

iPhone Dev Seminar

for CS 50 Vivek Sant December 7, 2008

Overview

- I. Getting started
- 2. Resources
- 3. Types of apps
- 4. Anatomy of an App
- 5. Objective-C
- 6. Hello World
- 7. A Calculator

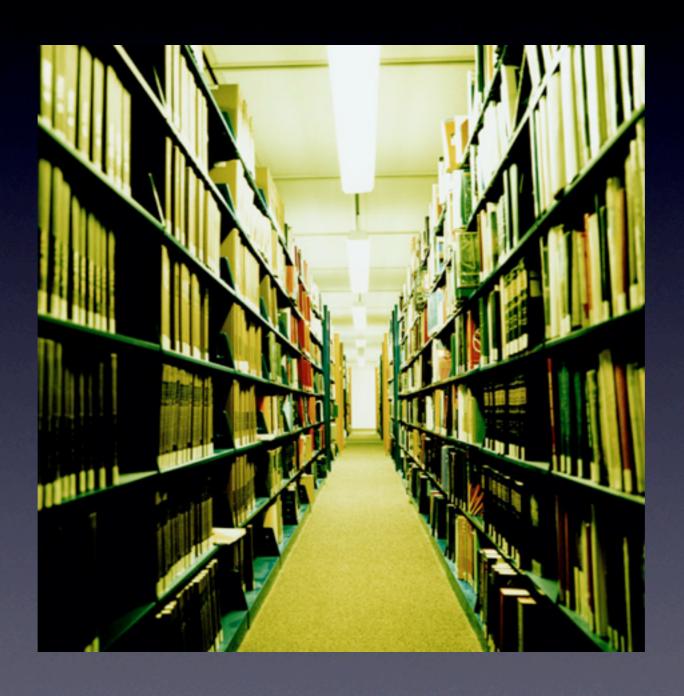
1. Getting Started



Getting Started

- Must have OS X Leopard
- Sign up for free Apple Developer account
- Download SDK (http://developer.apple.com/iphone/)
- Start messing around with examples!

2. Resources



Resources

- Apple
 - http://developer.apple.com/iphone/
 - https://developer.apple.com/webapps/
- Stanford's iPhone class
 - http://www.stanford.edu/class/cs193p/
- Google (it's getting better)

3. Types of Apps

- Web app (website)...business as usual...with a few adaptations
- Traditional "iPhone app" coding in Objective-C

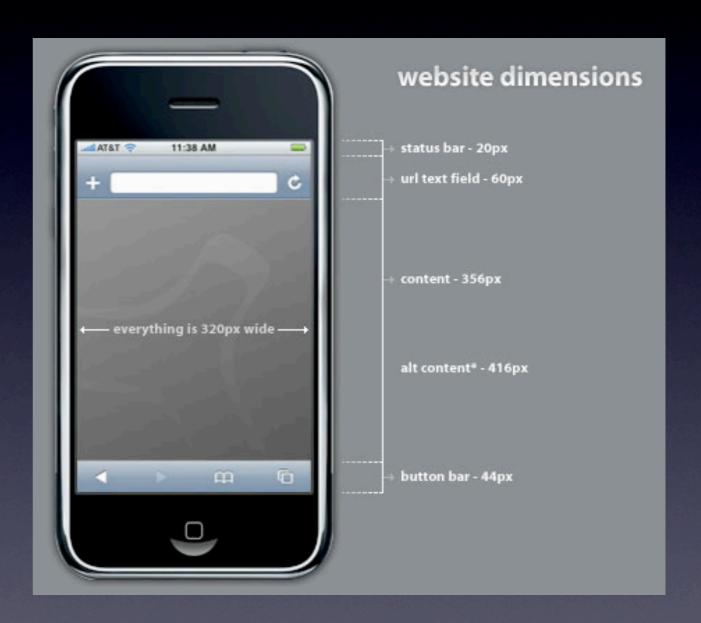
I. Page width = 320px

Can limit this during dev:

```
<meta name="viewport"
  content="width=320" />
```

