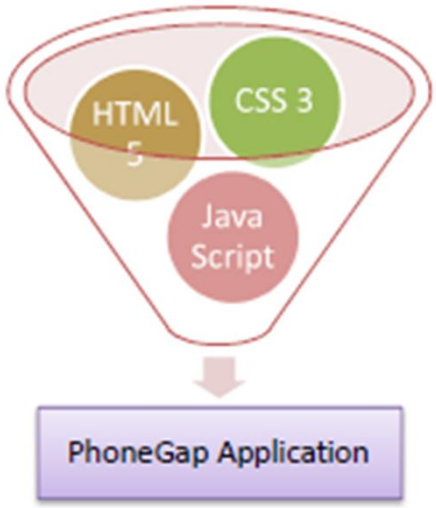
Developing apps with Smartphone Mobiliser

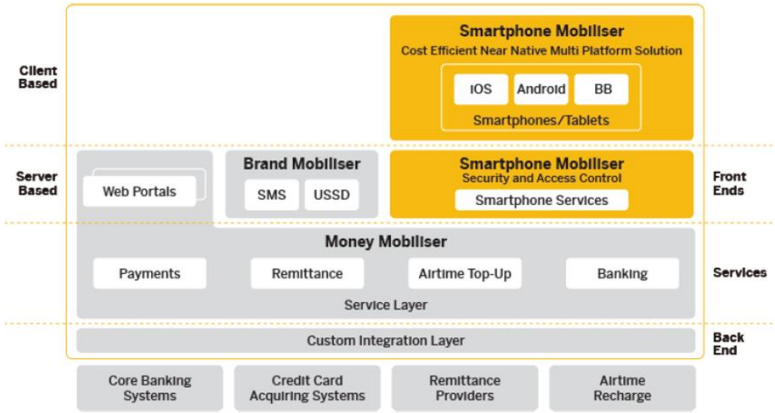
Mobiliser Smartphone Framework

- **A framework built on Adobe Phonegap**
- **Application built using HTML 5, CSS3 and Javascript**
  - HTML 5 to specific structure of layout of an app
  - CSS 3 to design the look and feel of presentation
  - Javascript to implement business logic for app
- **Application runs inside a web-kit based browser running inside the native OS**
  - Single code base, deploy to multiple platforms
- **Access to Mobile Device specific features**
  - Phonegap provides the wrapper layer implemented using native code, that provides hooks into mobile device features like geo-location, camera, accelerometer and contact book
- **Reference application come pre-built with all use cases pre-built in mobiliser platform**

