Views

Beethoven Sonatas

Song	Artist
Piano Sonata No. 3	Beethoven
Piano Sonata No. 7	Beethoven
Piano Sonata No. 10	Beethoven

Beethoven Concertos

Song	Artist
Piano Concerto No. 1	Beethoven
Piano Concerto No. 12	Beethoven
Piano Concerto No. 23	Beethoven

Playlist Views

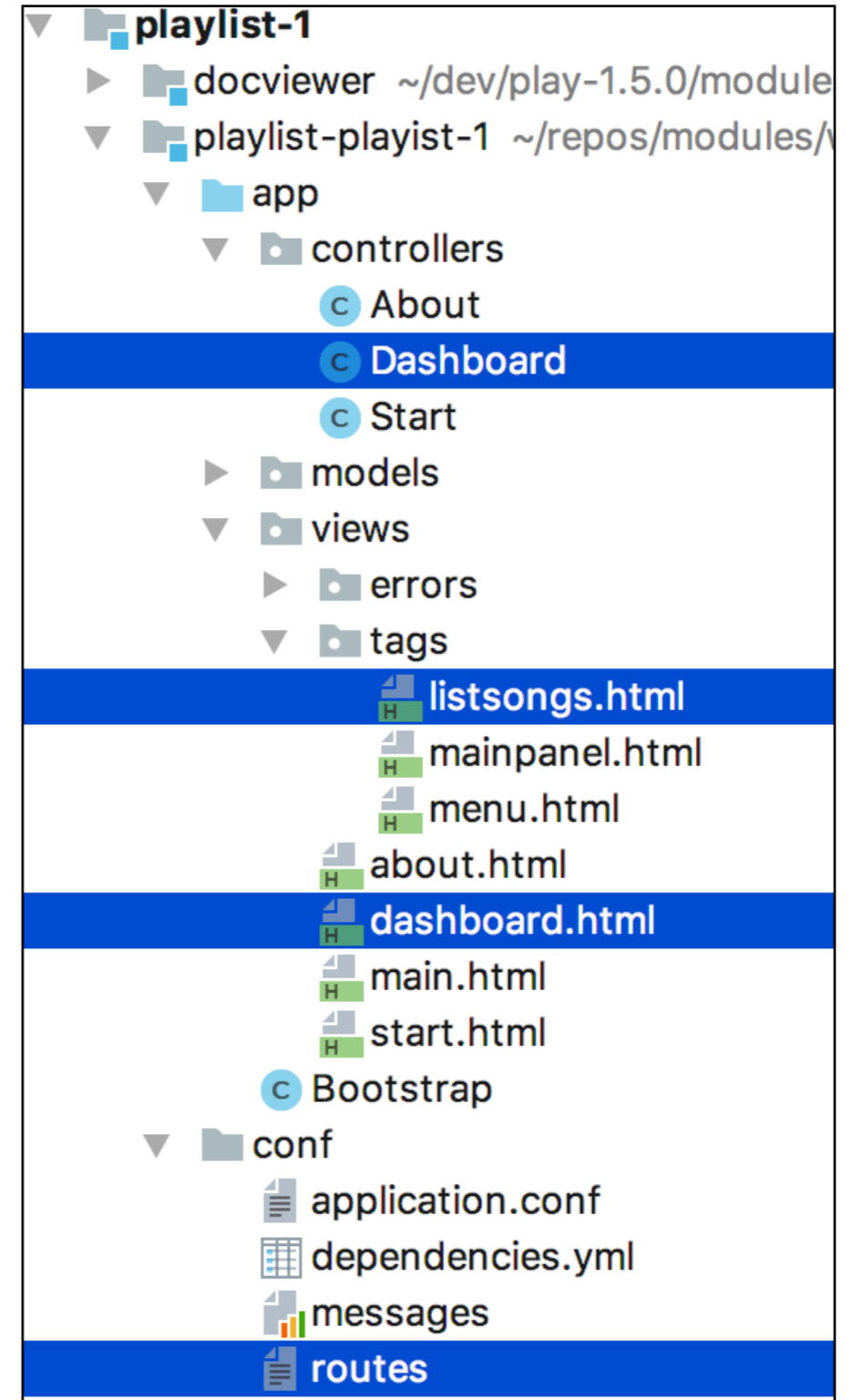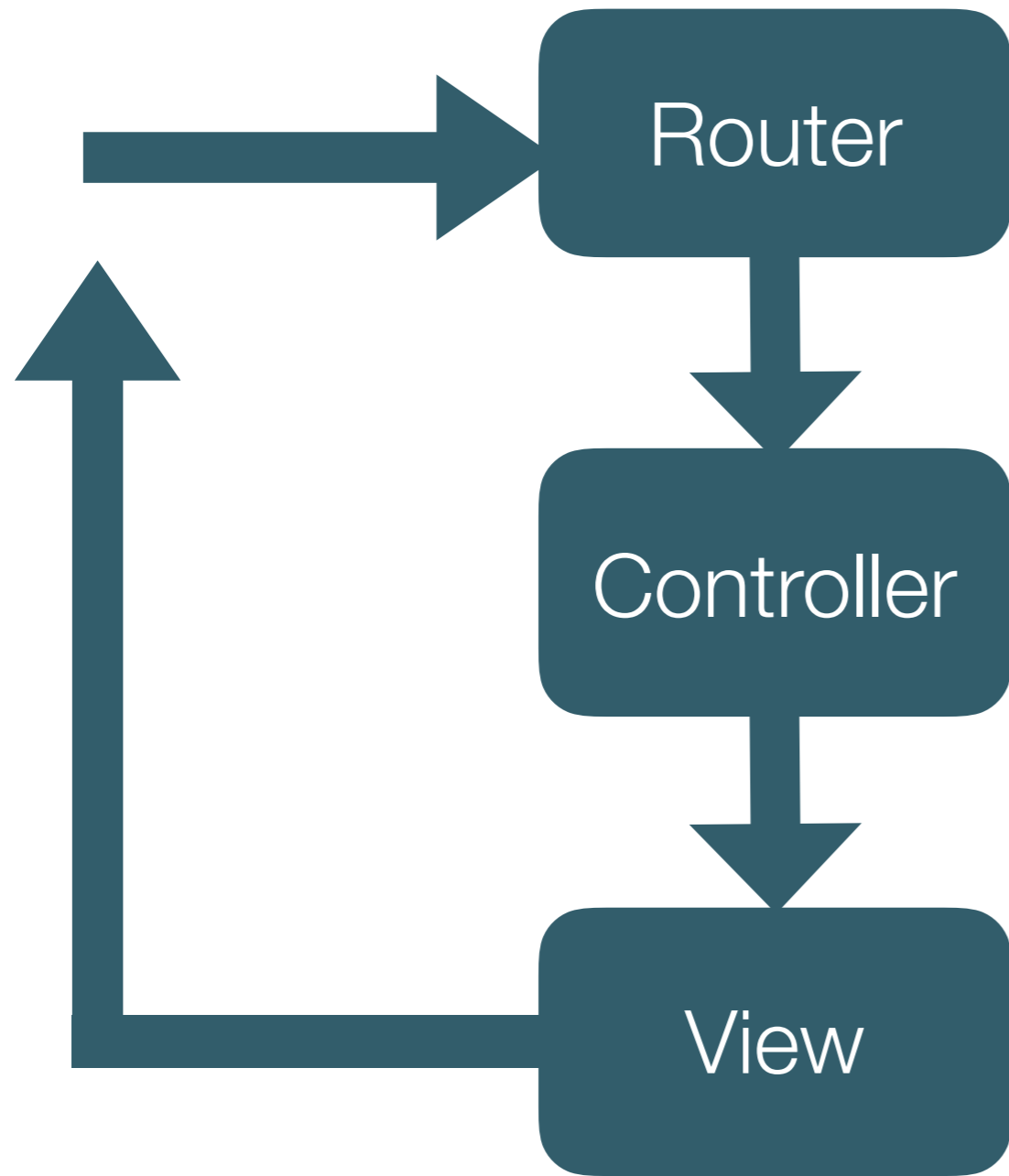## http://localhost:9000/dashboard

| Playlist | | Dashboard | About |

Beethoven Sonatas

Song	Artist
Piano Sonata No. 3	Beethoven
Piano Sonata No. 7	Beethoven
Piano Sonata No. 10	Beethoven