Or for even more control,

```
<meta name="viewport"
  content="width=320;
  initial-scale=1.0;
  maximum-scale=1.0;
  user-scalable=0;" />
```



2. Page height = 356px

You can gain 60px by hiding the address bar with:

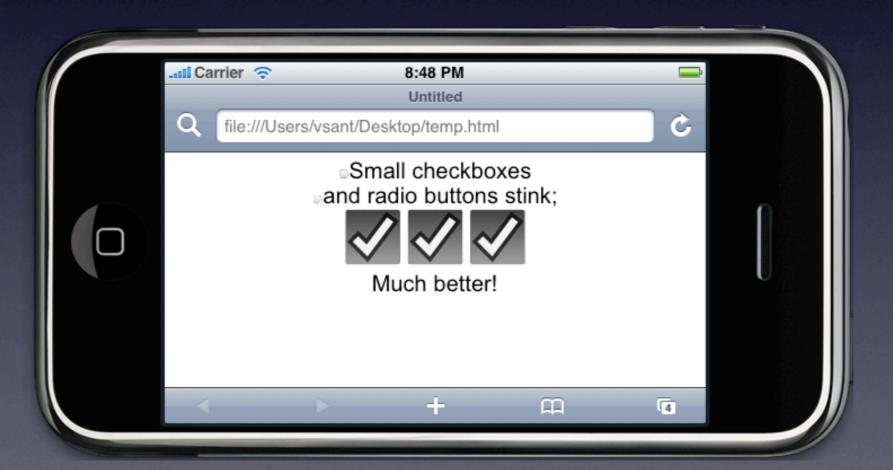
```
<script type="application/x-
javascript">
  function hideAddressBar()
  { window.scrollTo(0,1); }
</script>
```

But generally don't worry about height



3. Big form controls!

Safari on iPhone: can specify w,h for radio and checkbox



- 4. Nifty animation
- Fit with iPhone's theme
- Too much js = long load time; caution: body onload may be sluggish

Resources:

Combination Effects D

These are the combination effects which are inclu

- Effect.Appear, Effect.Fade
- Effect.Puff
- Effect.DropOut
- Effect.Shake
- Effect.SwitchOff
- Effect.BlindDown, Effect.BlindUp
- Effect.SlideDown, Effect.SlideUp
- Effect.Pulsate
- Effect.Squish
- Effect.Fold
- Effect.Grow
- Effect.Shrink

Note: This page is basically a duplicate of Combine

- Yahoo UI Library: http://developer.yahoo.com/yui/animation/
- Scriptaculous http://script.aculo.us/
- and of course, developer.apple.com

