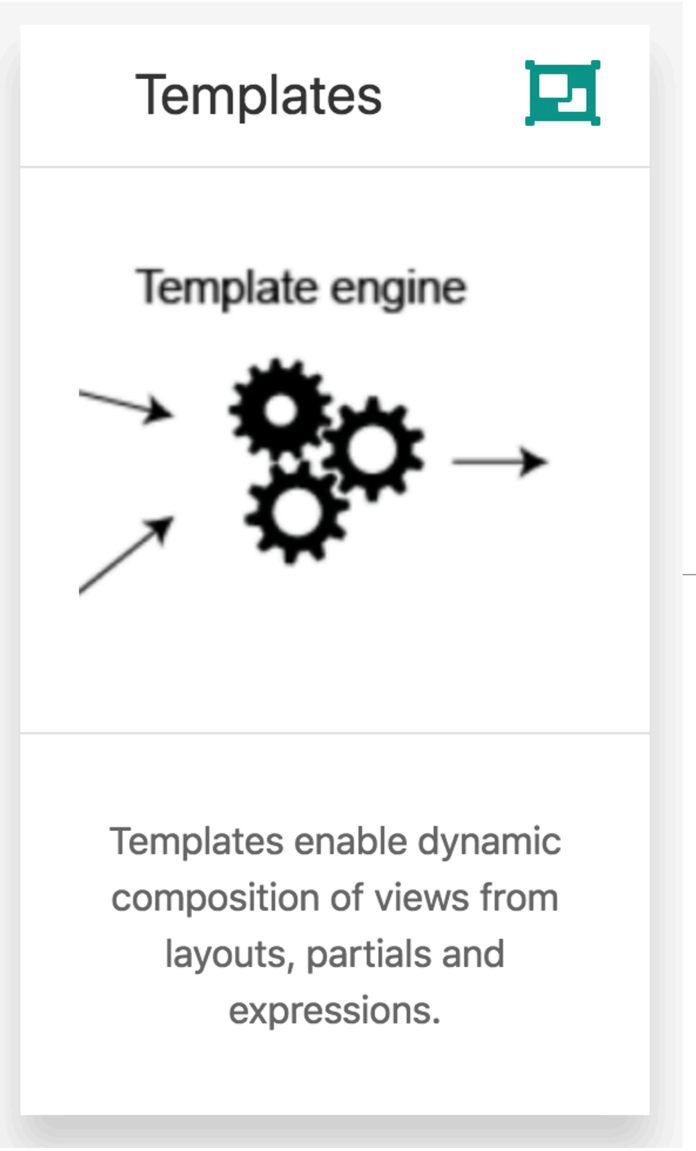
Templates

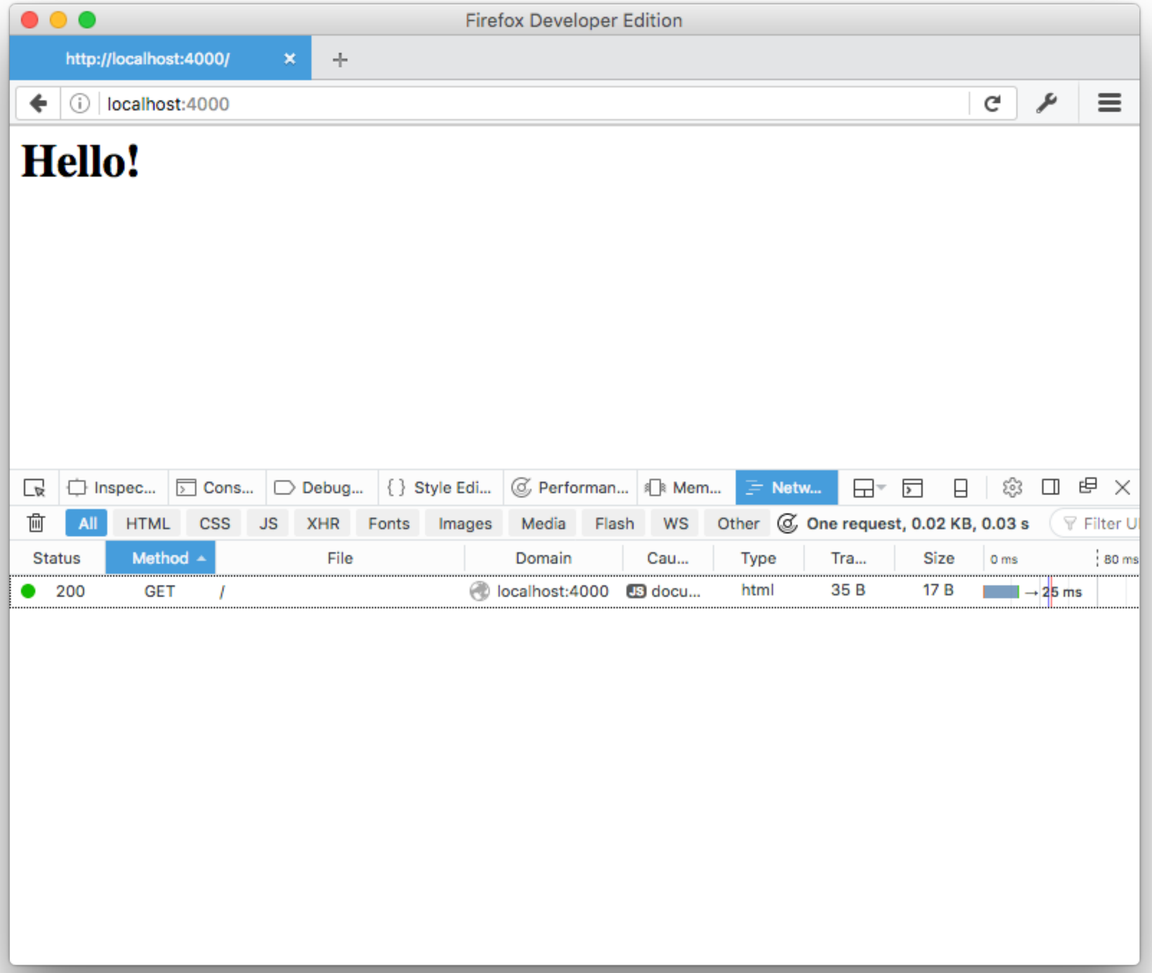

Templates
Template engine
Templates enable dynamic composition of views from layouts, partials and expressions.

response.send

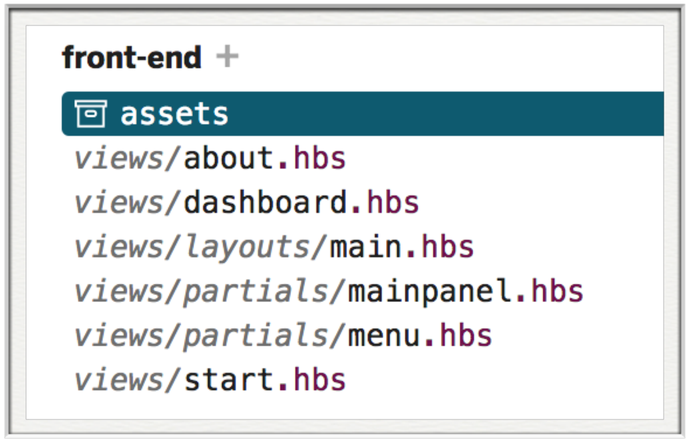
- In order to render web pages we could pass html content
- This would become very unwieldy and unmaintainable

start.js

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



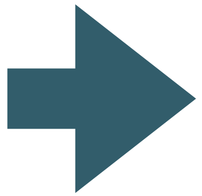
Front-end



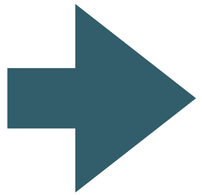
- All written in HTML + handlebars
- Handlebars: Templating language
- Similar to EJS, it supports:
  - **Layouts**
  - **Partials**
  - **Views**
- These are very similar to EJS equivalents

Partials & Layouts

- 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/cs
  </head>
  <body>
    <section class="ui container">
      {{{body}}}
    </section>
  </body>
</html>
```



```
<segment class="ui rasied segmemnt">
  <h1 class="ui headder">
    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 }}
```

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

myPartial.hbs

```
<section class="ui raised segment">
  <div class="ui grid">
    <aside class="six wide column">
