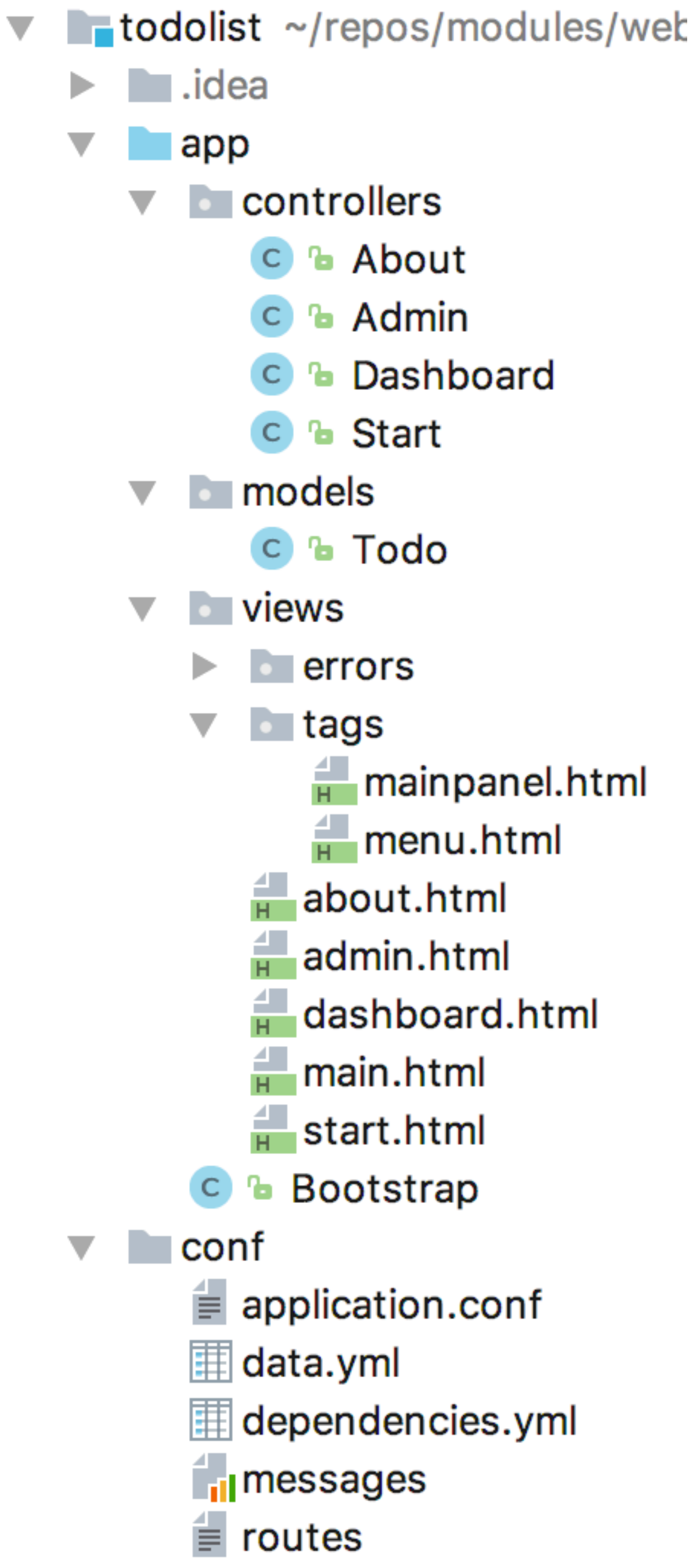
