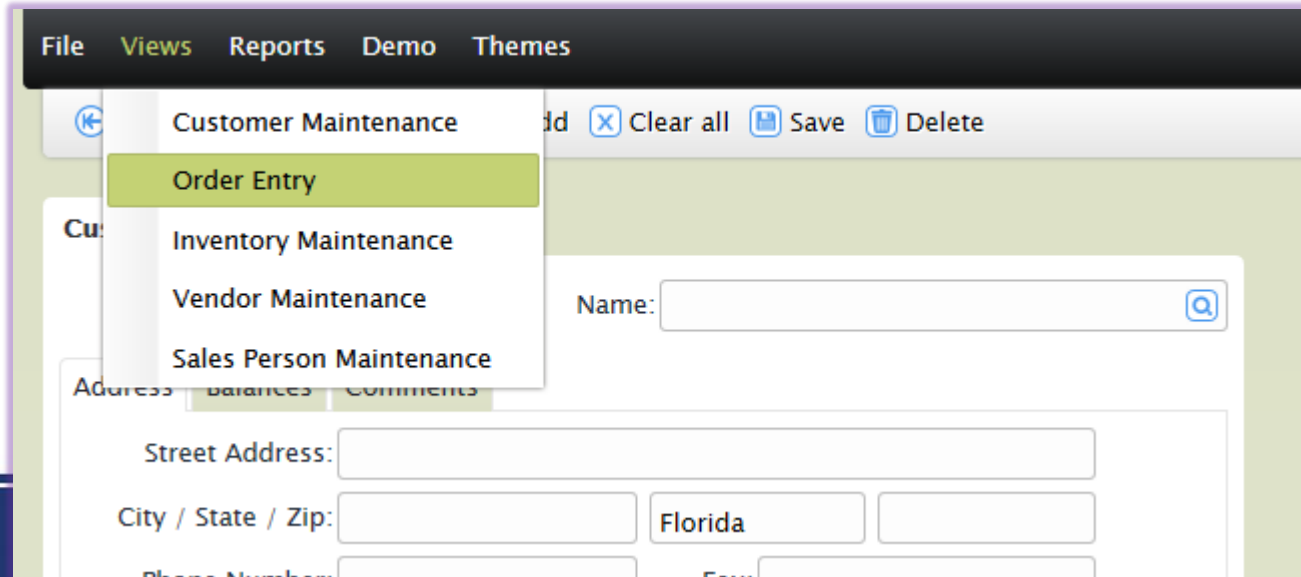
Message Boxes

- Adjust width to screen space

Prompt lists
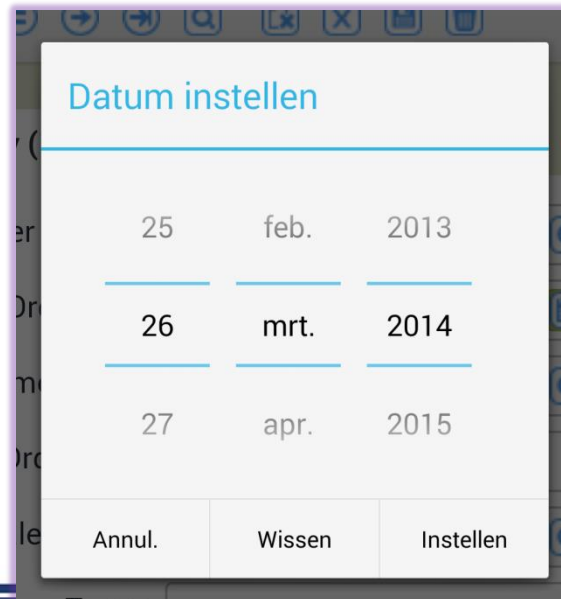
- Better focus handling
  - Caused a flashing keyboard
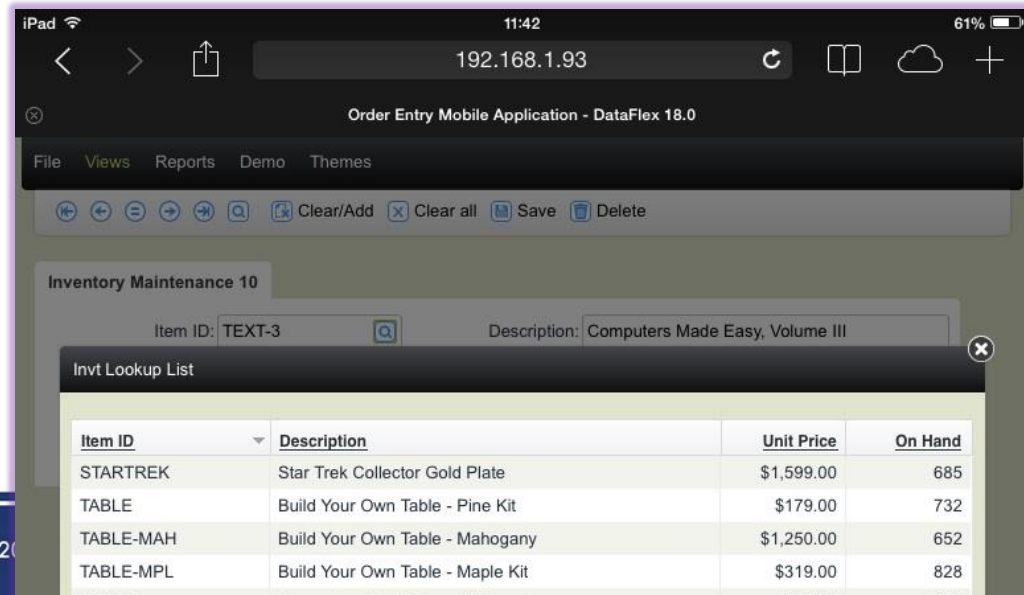
Menu