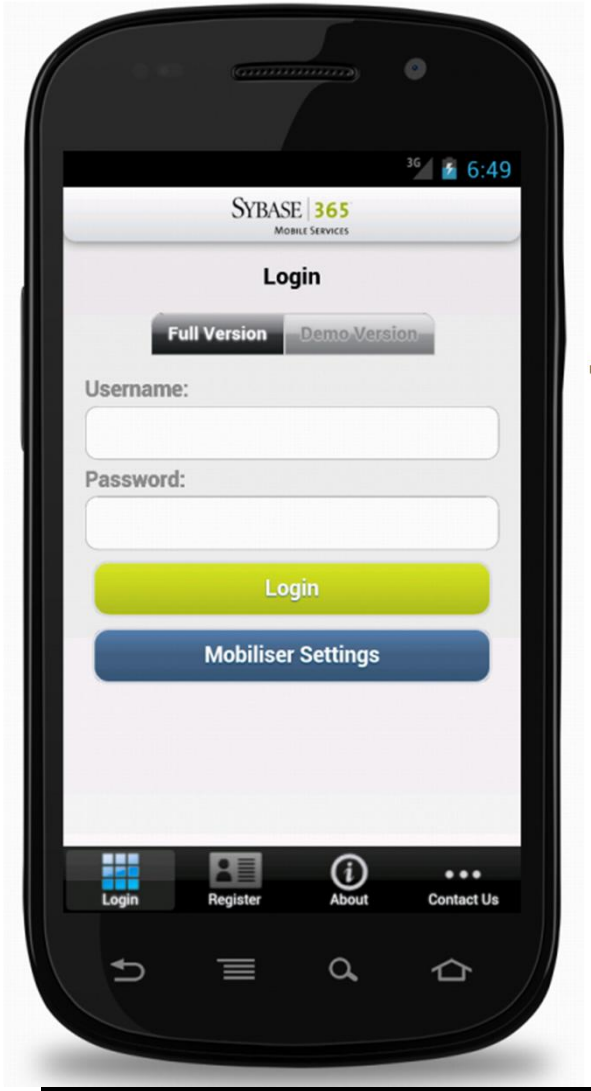


Key Benefits of the Framework

- Build Once deploy to multiple devices
  - Touch screeen smartphone apps for iPhone, iPad, Android and Blackberry
- Mobile Web Support
  - Easily leverage the same templates for mobile web
- Non-proprietary open technologies
  - HTML5, CSS 3, Javascript for rich user experience
- Multi-platform support
  - Provided by Adobe Phonegap
  - Cross Platform API based on W3C standards
  - Access to device functions like camera, geo-location from within Javascript
  - Plugins available to combine Javascript with native code for example – push notification, barcode scanner, Paypal, Facebook, NFC etc
- Fully functional reference application
  - with Mobiliser platform integration, that can serve as the starting point, reducing time to market



Application building blocks



Application specific files (HTML5)

index.html app.js app.css ext.js ext.css

Mobiliser JavaScript

serviceclient.js

SY_Transactions.js SY_Mobiliser.js SY_Data_Objects.js

Platform interface

phonegap.js

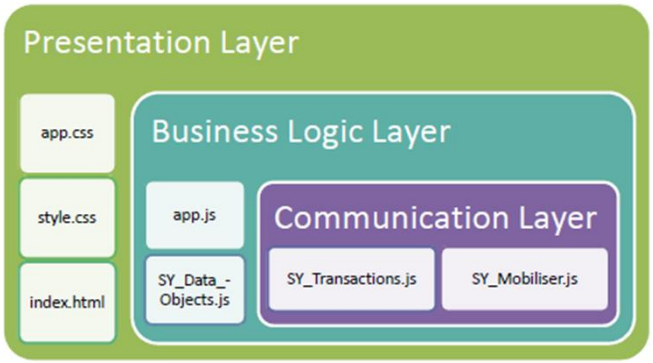
JS Libraries

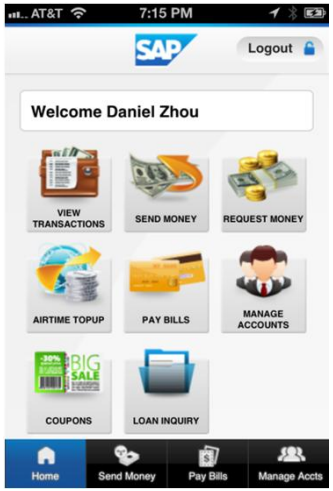
jQuery, jQuery Mobile

Mobile phone platform

Developing the App

- **Setup the environment**
  - Usually in eclipse IDE
- **Code in application layer divided into three logical layers**
  - Presentation
    - Design of the app
  - Business Logic
    - Specific app business logic
  - Communication
    - Communication with mobiliser
- **Pre Built main functions, out of the box with code**
  - Transaction Details
  - Send Money, Request Money
  - Airtime TopUp, PayBills
  - Manage Accounts, Coupons, Loan Inquiry





Development Environments for mobile

iOS

System required: Apple Mac running OSX Lion.

- Xcode 4 IDE
- https://developer.apple.com/devcenter/ios/
- Getting started with Phonegap in Xcode for iOS: http://www.adobe.com/devnet/html5/articles/getting-started-with-phonegap-in-xcode-for-ios.html

Android

System required: Windows PC or Mac or Linux

- Eclipse IDE
- http://developer.android.com/sdk/
- Getting started with Phonegap in Eclipse : http://www.adobe.com/devnet/html5/articles/getting-started-with-phonegap-in-eclipse-for-android.html