Beethoven Concertos

Song	Artist
Piano Concerto No. 1	Beethoven
Piano Concerto No. 12	Beethoven
Piano Concerto No. 23	Beethoven

http://localhost:9000/dashboard

Router

Controller

View

playlist-1
  docviewer ~/dev/play-1.5.0/module
  playlist-playlist-1 ~/repos/modules/
    app
      controllers
        About
        Dashboard
        Start
      models
      views
        errors
        tags
          listsongs.html
          mainpanel.html
          menu.html
        about.html
        dashboard.html
        main.html
        start.html
      Bootstrap
    conf
      application.conf
      dependencies.yml
      messages
      routes

GET   /dashboard   Dashboard.index   routes

Static Version

Dashboard.java

```java
public class Dashboard extends Controller
{
  public static void index()
  {
    Logger.info("Rendering Dashboard");
    render ("dashboard.html");
  }
}
```

dashboard.html

```
#{extends 'main.html' /}
#{set title:'Dashboard' /}

#{menu id:"dashboard"/}

<section class="ui segment">
  <h2 class="ui header">
    Beethoven Sonatas
  </h2>
  #{listsongs/}
</section>
```

listsongs.html

```html
<table class="ui fixed table">
  <thead>
    <tr>
      <th>Song</th>
      <th>Artist</th>
    </tr>
  </thead>
<tbody>
  <tr>
    <td>
      Piano Sonata No. 3
    </td>
    <td>
      Beethoven
    </td>
  </tr>
  <tr>
    <td>
      Piano Sonata No. 7
    </td>
    <td>
      Beethoven
    </td>
  </tr>
  <tr>
    <td>
      Piano Sonata No. 10
    </td>
    <td>
      Beethoven
    </td>
  </tr>
</tbody>
</table>
```
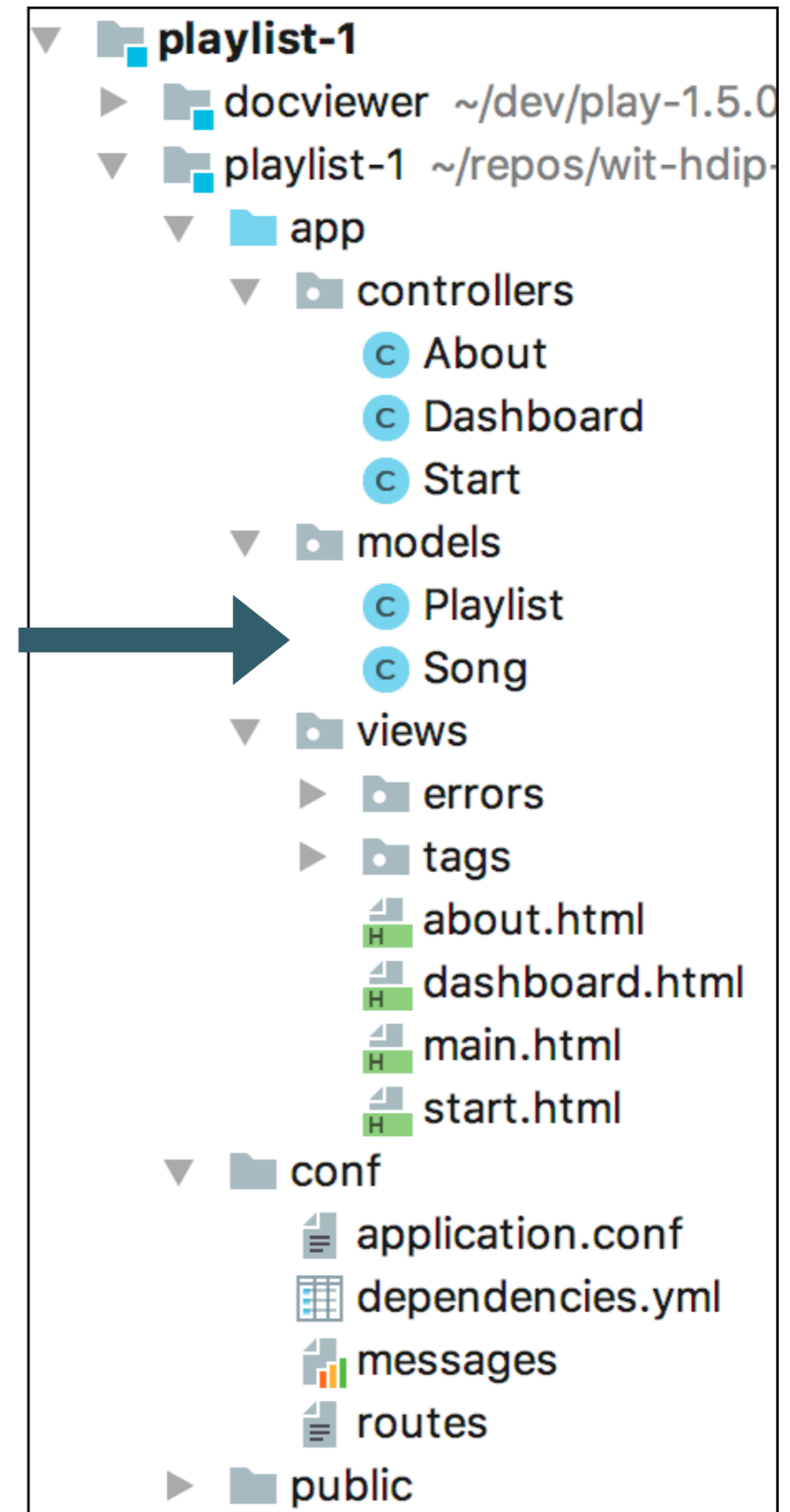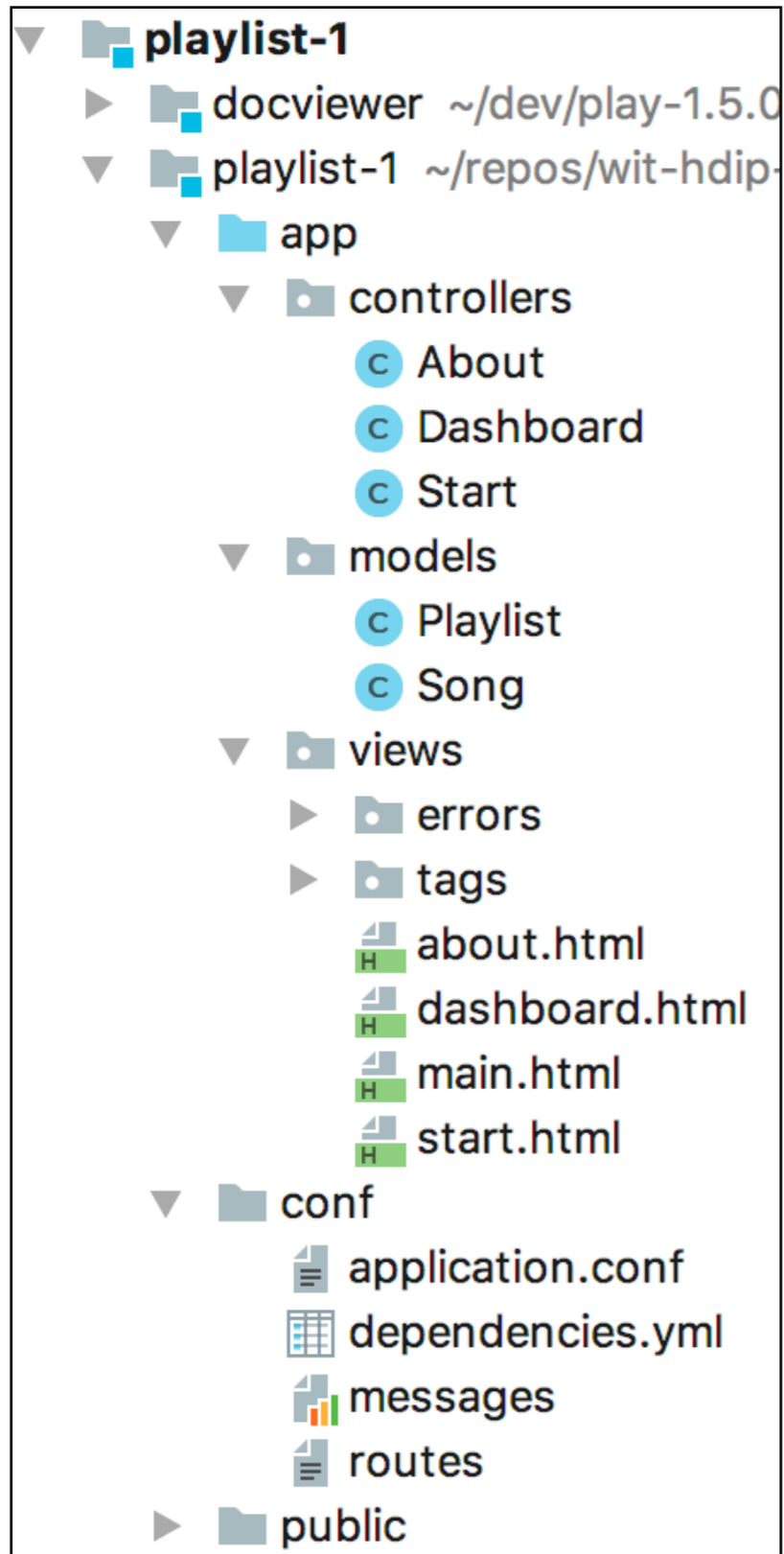
Beethoven Sonatas

