KICKSTARTING

Firefox OS

APPS DEVELOPMENT

Use Left & Right arrows for page navigation

YES YOU CAN!

You can start building Firefox OS apps **right now**, if...

- You know HTML basics
- You know JavaScript basics
- You have some idea with CSS
- You can press the RIGHT arrow

seriously, to go to the next slide!

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1. Intro
2. Organization
3. Tools you'll need
4. Hello, World
5. Tips & Tricks

1. INTRO

Probably you already know about Firefox OS , note that it's not Firefox the browser... it's a brand new OS for mobile platforms.

We're interested in building apps which runs in devices with Firefox OS

IT'S ALREADY LIVE!

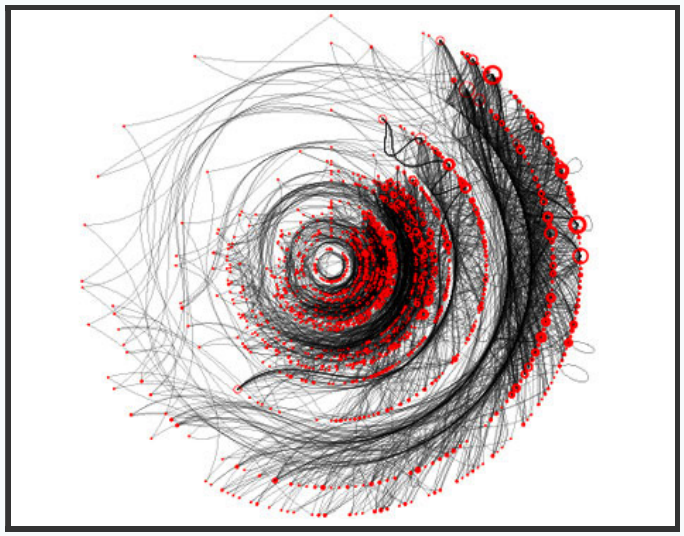
2. ORGANIZATION

of Firefox OS Apps

To develop any application, we worry about two things...

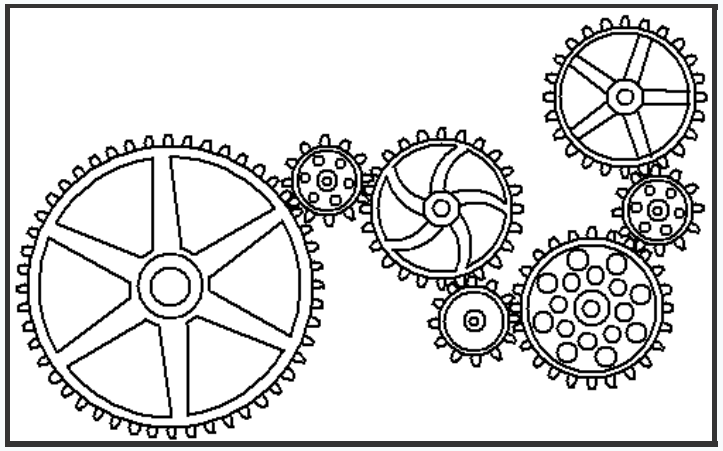
(next slides)

USER INTERFACE



Pages, Forms, Buttons, sliders...

& CONTROLS!



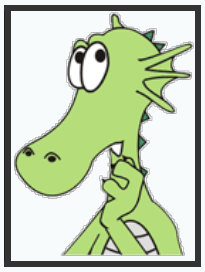
Logic programming, loops, working with data etc...

ORGANIZATION

While building Firefox OS apps, we

- build user interface with **HTML** & **CSS**
- & **Javascript** does the programming!

PHILOSOPHY



So, Firefox OS apps are basically **Web Apps**!

And since HTML/CSS/JavaScripts are standards, these apps run not only in Firefox OS devices, but on any device that have a browser!!! (Yes, on your Android too*)

Don't misunderstand *web apps* - they run offline, too!
* Some APIs don't work in all browsers.

LET'S START!

3. TOOLS

- Any **text editor** *(to write code)*
- Latest **Firefox browser** *(to see output!)*

Optionally (highly recommended):

- Firefox OS **Simulator Addon**
- **Firebug** *(for debugging)*

TEXT EDITOR

Any text editor will work. We'll be making following types of files:

- HTML (.html)
- JavaScript (.js)
- CSS (.css)

You can use **Sublime**, Notepad++, Netbeans, Eclipse or even the basic editor which comes with your OS.

