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.

1. Mobile Apps General Tenants
   1. 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 – App needs to be able to be stopped and started quickly. Can’t be a lot of overhead to access an use the functionality/features of the app.
      4. Apps need to have a distilled feature set that contains only what is absolutely necessarily functionality-wise. A clear and defined purpose. Simplicity, simplicity, simplicity, simplicity.
   2. Responsiveness is critical (from a performance/feeling standpoint)
   3. Multi-threaded & Asynchronous programming
   4. NEVER BLOCK UI THREAD
   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. Talk about Silencio vs Volume Master
      2. Keywords
      3. Description
      4. Graphics, Videos, etc.
      5. Review some ASO tools
         1. Searchman
         2. App Annie
2. Backend web services
   1. Typically RESTful
   2. ASP.NET Web API
   3. Frequently JSON-based
   4. Lightweight & Fast!
3. iOS Apps
   1. Tools needed
      1. Apple Developer License (for iOS)
         1. $99/yr (+tax)
      2. XCode
         1. Free!
      3. Mac
         1. NOT free :(
         2. Mac Mini - Recommend $699
         3. MacBook Air/Pro - Pro $1099
   2. Tour of app in XCode
   3. Display of app working in emulator
   4. Display of app working on device
   5. Show iTunesConnect
4. Android Apps
   1. Tools needed
      1. Google Developer/Play Store Account
         1. $25 registration fee (1-time)
      2. Amazon App Store Account (Optional)
         1. Free!
      3. Android Studio, IntelliJ or Eclipse
         1. Free!
      4. Windows, Mac, Linux, whatever…
   2. Tour of app in Android Studio
   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. Show Google Play Store Developer Console
   7. Show Android App Store Developer Console
5. Windows Phone Apps
   1. Tools needed
      1. Windows Phone App Developer License
         1. $19 (Individual), $99 (Company)
      2. Visual Studio (Express) w/ Windows Phone SDK
         1. Free!
      3. Windows PC (may change soon)
         1. You can figure this out
   2. Tour of app in Visual Studio
   3. Display of app working in emulator
   4. Show Windows Phone Store Developer Console
6. Cross-Platform Apps with Xamarin
   1. Tools needed
      1. All platform-specific requirements except IDE
      2. Xamarin License
         1. $25/mo - $999/yr
   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 (Android)
7. Giveaway
   1. Give away Google Play Store Gift Card (value $10)

Prezi Presentation - <http://prezi.com/dscwt-izoe67/?utm_campaign=share&utm_medium=copy>

Source on GitHub - <https://github.com/blinard/IntroToMobileAppDevelopment>