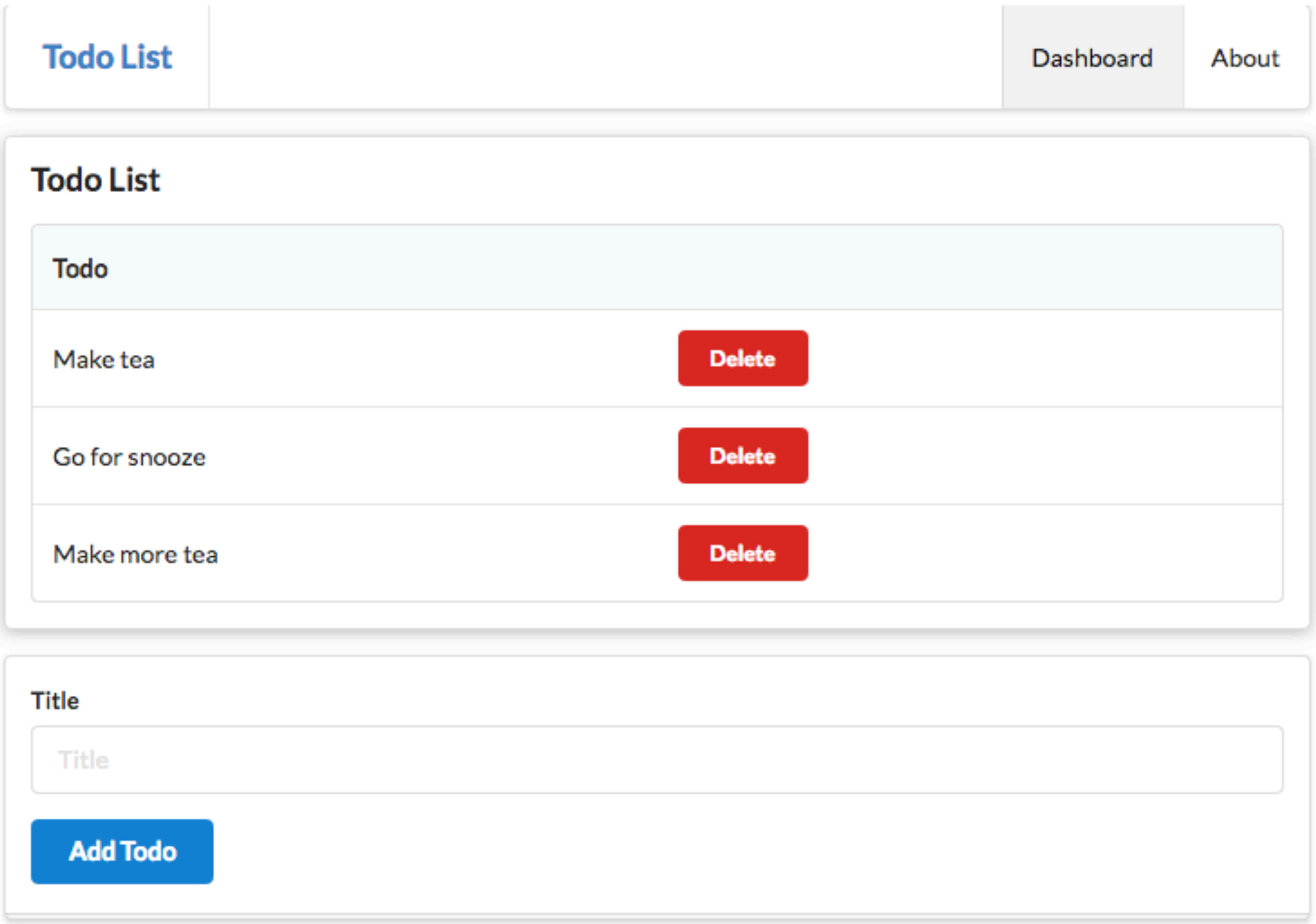
Todo Sessions