Song	Artist
Piano Sonata No. 3	Beethoven
Piano Sonata No. 7	Beethoven
Piano Sonata No. 10	Beethoven

Beethoven Concertos

Song	Artist
Piano Concerto No. 1	Beethoven
Piano Concerto No. 12	Beethoven
Piano Concerto No. 23	Beethoven

Model Playlist in Application

Models Package
Contains Simple Java
Class for Song &
Playlist

Song & Playlist

```
playlist-1
  ▶ docviewer ~/dev/play-1.5.0
  ▼ playlist-1 ~/repos/wit-hdip-
    ▼ app
      ▼ controllers
          c About
          c Dashboard
          c Start
      ▼ models
          c Playlist
          c Song
      ▼ views
        ▶ errors
        ▶ tags
          about.html
          dashboard.html
          main.html
          start.html
    ▼ conf
        application.conf
        dependencies.yml
        messages
        routes
    ▶ public
```

```java
package models;

public class Song
{
  public String title;
  public String artist;

  public Song(String title, String artist)
  {
    this.title = title;
    this.artist = artist;
  }
}
```

```java
package models;

import java.util.ArrayList;
import java.util.List;

public class Playlist
{
  public String title;
  public List<Song> songs = new ArrayList<Song>();

  public Playlist(String title)
  {
    this.title = title;
  }
}
```
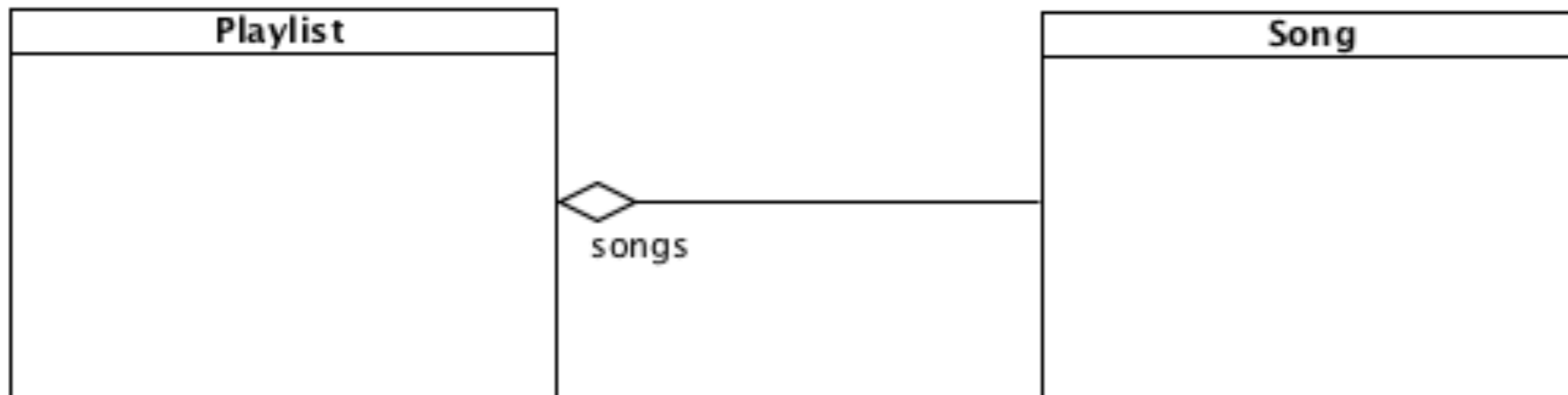
One To Many Relationship

```java
package models;

import java.util.ArrayList;
import java.util.List;

public class Playlist
{
  public String title;
  public List<Song> songs = new ArrayList<Song>();

  public Playlist(String title)
  {
    this.title = title;
  }
}
```

```java
package models;

public class Song
{
  public String title;
  public String artist;

  public Song(String title, String artist)