FIREFOX BROWSER

To see the complete functionality of your app, we'll use Firefox Browse - the desktop browser we all love.

We'll open the HTML files with our browser.

FIREFOX OS SIMULATOR

It's an addon for Firefox browser, install the addon and simulate Firefox OS in your desktop!

Finally, **Firebug** helps us debugging HTMLs & JavaScripts, so install this addon too.

Firefox OS Simulator

HELLO, WORLD!

It's time for a "Hello World" app, right now!

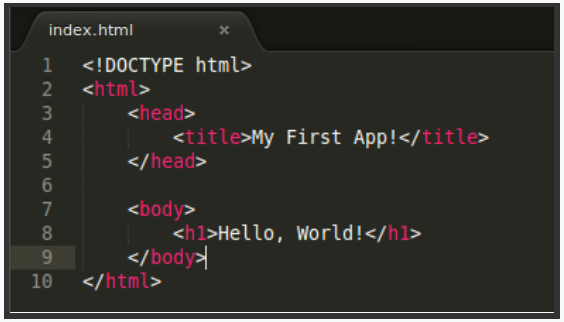
STEP 1: CREATE A DIRECTORY NAMED **HELLO**

Create a directory named ***hello*** anywhere in your computer.

This will be the base directory - we put all files of our app here.

STEP 2: CREATE FILE NAMED **INDEX.HTML**

Create a file *index.html* (it doesn't need to be index.html, it could be any name with .html extention) in the *hello* directory.



SEE IT IN YOUR BROWSER

Open the index.html file with your Firefox Browser. You can double-click or right-click then open with Firfox.

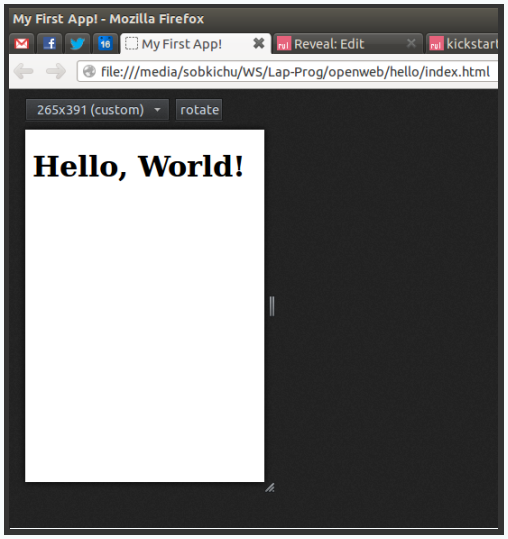
My First App! - Mozilla Firefox
My First App!
Reveal: Edit
kickstart firefo...
file:///media/sobkichu/WS/Lap-Prog/openweb/hello/index.html
Hello, World!

But...doesn't look like a mobile app!

Because, we've not taken care of screen size & others.

TIPS

To test mobile screens with various sizes, press
Control + Shift + M in your Firefox!



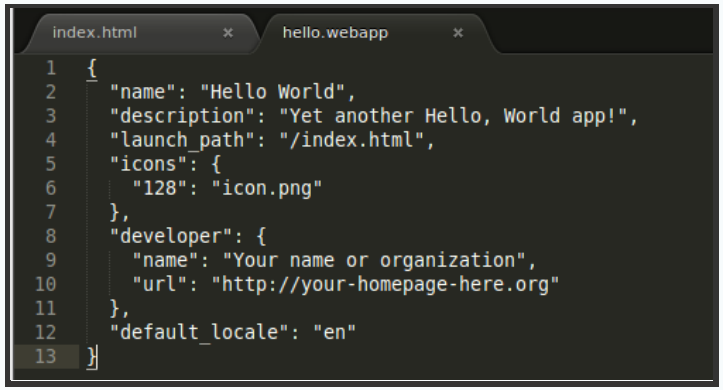
Pressing **ctrl + shft + M** gives a mobile app look-&-feel!

STEP 3: CREATE MANIFEST FILE

All Firefox OS apps need a **manifest** file. The manifest file tells the app's name, description, permissions it requires and some other basic settings.
Manifest file can have any name, but it should have *.webapp* extension.