      <img src="images/homer5.jpg" class="ui medium image">
    </aside>
    <article class="eight wide column">
      <table class="ui celled table segment">
        <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>
```

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/
    <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/semantic-ui/2.
    <script type="text/javascript" src="https://cdnjs.cloudflare.com/ajax/libs/semanti
    <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, tempting 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>
```

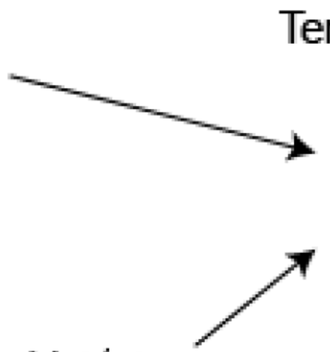
Tempting Engine

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.

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

when used with this context:

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

will result in:

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

about.js

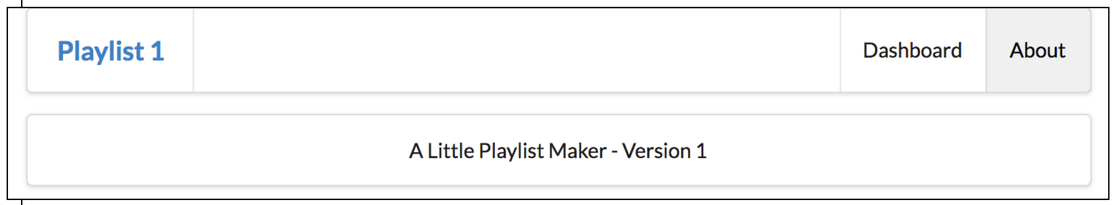
```
'use strict';

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)

about.js

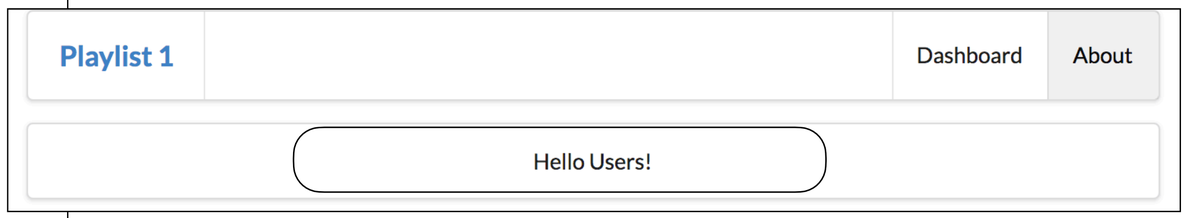
About Controller -> About View

```
'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.hbs

```
{{> 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’