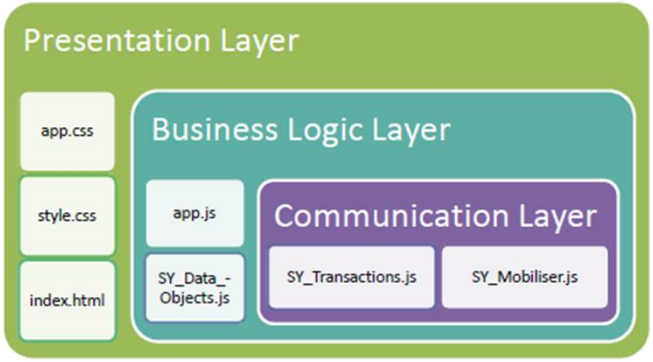
Blackberry

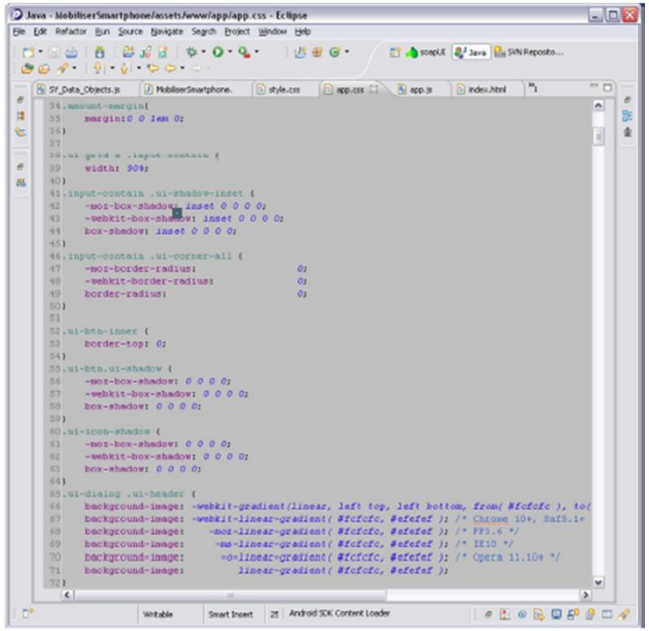
System required: Windows PC 32 bit ! (at least the Java SDK)

- Webworks
- http://developer.blackberry.com
- Eclipse IDE (32 bit !)..

Customizing the App

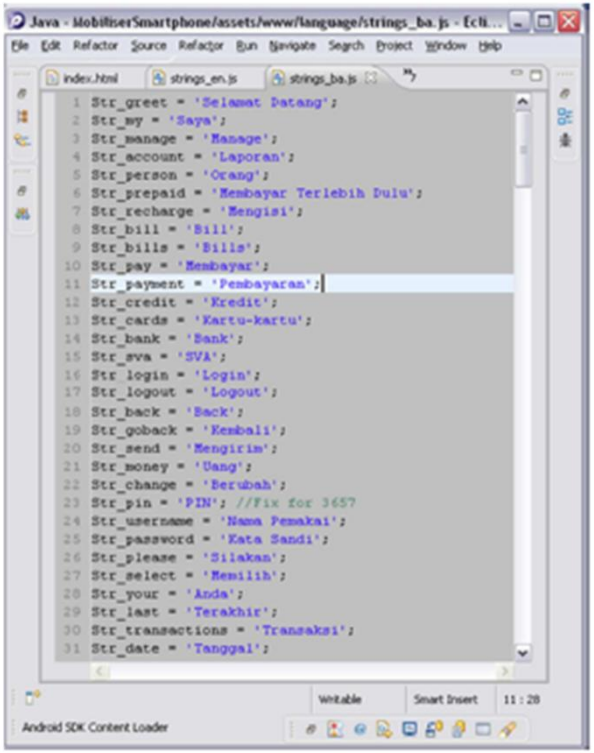
- **To rebrand the app with color and logos**
  - Developer works with files in presentation layer and modifies the CSS and HTML
- **Custom Functionality**
  - Using the files in business layer, one can change the way data is manipulated in addition to the presentation layer to achieve the look and feel
- **New custom mobiliser transactions and use cases**
  - Developer works with communication layer files so that new parameters and results of new transactions or use cases are understood
- **UI Package**
  - Framework uses jQuery mobile as the UI package to display widgets on pages. The framework allows use of other packages like Sencha





Localizing and Provisioning the app

- **Localization**
- Uses jQuery module for localization
- Different text for each language defined in a “language” folder
- File “strings_” holds text for all fields for that language – e.g. “strings_en” for english



- **Done through official distribution marketplace for each mobile platform**
- iPhone, iPad – App Store
- BlackBerry – App World
- Android – Android Market, Google Play Store

- **Securing the application**
- The app does not store any data on phone
- All app data is removed from phone memory when user finishes
- App runs inside a browser container which takes care of security through SSL

Application Screens – Pre Built with source code