  {
    this.title = title;
    this.artist = artist;
  }
}
```

Creating Model Objects

Create a
playlist with 3
songs

Send the playlist to
the view

```java
public class Dashboard extends Controller
{
  public static void index() {
    Logger.info("Rendering Dashboard");

    Song s1 = new Song("Piano Sonata No. 3", "Beethoven");
    Song s2 = new Song("Piano Sonata No. 7", "Beethoven");
    Song s3 = new Song("Piano Sonata No. 10", "Beethoven");
    Playlist playlist = new Playlist("Beethoven Sonatas");
    playlist.songs.add (s1);
    playlist.songs.add (s2);
    playlist.songs.add (s3);

    render ("dashboard.html", playlist);
  }
}
```

Accessing Java Object from Template

```java
public class Dashboard extends Controller
{
  public static void index() {
    Logger.info("Rendering Dashboard");

    Song s1 = new Song("Piano Sonata No. 3", "Beethoven");
    Song s2 = new Song("Piano Sonata No. 7", "Beethoven");
    Song s3 = new Song("Piano Sonata No. 10", "Beethoven");
    Playlist playlist = new Playlist("Beethoven Sonatas");
    playlist.songs.add (s1);
    playlist.songs.add (s2);
    playlist.songs.add (s3);

    render ("dashboard.html", playlist);
  }
}
```

```java
package models;

public class Playlist
{
  public String title;
  public List<Song> songs = new ArrayList<Song>();

  public Playlist(String title)
  {
    this.title = title;
  }
}
```
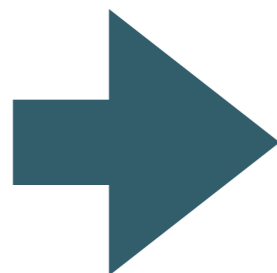
dashboard.html

```html
#{extends 'main.html' /}
#{set title:'Dashboard' /}

#{menu id:"dashboard"/}

<section class="ui segment">
  <h2 class="ui header">
    ${playlist.title}
  </h2>
  #{listsongs playlist:playlist/}
</section>
```