todolist app



```
▼ todolist ~/repos/modules/web
  ▶ .idea
  ▼ app
    ▼ controllers
        About
        Admin
        Dashboard
        Start
    ▼ models
        Todo
    ▼ views
      ▶ errors
      ▼ tags
          mainpanel.html
          menu.html
        about.html
        admin.html
        dashboard.html
        main.html
        start.html
      Bootstrap
  ▼ conf
      application.conf
      data.yml
      dependencies.yml
      messages
      routes
```



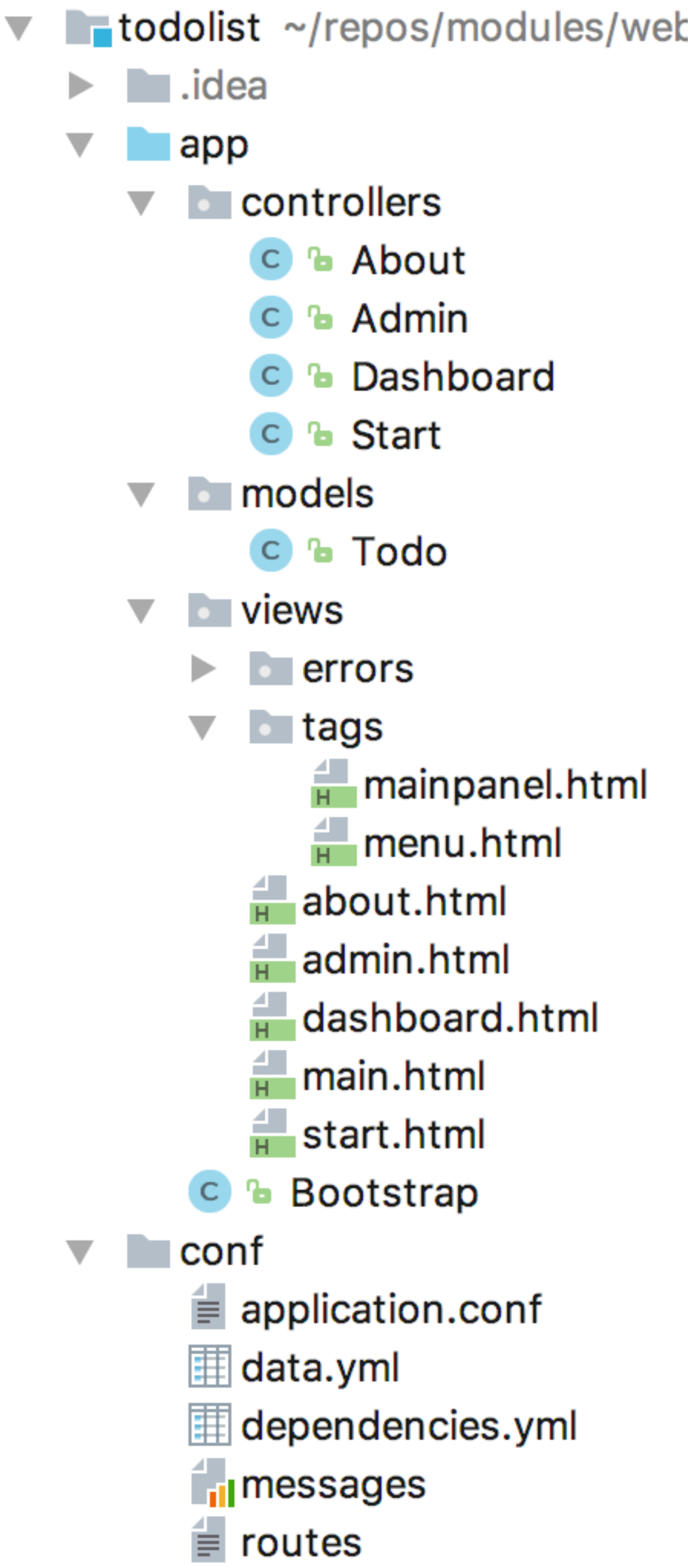
Todo List

Todo List

Todo	
Make tea	Delete
Go for snooze	Delete
Make more tea	Delete

Title

Bootstrap Model Seeding



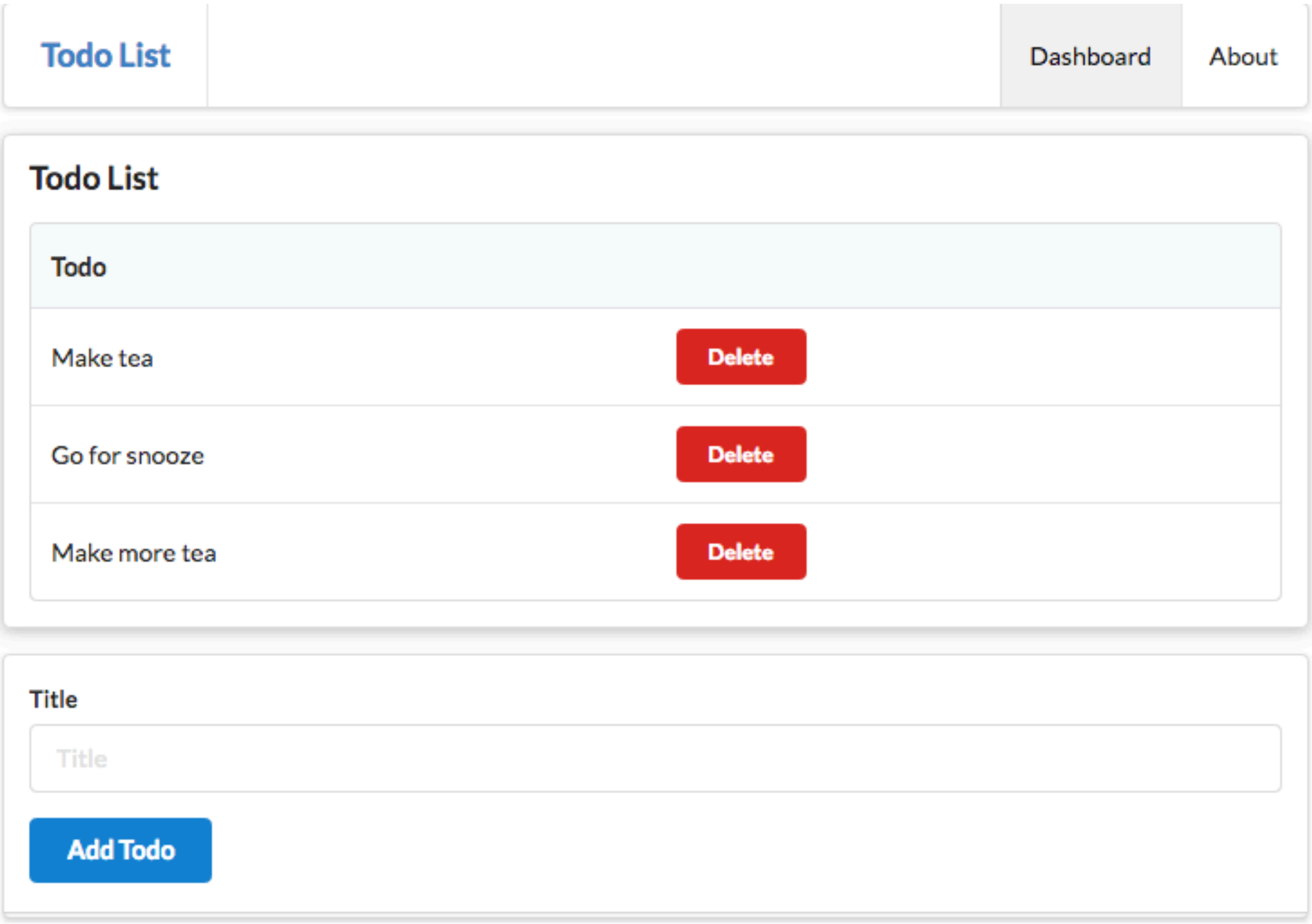
```
todolist ~/repos/modules/web
  .idea
  app
    controllers
      About
      Admin
      Dashboard
      Start
    models
      Todo
    views
      errors
      tags
        mainpanel.html
        menu.html
      about.html
      admin.html
      dashboard.html
      main.html
      start.html
    Bootstrap
  conf
    application.conf
    data.yml
    dependencies.yml
    messages
    routes
```

```java
public class Bootstrap extends Job
{
  public void doJob()
  {
    Fixtures.loadModels("data.yml");
  }
}
```

```yaml
Todo(t1):
  title: Make tea

Todo(t2):
  title: Go for snooze

Todo(t3):
  title: Make more tea
```

```java
@Entity
public class Todo extends Model
{
  public String title;

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

Dashboard View



Todo List

Todo	
Make tea	Delete
Go for snooze	Delete
Make more tea	Delete

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

#{menu id:"dashboard"/}

<section class="ui raised segment">
  <header class="ui header">
    Todo List
  </header>
  <table class="ui fixed table">
    <thead>
    <tr>
      <th>Todo</th>
      <th></th>
    </tr>
    </thead>
    <tbody>
    <div class="ui bulleted list">
      #{list items:todolist, as:'todo'}
      <tr>
        <td> ${todo.title} </td>
        <td> <a href="/dashboard/deletetodo/${todo.id} " class="ui tiny red button"> Delete </a> </td>
      #{/list}
    </div>
    </tbody>
  </table>

</section>

<form class="ui stacked segment form" action="/dashboard/addtodo" method="POST">
