Intro to Mobile App Development

Outline

This lunch n’ learn serves as a fast-paced introduction to the mobile app development space. We’ll walk through creating native mobile apps in all 3 major platforms in addition to creating cross-platform mobile apps with the Xamarin framework. The most frequently used back-end services and technologies will also be discussed. If time allows we’ll take a look at some of the production and in-development mobile apps being worked on here within the HDC.

Random number generator app – have people guess the number that’s generated, closest guess wins prize. – Bonus, make an app to track the guesses and tell u who’s closest ☺

Need something to give away, and a clever way to give it away

1. Backend web services
   1. Typically RESTful
   2. ASP.NET Web API
   3. Frequently JSON-based
   4. Lightweight & Fast!
2. Mobile Apps General Tenants
   1. NEVER BLOCK UI THREAD
   2. Multi-threaded & Asynchronous programming
   3. Responsiveness is critical (from a performance/feeling standpoint)
   4. Entirely different paradigm from web/windows development
      1. Size constraints (Small Screens) - Smaller screen size means less real estate to fit items and functionality
      2. Size constraints (interaction points, fields, buttons, etc) – Interaction points need to be much bigger….fingers and thumbs are much less precise than mouse pointers. So interaction points need to be bigger which exacerbates size constraints.
      3. Audience Inattention/Distractability –
      4. Apps need to have a distilled feature set that contains only what is absolutely necessarily functionality-wise. A clear and defined purpose.
   5. Discoverability and App Store Optimization
      1. OMG – App Name!
         1. Extremely important for visibility and app store optimization
         2. Be sure it includes 1 or 2 of your most relevant key words
         3. Give some examples of good and bad names
      2. Keywords
      3. Description
      4. Graphics, Videos, etc.
3. iOS Apps
   1. Tools needed
      1. Apple Developer License
         1. Cost
      2. XCode
         1. Cost
      3. Mac
         1. Cost
   2. Tour of app in XCode
   3. Display of app working in emulator
   4. Display of app working on device
   5. Publish app so that a volunteer can show it?
4. Android Apps
   1. Tools needed
      1. Google Developer/Play Store Account
         1. Cost
      2. Android Studio, IntelliJ or Eclipse
         1. Cost
      3. Windows, Mac, Linux, whatever…
   2. Tour of app in IntelliJ
   3. Display of app working in emulator
   4. Display of app working on device
   5. Publish app so that a volunteer can show it?
5. Windows Phone Apps
   1. Tools needed
      1. Windows Phone App Developer License
         1. Cost
      2. Visual Studio (Express?)
         1. Cost
      3. Windows PC (may change soon)
         1. Cost
   2. Tour of app in XCode
   3. Display of app working in emulator
   4. Display of app working on device
   5. Publish app so that a volunteer can show it?
6. Cross-Platform Apps with Xamarin
   1. Tools needed
      1. All platform-specific requirements except IDE
      2. Xamarin License
         1. Cost
   2. Tour of app in Xamarin Studio
   3. Display of app working in emulator
   4. Display of app working on device
   5. Publish app so that volunteer can show it?
7. If time allows – walk through IA Food Inspections, ITMPI App and Mobile Evaluations.
8. Giveaway
   1. Have people guess a number in the range, closest guess to the number generated wins!
   2. Give away Android Developer/Google Play Store License (value $25)
   3. Give away iOS or Windows Phone Developer License (1yr, value $99)