$${playlist.title}

```java
public class Dashboard extends Controller
{
  public static void index() {
    Logger.info("Rendering Dashboard");

    Song s1 = new Song("Piano Sonata No. 3", "Beethoven");
    Song s2 = new Song("Piano Sonata No. 7", "Beethoven");
    Song s3 = new Song("Piano Sonata No. 10", "Beethoven");
    Playlist playlist = new Playlist("Beethoven Sonatas");
    playlist.songs.add (s1);
    playlist.songs.add (s2);
    playlist.songs.add (s3);

    render ("dashboard.html", playlist);
  }
}
```

Iterating through a list

listsongs.html

```html
#{extends 'main.html' /}
#{set title:'Dashboard' /}

#{menu id:"dashboard"/}

<section class="ui segment">
  <h2 class="ui header">
    ${playlist.title}
  </h2>
  #{listsongs playlist:playlist/}
</section>
```

```html
<table class="ui fixed table">
  <thead>
    <tr>
      <th>Song</th>
      <th>Artist</th>
    </tr>
  </thead>
  <tbody>
    #{list items:_playlist.songs, as:'song'}
      <tr>
        <td>
          ${song.title}
        </td>
        <td>
          ${song.artist}
        </td>
      </tr>
    #{/list}
  </tbody>
</table>
```

```
#{extends 'main.html' /}
#{set title:'Dashboard' /}

#{menu id:"dashboard"/}

<section class="ui segment">
  <h2 class="ui header">
    ${playlist.title}
  </h2>
  #{listsongs playlist:playlist/}
</section>
```

Song	Artist
Piano Concerto No. 1	Beethoven
Piano Concerto No. 12	Beethoven
Piano Concerto No. 23	Beethoven

```
<table class="ui fixed table">
  <thead>
    <tr>
      <th>Song</th>
      <th>Artist</th>
    </tr>
  </thead>
  <tbody>
    #{list items:_playlist.songs, as:'song'}
    <tr>
      <td>
        ${song.title}
      </td>
      <td>
        ${song.artist}
      </td>
    </tr>
    #{/list}
  </tbody>
</table>
```

playlist accessed via "_playlist" identifier

for loop to iterate through each song in the array

Multiple Playlists

```java
public class Dashboard extends Controller
{
  public static void index() {
    Logger.info("Rendering Dashboard");

    Song s1 = new Song("Piano Sonata No. 3", "Beethoven");
    Song s2 = new Song("Piano Sonata No. 7", "Beethoven");
    Song s3 = new Song("Piano Sonata No. 10", "Beethoven");
    Playlist p1 = new Playlist("Beethoven Sonatas");
    p1.songs.add (s1);
    p1.songs.add (s2);
    p1.songs.add (s3);

    Song s4 = new Song("Piano Concerto No. 1", "Beethoven");
    Song s5 = new Song("Piano Concerto No. 12", "Beethoven");
    Song s6 = new Song("Piano Concerto No. 23", "Beethoven");
    Playlist p2 = new Playlist("Beethoven Concertos");
    p2.songs.add (s4);
    p2.songs.add (s5);
    p2.songs.add (s6);

    List<Playlist> playlists = new ArrayList<Playlist>();
    playlists.add(p1);
    playlists.add(p2);

    render ("dashboard.html", playlists);
  }
}
```


Beethoven Sonatas

Song	Artist
Piano Sonata No. 3	Beethoven
Piano Sonata No. 7	Beethoven
Piano Sonata No. 10	Beethoven

