F**get the Web
Full Frontal 2011
JavaScript conference

11 November
2011

http://2011.full-frontal.org/
Save to iCal / iPhone / Outlook / GCal

6 speakers

Glenn Jones
@glennjones

Brendan Dawes
@brendandawes

Jeremy Ashkenas
@jaworski

Martin Hawkes
@martinhawkes

Nicholas C. Tabo

The Duke of York’s Picturehouse

Topics
Just a little demo for the "Forget the Web" talk given by @rem at SkillSwaps using the following tech:

- History API
- AppCache for offline access and url goodness
- Web SQL Databases and IndexedDB
- Web Storage and events

Current user: rem [Change]

Note: changing the user will lose the saved notes.

http://ftw.nodester.com
Just a little demo for the "Forget the Web" talk given by @rem at SkillSwaps using the following tech:

- History API
- AppCache for offline access and URLs
- Web SQL Databases and IndexedDB
- Web Storage and events

Current user: rem

Note: changing the user will lose the saved notes.

Change this to your Twitter username

This is live now

http://ftw.nodester.com
» Skillswap cuddles up to HTML5 =

http://ftw.nodester.com
• Web Storage
• IndexedDB (where available)
• Web SQL Databases
• History API
• Offline manifest
- Web Storage simple, and well supported IE8+
- Web SQL has good mobile support, but no Firefox
- IndexedDB gives us coverage
Web storage
Cookies suck.
Not the edible kind, duh!

Cookies suck.
1. Code for cookies difficult
2. Date format is fugly
3. Limitations in size and number
4. Deleting doesn't really delete
5. Sessions leak...but not always!
Fuck cookies.
Sexy Storage FTW
localStorage no expiry required & persists

sessionStorage doesn't leak

Applied to document origin, i.e. scheme/host/port tuple

Insanely simple API
setItem(key, value)
removeItem(key)
length
key(index)
clear()
var store = localStorage;
store.name = 'remy';
var store = localStorage;
store.name = 'remy';
delete store.name;
Values are coerced into strings
Values are coerced into strings

Work around: JSON
(and http://www.json.org/json2.js)
Just a little demo for the "Forget the Web" talk given by @rem at SkillSwaps using the following tech:

- History API
- AppCache for offline access and url goodness
- Web SQL Databases and IndexedDB
- Web Storage and events

Current user: rem

Note: changing the user will lose the saved notes.
The API isn't protected, you can, if you want to mess things up, do:

```javascript
localStorage.key = 'foo';
```

Now the key method is a string :(

Gotcha
Web SQL Databases
- SQLite based
- No longer actively maintained
- Good Safari support - i.e. iOS
- Fully featured debuggers available
db = openDatabase('Notes', '1.0', 'notes', 5242880);

db.transaction(function(tx) {
    tx.executeSql('CREATE TABLE IF NOT EXISTS ' +
        'notes(id TEXT PRIMARY KEY ASC, title TEXT, ' +
        'rating INTEGER, date DATE, notes TEXT, ' +
        'updated DATE, url TEXT UNIQUE)',
    [], // fields
    success, error);
});
db = openDatabase('Notes', '1.0', 'notes', 5242880);

db.transaction(function(tx) {
    tx.executeSql('CREATE TABLE IF NOT EXISTS ' +
        'notes(id TEXT PRIMARY KEY ASC, title TEXT, ' +
        'rating INTEGER, date DATE, notes TEXT, ' +
        'updated DATE, url TEXT UNIQUE)',
    [], // fields
    success, error);
});
db = openDatabase('Notes', '1.0', 'notes', 5242880);

db.transaction(function(tx) {
    tx.executeSql('CREATE TABLE IF NOT EXISTS ' +
         'notes(id TEXT PRIMARY KEY ASC, title TEXT, ' +
         'rating INTEGER, date DATE, notes TEXT,' +
         'updated DATE, url TEXT UNIQUE)',
         [], // fields
         success, error);
});
db = openDatabase('Notes', '1.0', 'notes', 5242880);

db.transaction(function(tx) {
    tx.executeSql('CREATE TABLE IF NOT EXISTS notes(id TEXT PRIMARY KEY ASC, title TEXT, ' +
    'rating INTEGER, date DATE, notes TEXT, ' +
    'updated DATE, url TEXT UNIQUE)', [[]], // fields
    success, error);
});
db = openDatabase('Notes', '1.0', 'notes', 5242880);

db.transaction(function(tx) {
    tx.executeSql('CREATE TABLE IF NOT EXISTS ' +
    'notes(id TEXT PRIMARY KEY ASC, title TEXT, ' +
    'rating INTEGER, date DATE, notes TEXT, ' +
    'updated DATE, url TEXT UNIQUE)',
    [[], // fields
     success, error);
});
db = openDatabase('Notes', '1.0', 'notes', 5242880);

db.transaction(function(tx) {
    tx.executeSql('CREATE TABLE IF NOT EXISTS notes(id TEXT PRIMARY KEY ASC, title TEXT, rating INTEGER, date DATE, notes TEXT, updated DATE, url TEXT UNIQUE)', [], // fields
        success, error);
});
- Atomic transactions
- Queues every request
- Good Safari support - i.e. iOS
- Fully featured debuggers available
• Still very new
• Support will be further reaching than Web SQL (but unsure about Safari)
• Very, very difficult to debug atm.
var request = indexedDB.open('notes');
request.onerror = fail;
request.onsuccess = function (e) {
    db = e.target.result;
};
Now create the actual data store
var RW = IDBTransaction.READ_WRITE;

var transaction = db.transaction(['notes'], RW, 0),
store = transaction.objectStore('notes'),
request = store.put(data);
var RW = IDBTransaction.READ_WRITE;

var transaction = db.transaction(['notes'], RW, 0),
    store = transaction.objectStore('notes'),
    request = store.get(id);

request.onsuccess = function (event) {
    callback(event.target.result);
};