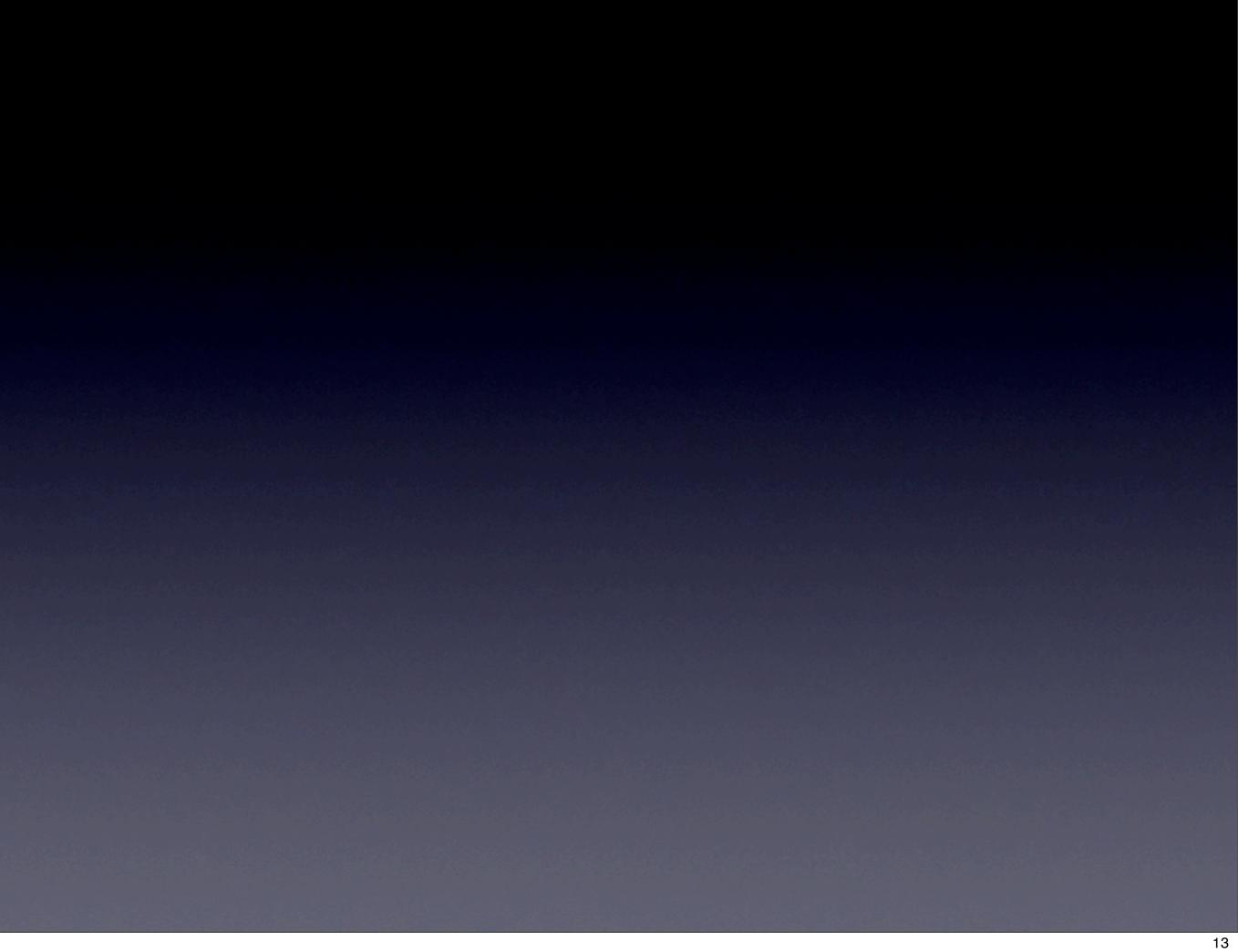
5. finger != mouse

Remember this.

So no "onmouseover" and hover events etc!







"Regular" Apps



"Regular" Apps

- Actually use the SDK
- Objective-C
- Steeper learning curve but more power

So where are we?

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4. Anatomy of an App

- Compiled code
 - Your code
 - Cocoa Touch framework code
- Nib files
 - Contains user interface elements (along with other objects)
 - Includes details about object relationships
- Resources (sounds, images, etc)
- Info.plist file (application configuration)

MVC

Model, View, Controller Divides an application into 3 main functional pieces

Model

- Manages the app data and state, not concerned with UI or presentation
- Often persists somewhere

View

- Displays the model objects to the user
- Allows user to manipulate data by responding to events

Controller

 Coordinates the model and the view, keeps the view updated when model changes, etc. Typically where app "logic" is.

5. Objective-C

- Objective-C strict superset of C;
- .h = header file; .m = implementation file;
- Some syntax:
- Say you declare Person * voter;
- voter.castBallot(); ==> [voter castBallot];
- voter.setAge(21); ==> [voter setAge:21];
- [voter registerForState:@"CA" party:@"Independent"];

5. Objective-C

- With Obj-C 2.0, dot syntax at least for accessor methods:
- Instead of [person setHeight:newHeight];
- can do person.height = newHeight;
- Bool typedef, YES and NO;
- NSObject -- root class; implements mem. mgmt, introspection, object equality

5. Objective-C

- NSString * -- used instead of char *
- In C, constant strings are
 - "text";
- In ObjC, constant strings are
 - @"text"
- Constant strings are NSString instances:
- NSString *aString = @"Hello World!";
- NSMutableString -- allows string to be modified

Let's jump in -6. Hello World!