Create hello.webapp file in project directory

We create ***hello.webapp*** file (note the .webapp extention) in hello directory:



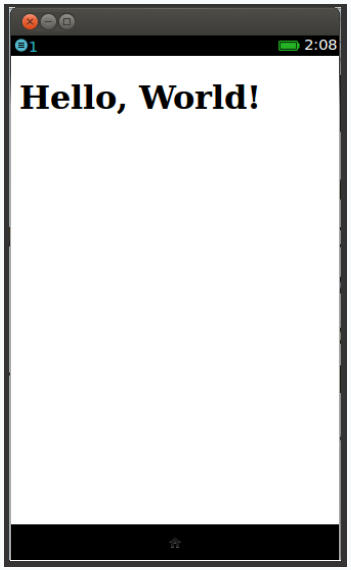
INSTALL APP IN THE SIMULATOR!

Open the Firefox OS Simulator from:
Tools > **Web Developer** > Firefox OS **Simulator**

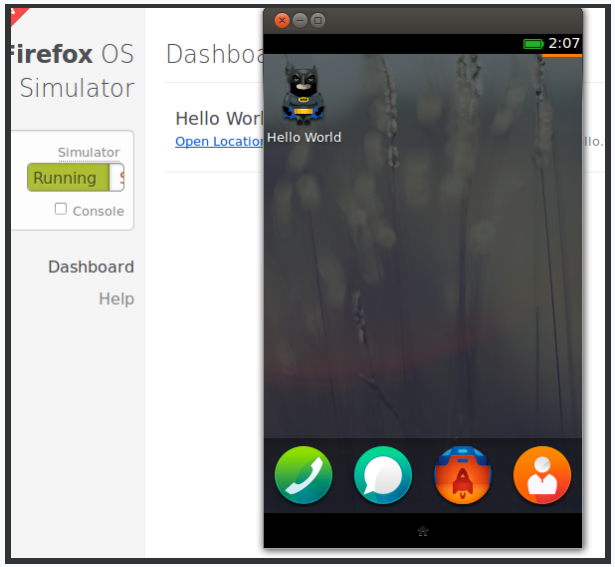
Click on "*Add Directory*"
Select the hello.webapp file you've just created

Bingo! Firefox OS Simulator will start with our app!

APP IN FIREFOX OS SIMULATOR



We've added a Batman Icon Too!



MORE FUN: ADD SOME SCRIPTS

We will add a text input box and a button in our simple app.
When user clicks button, an alert box with the text in the input field will be shown.

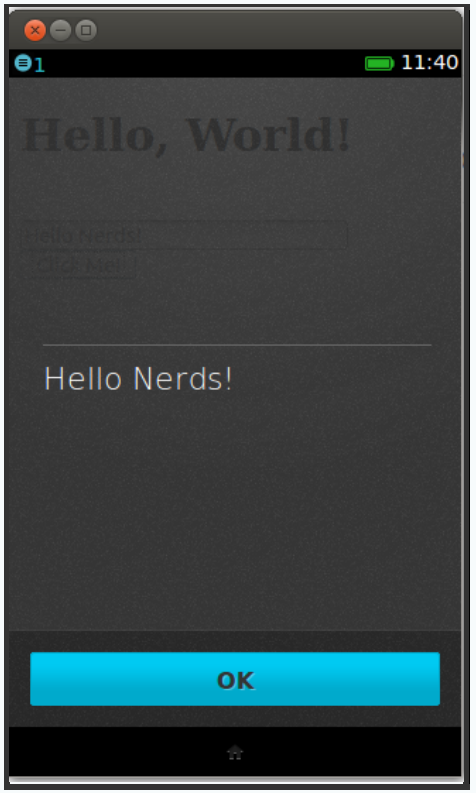
CHANGE THE **INDEX.HTML** FILE TO ADD THE INPUT ELEMENTS

```
1  <!DOCTYPE html>
2  <html>
3      <head>
4          <title>My First App!</title>
5      </head>
6
7      <body>
8          <h1>Hello, World!</h1>
9          <br />
10         <input type='text' id='myTextInput' value='Type something!' />
11         <button id='myButton'>Click Me!</button>
12         <!-- Insert Our Script -->
13         <script src='hello.js'></script>
14     </body>
15 </html>
```

CREATE A FILE NAMED **HELLO.JS** INSIDE YOUR PROJECT DIRECTORY

```
// Reference UI elements
var button = document.getElementById('myButton');
var txtInput = document.getElementById('myTextInput');
// Bind click event of the button with an event listener
button.addEventListener('click', function(){
    var text = txtInput.value;
    // Show alert box with this text
    alert(text);
})
```

Open Firefox OS Simulator and click **Update**



CONGRATULATIONS!

