

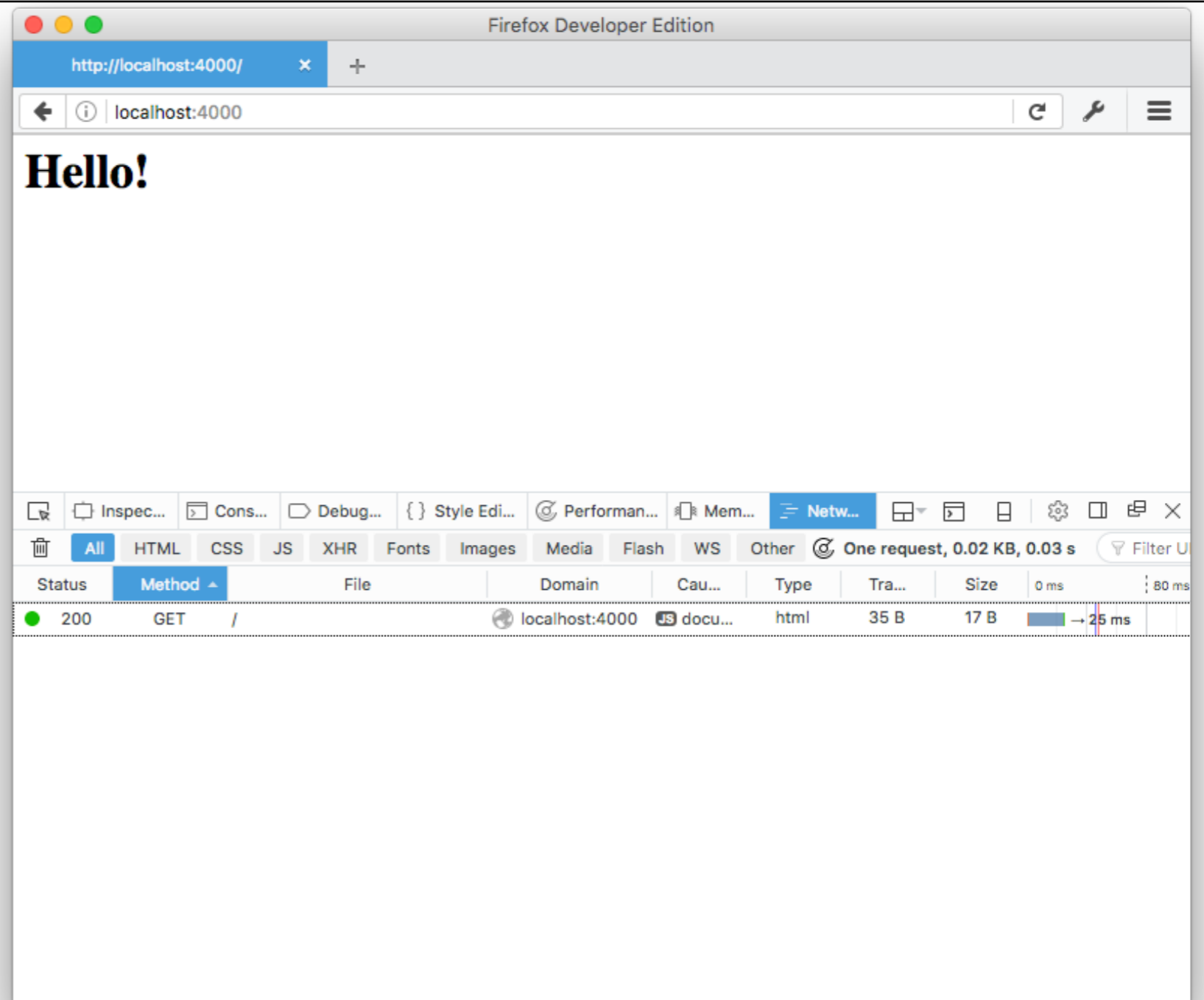
# Templates

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response.send

- In order to render web pages we could pass html content
- This would become very unwieldy and unmaintainable

```
const start = {  
  index(request, response) {  
    logger.info('start rendering');  
    response.send('<h1> Hello </h1>');  
  },  
};
```



# Front-end



- All written in HTML + handlebars
- Handlebars: Templating language
- Similar to EJS, it supports:
  - **Layouts**
  - **Partials**
  - **Views**
- These are very similar to EJS equivalents