- Open on click
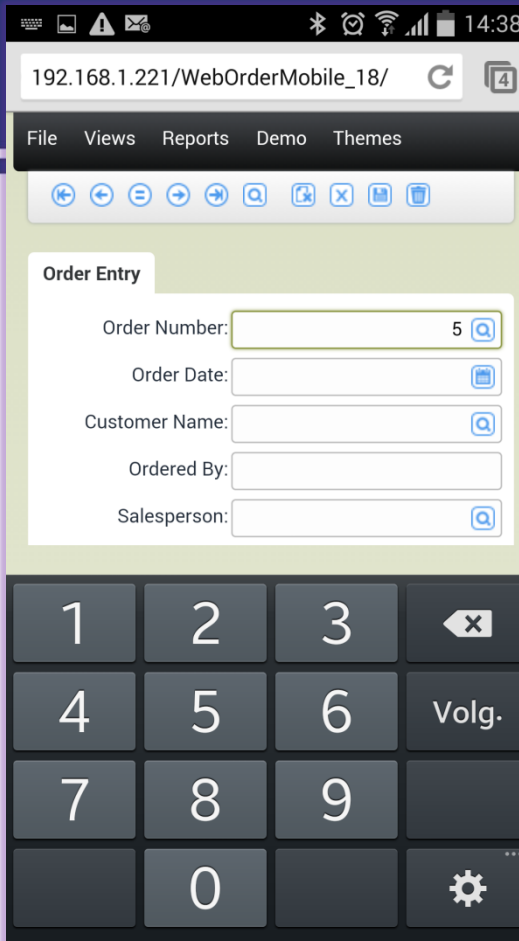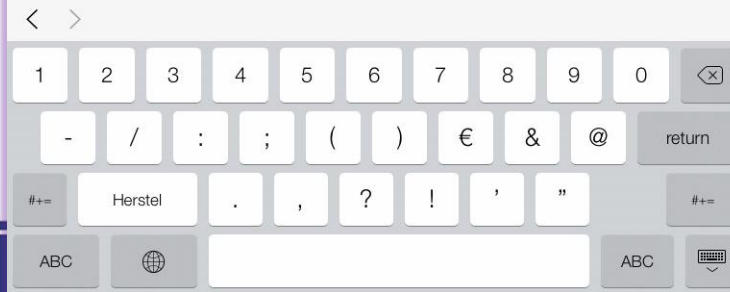   - cWebMenuBar - pbShowOnHover

Native date picker

- cWebDateForm - pbHtml5NativeOnMobile

Numeric Keyboard

- cWebForm – pbHtml5NumberOnMobile

Demo

- Website to attract new employees
- Submit job application online
- Manage applications in WebApp

- www.werkenbijdataaccess.nl

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Conclusion

- DataFlex WebApps will be the way to go for supporting Mobile Devices!

- First steps are made
  - Improvements in 18.0
  - Responsive concept

Research

- Mobile theme
  - Touch friendly
  - Mobile look
- More improvements
  - Navigation
  - Lists
  - Better responsive API's
- Some mobile controls

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I'll be around and would be happy to answer any specific questions you may have...

THANKS!

Harm Wibier