You have created your first Firefox OS app!

TIPS & TRICKS

DO WE NEED TO USE THE SIMULATOR?

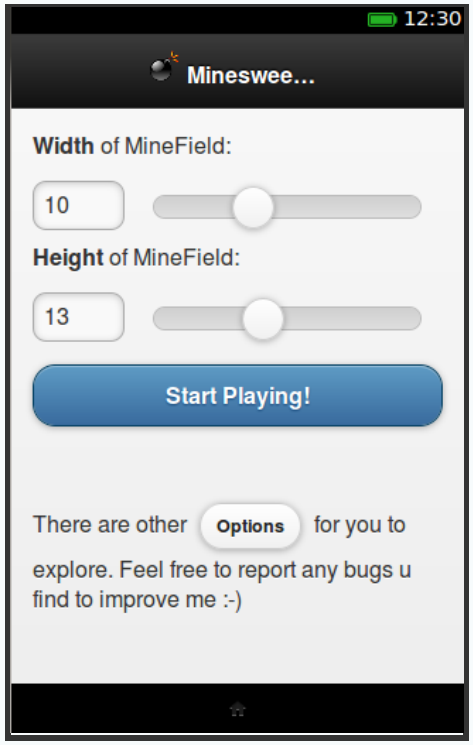
Not really. You can test your app using the Firefox Browser. I can test all the functionalities almost, using the browser & mobile view. So each time you update your app you can test by just refreshing the browser.

USING FRAMEWORKS

To give your app a mobile application like look and feel, you can use many frameworks.
jQuery Mobile is a cool framework, which turns your HTML stuffs into cool mobile app!

Also handle mobile input events like tap, long tap, swipe etc!

USING JQUERY MOBILE



Cool, right? learning jQuery Mobile is very easy!

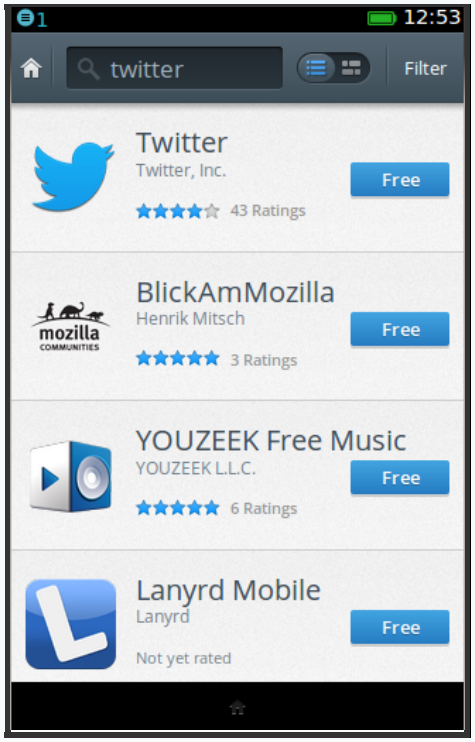
See a video tutorial on **building an app** in 6 minutes using jQuery Mobile by Aniruddha, you won't regret this!

Also has a drag & drop interface to build UI!

PUBLISHING YOUR APP

Once you've completed your app, you need to upload it in a server, and share the link.

FIREFOX MARKETPLACE



You can submit your app in the **Firefox Marketplace** for more publicity!

Sign in to **Marketplace Developer Hub** & follow the instructions!

DOCS

MOZILLA DEVELOPER NETWORK (MDN)

MDN Will be your one-stop center for docs. You may also check out:

- **HTML5**
- **JavaScript**
- **CSS** Docs

DEMOS

APPS SHOWDOWN

Need inspiration? See some cool apps in action in the **Demo Studio**. You may also try the Markeplace from Firefox OS Simulator.

THANK YOU

@ishafiul: Author of this presentation. **Shafiul Azam** is a Mozilla Rep, OpenSource enthusiast.

This presentation can be viewed online from:
shafiul.github.com/slides

REFERENCES

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4. http://www.iconspedia.com/icon/batman-icon-37891.html