## front-end +

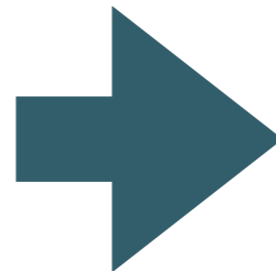
### assets

```
views/about.hbs  
views/dashboard.hbs  
views/layouts/main.hbs  
views/partials/mainpanel.hbs  
views/partials/menu.hbs  
views/start.hbs
```

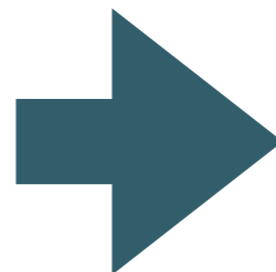
# Partials & Layouts

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- Partials & Layouts play a prominent role in enabling DRY (Dont Repeat Yourself) principles
- Layouts: Reusable Page Structure
- Partials: Reusable templates



```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8">
    <title> {{title}} </title>
    <meta charset="UTF-8">
    <script type="text/javascript" src:
    <link rel="stylesheet" href="https
    <script type="text/javascript" src:
    <link rel="stylesheet" type="text/
  </head>
  <body>
    <section class="ui container">
      {{{body}}}
    </section>
  </body>
</html>
```



```
<segment class="ui raised segment">
  <h1 class="ui header">
    Title for Dashboard Panel
  </h1>
  <p>
    To be replaced with content...
  </p>
</segment>
```

# Partials

- Handlebars partials allow for code reuse by creating shared templates.
- Calling the partial is done through the partial call syntax:

```
{{> myPartial }}
```

myPartial.hbs

```
<section class="ui raised segment">
  <div class="ui grid">
    <aside class="six wide column">
      
    <article class="eight wide column">
      <table class="ui celled table seg
      <thead>
        <tr>
          <th>Amount</th>
          <th>Method donated</th>
        </tr>
      </thead>
      <tbody>
        {{#each donations}}
          <tr>
            <td> {{amount}} </td>
            <td> {{method}} </td>
          </tr>
        {{/each}}
      </tbody>
    </table>
  </article>
</div>
</section>
```

- Will render the partial named myPartial. When the partial executes, it will be run under the current execution context.

# Layout

---

- All views will be based on structure laid down in **main.hbs**.
- Includes Semantic-UI CSS library
- View content will be inserted into {{{body}}}

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8">
    <title> {{title}} </title>
    <meta charset="UTF-8">
    <script type="text/javascript" src="https://cdnjs.cloudflare.com/ajax/libs/jquery/3.2.1/jquery.min.js"></script>
    <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/semantic-ui/2.2.8/semantic.min.css">
    <script type="text/javascript" src="https://cdnjs.cloudflare.com/ajax/libs/semantic-ui/2.2.8/semantic.min.js"></script>
    <link rel="stylesheet" type="text/css" href="/stylesheets/style.css">
  </head>
  <body>
    <section class="ui container">
      {{{body}}}
    </section>
  </body>
</html>
```



# Template Expressions

---

- In addition to layouts + partials, templating also support **Template Expressions**
- These expressions enable external information to be incorporated into a page.
- This information will be delivered via Javascript Objects



```
<div class="entry">  
  <h1>{{title}}</h1>  
  <div class="body">  
    {{body}}  
  </div>  
</div>
```

# Tempting Engine

---

## Context

```
var person = {  
  firstName: 'Eric',  
  surname: 'Praline'  
};
```

## Template

```
<p>First name: {{firstName}}</p>  
<p>Surname: {{surname}}</p>
```

## Template engine



## Rendered HTML

```
<p>First name: Eric</p>  
<p>Surname: Praline</p>
```



# Template Expressions

---

- A handlebars expression is a {{, some contents, followed by a }}

```
<div class="entry">
  <h1>{{title}}</h1>
  <div class="body">
    {{body}}
  </div>
</div>
```

```
var context = {title: "My New Post", body: "This is my first post!"};
```

- In Javascript, create an object literal with matching properties
- When rendered, the properties replace the handlebars expressions

```
<div class="entry">
  <h1>My New Post</h1>
  <div class="body">
    This is my first post!
  </div>
</div>
```

# each helper

---

You can iterate over a list using the built-in each helper. Inside the block, you can use this to reference the element being iterated over.

when used with this context:

will result in:

```
<ul class="people_list">
  {{#each people}}
    <li>{{this}}</li>
  {{/each}}
</ul>
```

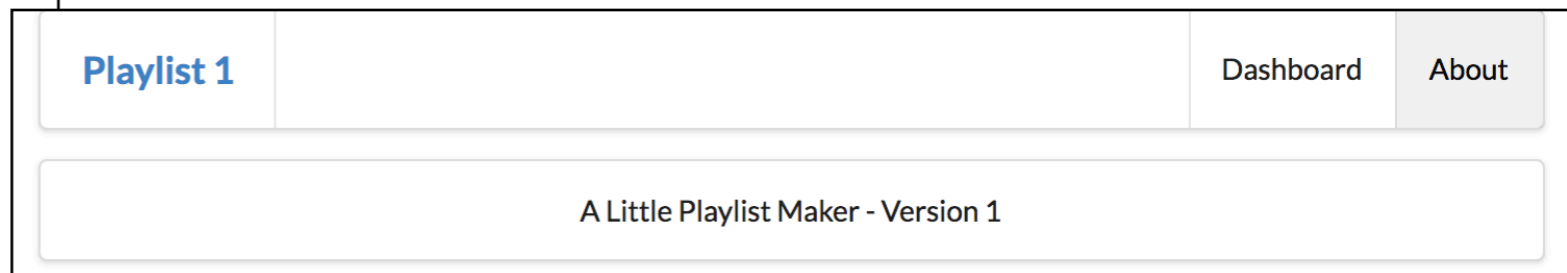
```
{
  people: [
    "Yehuda Katz",
    "Alan Johnson",
    "Charles Jolley"
  ]
}
```

```
<ul class="people_list">
  <li>Yehuda Katz</li>
  <li>Alan Johnson</li>
  <li>Charles Jolley</li>
</ul>
```

about.js

```
'use strict';  
const logger = require('../utils/logger');  
const about = {  
  index(request, response) {  
    logger.info('about rendering');  
    const viewData = {  
      title: 'About Playlist 1',  
    };  
    response.render('about', viewData);  
  },  
};  
module.exports = about;
```

## About Controller -> About View



about.hbs

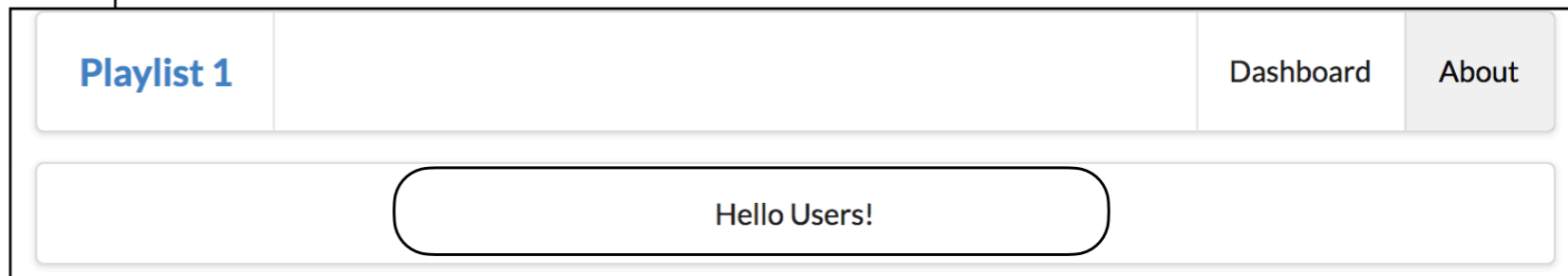
```
{{> menu id="about"}}  
  
<section class="ui center aligned middle aligned segment">  
  <p>  
    A Little Playlist Maker - Version 1  
  </p>  
</sect
```

- **response.render** locates the named template and sends it to the browser

- It also passes the **viewData** object to the to the view
- The View may or may not use the data in this object (not used in above example)

```
'use strict';
const logger = require('../utils/logger');
const about = {
  index(request, response) {
    logger.info('about rendering');
    const viewData = {
      title: 'About Playlist 1',
      greeting: 'Hello Users!',
    };
    response.render('about', viewData);
  },
};
module.exports = about;
```

# About Controller -> About View



```
{{> menu id="about"}}
<section class="ui center aligned middle aligned segment">
  <p>
    {{greeting}}
  </p>
</section>
```

- We can pass simple and complex data to the views

- `{{greeting}}` replaced with the value in the viewData object called 'greeting'