Beethoven Concertos

Song	Artist
Piano Concerto No. 1	Beethoven
Piano Concerto No. 12	Beethoven
Piano Concerto No. 23	Beethoven

An array of 2 playlists
passed to view

```java
public class Dashboard extends Controller
{

  public static void index() {
    Logger.info("Rendering Dashboard");

    Song s1 = new Song("Piano Sonata No. 3", "Beethoven"
    Song s2 = new Song("Piano Sonata No. 7", "Beethoven"
    Song s3 = new Song("Piano Sonata No. 10", "Beethover
    Playlist p1 = new Playlist("Beethoven Sonatas");
    p1.songs.add (s1);
    p1.songs.add (s2);
    p1.songs.add (s3);

    Song s4 = new Song("Piano Concerto No. 1", "Beethove
    Song s5 = new Song("Piano Concerto No. 12", "Beethov
    Song s6 = new Song("Piano Concerto No. 23", "Beethov
    Playlist p2 = new Playlist("Beethoven Concertos");
    p2.songs.add (s4);
    p2.songs.add (s5);
    p2.songs.add (s6);

    List<Playlist> playlists = new ArrayList<Playlist>();
    playlists.add(p1);
    playlists.add(p2);

    render ("dashboard.html", playlists);
  }
}
```

Beethoven Sonatas

Song	Artist
Piano Sonata No. 3	Beethoven
Piano Sonata No. 7	Beethoven
Piano Sonata No. 10	Beethoven

Beethoven Concertos

Song	Artist
Piano Concerto No. 1	Beethoven
Piano Concerto No. 12	Beethoven
Piano Concerto No. 23	Beethoven

```html
#{extends 'main.html' /}
#{set title:'Dashboard' /}

#{menu id:"dashboard"/}

#{list items:playlists, as:'playlist'}
  <section class="ui segment">
    <h2 class="ui header">
      ${playlist.title}
    </h2>
    #{listsongs playlist:playlist/}
  </section>
#{/list}
```

```java
public static void index() {
    Logger.info("Rendering Dashboard");
    //...
    List<Playlist> playlists = new ArrayList<Playlist>();
    playlists.add(p1);
    playlists.add(p2);

    render ("dashboard.html", playlists);
}
```

Iterate through the playlists array →

Output the playlist name →

```
#{extends 'main.html' /}
#{set title:'Dashboard' /}

#{menu id:"dashboard"/}

#{list items:playlists, as:'playlist'}
  <section class="ui segment">
    <h2 class="ui header">
      ${playlist.title}
    </h2>
    #{listsongs playlist:playlist/}
  </section>
#{/list}
```

Pass the entire playlist to the listsongs partial

```java
public static void index() {
    Logger.info("Rendering Dashboard");
    //...
    List<Playlist> playlists = new ArrayList<Playlist>();
    playlists.add(p1);
    playlists.add(p2);

    render ("dashboard.html", playlists);
}
```

```html
#{extends 'main.html' /}
#{set title:'Dashboard' /}

#{menu id:"dashboard"/}

#{list items:playlists, as:'playlist'}
  <section class="ui segment">
    <h2 class="ui header">
      ${playlist.title}
    </h2>
    #{listsongs playlist:playlist/}
  </section>
#{/list}
```

Beethoven Sonatas

Song	Artist
Piano Sonata No. 3	Beethoven
Piano Sonata No. 7	Beethoven
Piano Sonata No. 10	Beethoven

Beethoven Concertos

Song	Artist
Piano Concerto No. 1	Beethoven
Piano Concerto No. 12	Beethoven
Piano Concerto No. 23	Beethoven

```html
<table class="ui fixed table">
  <thead>
    <tr>
      <th>Song</th>
      <th>Artist</th>
    </tr>
  </thead>
  <tbody>
    #{list items:_playlist.songs, as:'song'}
    <tr>
      <td>
        ${song.title}
      </td>
      <td>
        ${song.artist}
      </td>
    </tr>
    #{/list}
  </tbody>
</table>
```