CS1320
Creating Modern Web and Mobile Applications
Lecture 22

Mobile Applications II
Structure of a NativeScript Application

- Display
- NativeScript Libraries
- JavaScript Event Handler
- NativeScript Page Handler
- Back End
- AJAX

Events
NativeScript Uses Familiar Concepts

- Code is all written in JavaScript
- Formatting
  - Done using CSS for the widgets, rather than widget properties
  - Much of CSS is directly usable
  - Layouts match the HTML/CSS frameworks you’ve used
- Page Contents
  - Done using templating ala VUE
  - Context provided as part of a page description
  - Can use VUE, REACT, Angular, … as well
- Common libraries
  - Fetch - basically the same as fetch in the browser
Creating a Mobile Application

- Start by understanding the pages needed
- Sketch those pages
  - What they might look like
  - Interactions on the page
  - Interactions between pages
- Implement the pages one-by-one
  - Map diagram to layout widgets
  - Using sample data at first
  - Then using real data
CD FINDER

• Show using airmedia
NativeScript Playground

• You can use a command line interface to create NativeScript apps
  o tns command with options to do various things
  o code or any other editor to edit files
  o If you are doing a large project, this is the way to go

• For simpler things (and even large things in addition to tns) use Playground
  o NativeScript Playground is a web-based development environment
  o Includes tie in to a mobile app to show the results as needed
  o Geared toward NativeScript development
Application Organization

- **File Structure**
  - Global files
  - Per-Page files
    - XML: description of the page display
    - CSS: CSS to format the page

- **Page Rendering**
  - Vue-like templates
  - User provided context (goes with the page)
File Organization for CD FINDER

• Pages
• Platforms
CD FINDER Home Page

• XML
• CSS
• JavaScript
Playground And the Phone

- Connecting Playground with the phone
- Showing Changes
CD FINDER CD List Page

- XML
- CSS
- JavaScript
- Determining what the input looks like
CD FINDER Details Page
CD FINDER Back End

- RESTful interface using fetch
- Node.js server to handle the request
- Using MONGODB from node
Next Time

- Monday 3/30: Cloud Lab
  - There will be a prelab out over break