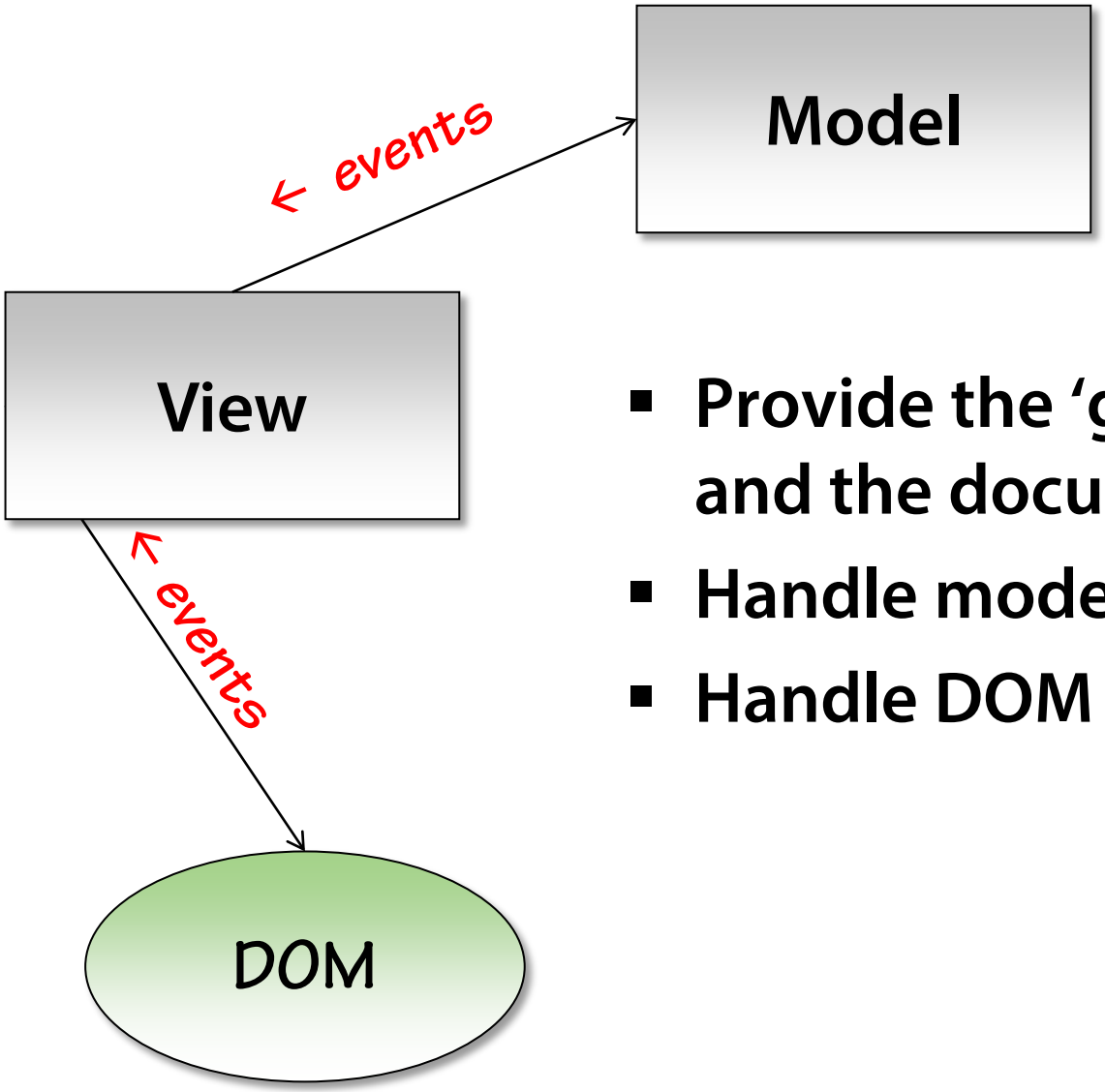
Outline

- What are views for?
- Defining view types
- Instantiating views
- View properties
- Rendering
- Views and models
- View events

Views



- Provide the 'glue' between models and the document
- Handle model events
- Handle DOM events

Defining New View Types

- Define new View types by extending Backbone.View

```
var VehicleListView = Backbone.View.extend({
    // properties
});
```

- All views have an associated DOM element at all times (.el)

Views that Create New Elements

- The new element is defined by the id, tagName, className and attributes

```
var V = Backbone.View.extend({
    tagName: 'li',
    id: 'thing',
    className: 'active',
    attributes: {
        'data-value': 12345
    }
});
var v = new V();
$('body').prepend(v.el);
```

Views that Attach to Existing Elements

- Pass a ‘el’ property to the view’s constructor

```
var V = Backbone.View.extend({});

var v = new V({el: '#test'});

v.$el.css('background-color', 'CornflowerBlue');
```

http://jsfiddle.net/R9Eb6/3/

Instantiating Views

- To create a new view object call its constructor function with the 'new' operator
- The simplest case is to create an instance of Backbone.View

```
var view = new Backbone.View();
```

- Usually you will want to instantiate instances of your own view type

```
var VehicleListView = Backbone.View.extend({});
var myView = new VehicleListView();
```

Instantiating Views (cont.)

- Often you will pass a model to the view constructor

```
var myView = new VehicleListView({
  model: myModelObject
});
```

Instantiating Views (cont.)

- **Any of the following properties will be attached directly to the view object if passed to the constructor**
  - model, collection, el, id, className, tagName, attributes

```
var myView = new VehicleListView({
  model: myModelObject,
  className: 'model-object'
});
```

el

- All views have an ‘el’ property that references the views DOM element

```
var v = new Backbone.View({el:'body'});
v.el // <body></body>
```

http://jsfiddle.net/bv6T8/

$el

- **$el is a cached jQuery (or zepto) wrapper around el**
  - Avoids repeated $(this.el)

```
var v = new Backbone.View({el:'body'});
v.$el // [<body></body>]
```

http://jsfiddle.net/H8mpG/

this.$

- **this.$ is the jQuery (or zepto) function scoped to the current view**
  - this.$('selector') is equivalent to this.$el.find(‘selector’)

render

- Render is the function that render's the views element (.el)
- The default implementation is a no-op. Provide an impelementation with your view definitions.
- Should return 'this'

```
var V = Backbone.View.extend({
  render: function () {
    this.$el.html('some content');
    return this;
  }
});
```

Combining Views and Models

- **Pass the model to the view's constructor**

```
var v = new View({
  model: myModel
});
```

- **Bind the view's render method**

```
myModel.on('change', function () {
  $('body').append(v.render().el);
});
```

make

- **Helpful function for creating DOM elements**

```
var el = new Backbone.View().make(
    'h3',
    {class: 'not-very-important'},
    'Preliminary Version'
);

// <h3 class="not-very-important">Preliminary Version</h3>
```

remove

- Remove is a shortcut method to remove the view from the DOM
- Equivalent to:

```
$el.remove();
```

events

- **Declarative syntax to register handlers for DOM events**

```
var FormView = Backbone.View.extend({
    events: {
        'click .clickable': 'handleClick',
    },
    handleClick: function () {}
}
```

- **Equivalent to:**

```
this.$('.clickable').click(handleClick);
```

View Guidelines

- **Views should render self-contained DOM element**
  - Do not attach to existing elements
  - Do not access DOM elements the view does not own
- **Pass el to the constructor of self-updating view**

Summary

- **Views**
  - Are the link between model's and UI
  - Are responsible for rendering model's
  - Responsible for handling DOM, model and collection events