On success, result is in event.target
Lawnchair

http://westcoastlogic.com/lawnchair/
Skillswap cuddles under
20 Jul
function router(path) {
    if (path.indexOf('/conf') === 0) {
        showConferenceDetails(path.substr(5));
    } else if (path === '/about') {
        body.id = '';
        body.className = 'about';
    } else if (path === '/') {
        showConferences('next');
    } else {
        showConferences(path.substr(1));
    }
}
function router(path) {
    if (path.indexOf('/conf') === 0) {
        showConferenceDetails(path.substr(5));
    } else if (path === '/about') {
        body.id = '';
        body.className = 'about';
    } else if (path === '/') {
        showConferences('next');
    } else {
        showConferences(path.substr(1));
    }
}
router(location.pathname);
History API

```javascript
history.pushState(state, title, url);
window.onpopstate = fn;
```
link.onclick = function (event) {
    event.preventDefault();
    showConferenceDetails(this.path);
    history.pushState('', '', this.path);
};
link.onclick = function (event) {
    event.preventDefault();
    showConferenceDetails(this.path);
    history.pushState('', '', this.path);
};
link.onclick = function (event) {
    event.preventDefault();
    showConferenceDetails(this.path);
    history.pushState('', '', this.path);
};
link.onclick = function (event) {
    event.preventDefault();
    showConferenceDetails(this.path);
    history.pushState('', '', this.path);
};
link.onclick = function (event) {
    event.preventDefault();
    showConferenceDetails(this.path);
    history.pushState('', '', this.path);
};
link.onclick = function (event) {
    event.preventDefault();
    showConferenceDetails(this.path);
    history.pushState('', '', this.path);
};

Now our url matches the page
window.onpopstate = function () {
    router(location.pathname);
};
URLS FTW!

http://flic.kr/p/a42tLM
What about when they request a URL that doesn't exist???
<html manifest="myapp.appcache">
serve with text/manifest
<html manifest="myapp.appcache">

serve with text/manifest

set header cache-control: no-cache
<html manifest="myapp.appcache">
serve with text/manifest
set header cache-control: no-cache
starts with CACHE MANIFEST
CACHE MANIFEST

/
range.js
datastore.js
» Skillswap cuddles up to HTML5
chrome://appcache-internals

Manifest: http://ftw.nodester.com/ftw.appcache

- Size: 46.5 kB
- Creation Time: Wednesday, July 20, 2011 4:08:38 PM
- Last Access Time: Wednesday, July 20, 2011 4:08:38 PM
- Last Update Time: Wednesday,July 20, 2011 4:08:38 PM

Manifest: http://jsconsole.com/jsconsole.appcache

- Size: 74.9 kB
- Creation Time: Sunday, July 17, 2011 10:44:51 AM
- Last Access Time: Wednesday, July 20, 2011 12:44:57 PM
- Last Update Time: Wednesday, July 20, 2011 12:33:45 PM

Manifest: https://www.me.com/mail/app.manifest

- Size: 4.2 MB
- Creation Time: Monday, July 18, 2011 4:37:59 PM
- Last Update Time: Monday, July 18, 2011 4:37:59 PM
CACHE MANIFEST

/
index.html
range.js
datastore.js

FALLBACK:
# force everything through
# the index url

//

# this won't match
# anything unless it's on
# another domain

NETWORK:
*

# v4
CACHE MANIFEST

/
index.html
range.js
datastore.js

FALLBACK:
# force everything through
# the index url
/

# this won't match
# anything unless it's on
# another domain
NETWORK:
*

# v4

served from cache
CACHE MANIFEST

/
index.html
range.js
datastore.js

FALLBACK:
# force everything through
# the index url
/
/

# this won't match
# anything unless it's on
# another domain
NETWORK:
*

# v4

Requests for files not found in the cache, are directed to / i.e. index.html (when offline).
CACHE MANIFEST

/
index.html
range.js
datastore.js

FALLBACK:
# force everything through
# the index url
/
/

# this won't match
# anything unless it's on
# another domain
NETWORK:
*

# v4

Any requests to urls that don't match / - i.e. on another domain, will be served through the web.
CACHE MANIFEST

/
index.html
range.js
datastore.js

FALLBACK:
# force everything through
# the index url
/
/

# this won't match
# anything unless it's on
# another domain
NETWORK:
*

# v4

Also ensures browser even attempts to load the asset
CACHE MANIFEST

/
index.html
range.js
datastore.js

FALLBACK:
# force everything through
# the index url
/

# this won't match
# anything unless it's on
# another domain
NETWORK:
*

# v4

The contents of the manifest must change to trigger an update
And let the router code handle the path
CACHE MANIFEST

/
index.html
range.js
datastore.js

FALLBACK:
# force everything through
# the index url
/

# this won't match
# anything unless it's on
# another domain
NETWORK:
*

# v4

Requests for files not found in the cache, are directed to /

i.e. index.html

(when offline).
- Web Storage for simple data
- Larger data in IndexedDB & Web SQL
- History for back button and url
- Offline to support our fake urls
» Skillswap cuddles up to HTML5 »
Thank you.