Let's build something!

Search

Current Contact Details

Contact List

Contact List

Current Contact Details

(click)

Data Model

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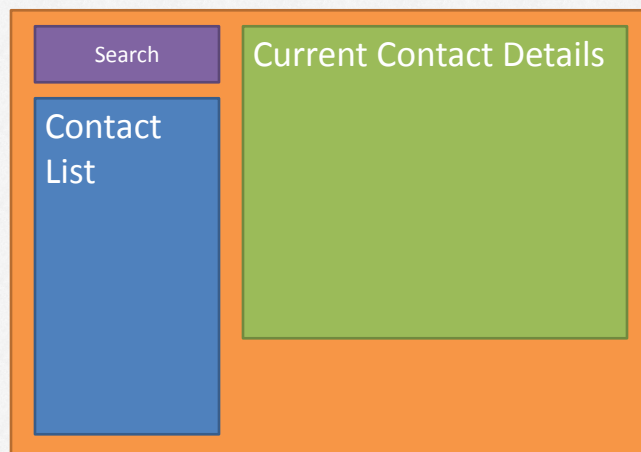
Data Model
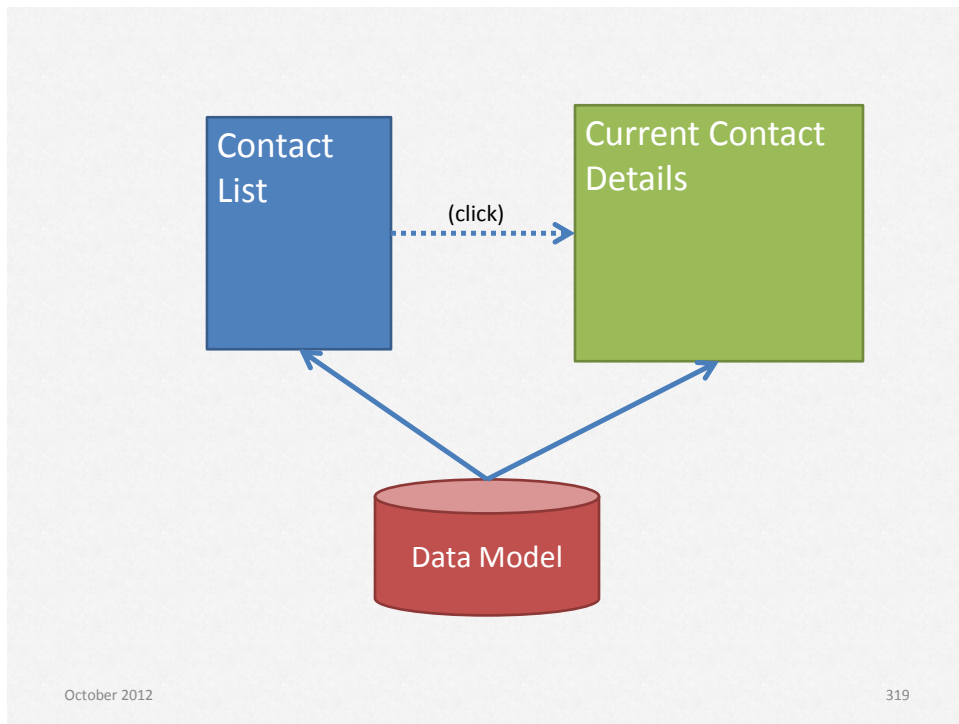
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Data Model (1)

- Put DataModel code in separate JavaScript file
  - DataModel.js
- Include it via <script>
- Advantages
  - Separation of concerns   (class)
  - Easier testing   (class)
  - Code organization   (file)

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Data Model (2)

```
function AddressBook() {

    // array index will be contact id, entries are Contact instances
    var contacts = [];

    // returns id for new contact
    this.addContact( contact ) { ….. };

    // remove from contacts list
    this.deleteContact( id );

    // hand back contact at id
    this.getContactDetails( id ) { …. };

    // hand back new array of first + last names with correct ids for idx
    this.getAllNames() { …. };
}
```

* Additional coolness coming later.

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Data Model (3)

```
function Contact( fn, ln, em ) {
    this.fname = fn;
    this.lname = ln;
    this.email = em;
}

var niek =
    new Contact( "Niek", "Sanders", "niek.sanders@gmail.com" );
```
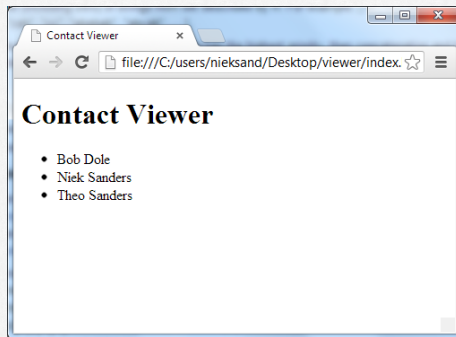
Progress Review

- Data model that can drive our front end GUI
- Neatly organized in to separate file
- Easy to replace with a mock for testing purposes
  - Important for AJAX
- Same code interface, more behavior
  - Custom jQuery events

Contact List

Contact List (1)

- Put ContactList code in separate JavaScript file
  - ContactList.js
- Include it via <script>
- In your document ready handler (index.html)
  - Create a datamodel
  - Add a handful of contacts to datamodel
  - createContactList(dataModel, div$)

Contact List (2)

```
function createContactList( dataModel, div$) {

  // pull all our contacts from datamodel

  // create <ul>, add each contact as <li>

  // append <ul> to div$

}
```

Progress Review

- Visualization of data model
- Not yet linked to data model updates
  – Change data model, list still the same
- About to add sort and search!

Sorting Contact List

Sorting Contacts (1)

- Sort contact list alphabetically by name
- http://tinyurl.com/avld6cw
- For fun, try doing descending sort Z -> A
- Pluggable sort common technique
  - PHP, C++
  - Bugs if not implemented correctly
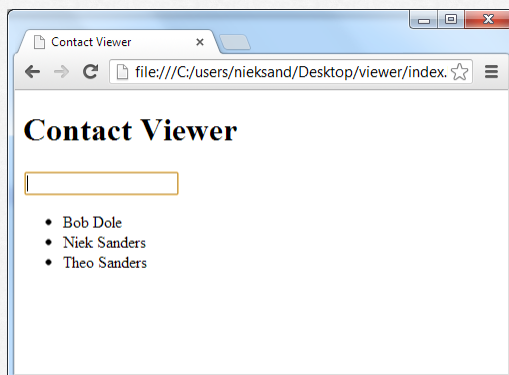
Sorting Contacts (2)

```
function createContactList( dataModel, div$) {

    // pull all our contacts from datamodel

    // sort the contacts!

    // create <ul>, add each contact as <li>

    // append <ul> to div$

}
```

Search Contact List

Contact Viewer ×

file:///C:/users/nieksand/Desktop/viewer/index.

Contact Viewer

- Bob Dole
- Niek Sanders
- Theo Sanders

Search Contacts (1)

- Create the search text box
- When creating contact list
  - Search box listen to keyup events
    http://api.jquery.com/keyup/
  - Call back has access to <ul>, hides non-matching elements
  - **http://tinyurl.com/98mg64c**

Search Contacts (2)

```
function createContactList( dataModel, div$) {

    // pull all our contacts from datamodel

    // sort the contacts!

    // create <ul>, add each contact as <li>

    // append <form> and <input> to div$

    // bind to input keyup, add search call back

    // bind to form submit, prevent form submission

    // append <ul> to div$

}
```

Progress Review

- First interactive component!
  - User types search, show matching names
- Still no persistent updating between data model and contact list

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