  <div class="field">
    <label>Title</label>
    <input placeholder="Title" type="text" name="title">
  </div>
  <button class="ui blue submit button">Add Todo</button>
</form>
```

Dashboard Routes + Controller

```
GET     /dashboard                                   Dashboard.index
POST    /dashboard/addtodo                           Dashboard.addTodo
GET     /dashboard/deletetodo/{id}                   Dashboard.deleteTodo
```

```java
public class Dashboard extends Controller
{
  public static void index()
  {
    Logger.info("Rendering Dashboard");
    List<Todo> todolist = Todo.findAll();
    render("dashboard.html", todolist);
  }

  public static void addTodo(String title)
  {
    Todo todo = new Todo(title);
    todo.save();
    Logger.info("Addint Todo" + title);
    redirect("/dashboard");
  }

  public static void deleteTodo(Long id)
  {
    Todo todo = Todo.findById(id);
    todo.delete();
    Logger.info("Deleting " + todo.title);
    redirect("/dashboard");
  }
}
```

Dashboard Index Action

```
GET     /dashboard                                            Dashboard.index
```

```
  public static void index()
  {
    Logger.info("Rendering Dashboard");
    List<Todo> todolist = Todo.findAll();
    render("dashboard.html", todolist);
  }
```

```
...
    <div class="ui bulleted list">
      #{list items:todolist, as:'todo'}
      <tr>
        <td> ${todo.title} </td>
        <td> <a href="/dashboard/deletetodo/${todo.id} " class="ui tiny red button"> Delete </a> </td>
      #{/list}
    </div>
    </tbody>
  </table>
…
```

Dashboard addTodo Action

```
POST     /dashboard/addtodo                          Dashboard.addTodo
```

```
  public static void addTodo(String title)
  {
    Todo todo = new Todo(title);
    todo.save();
    Logger.info("Adding Todo" + title);
    redirect("/dashboard");
  }
```

```
<form class="ui stacked segment form" action="/dashboard/addtodo" method="POST">
  <div class="field">
    <label>Title</label>
    <input placeholder="Title" type="text" name="title">
  </div>
  <button class="ui blue submit button">Add Todo</button>
</form>
```

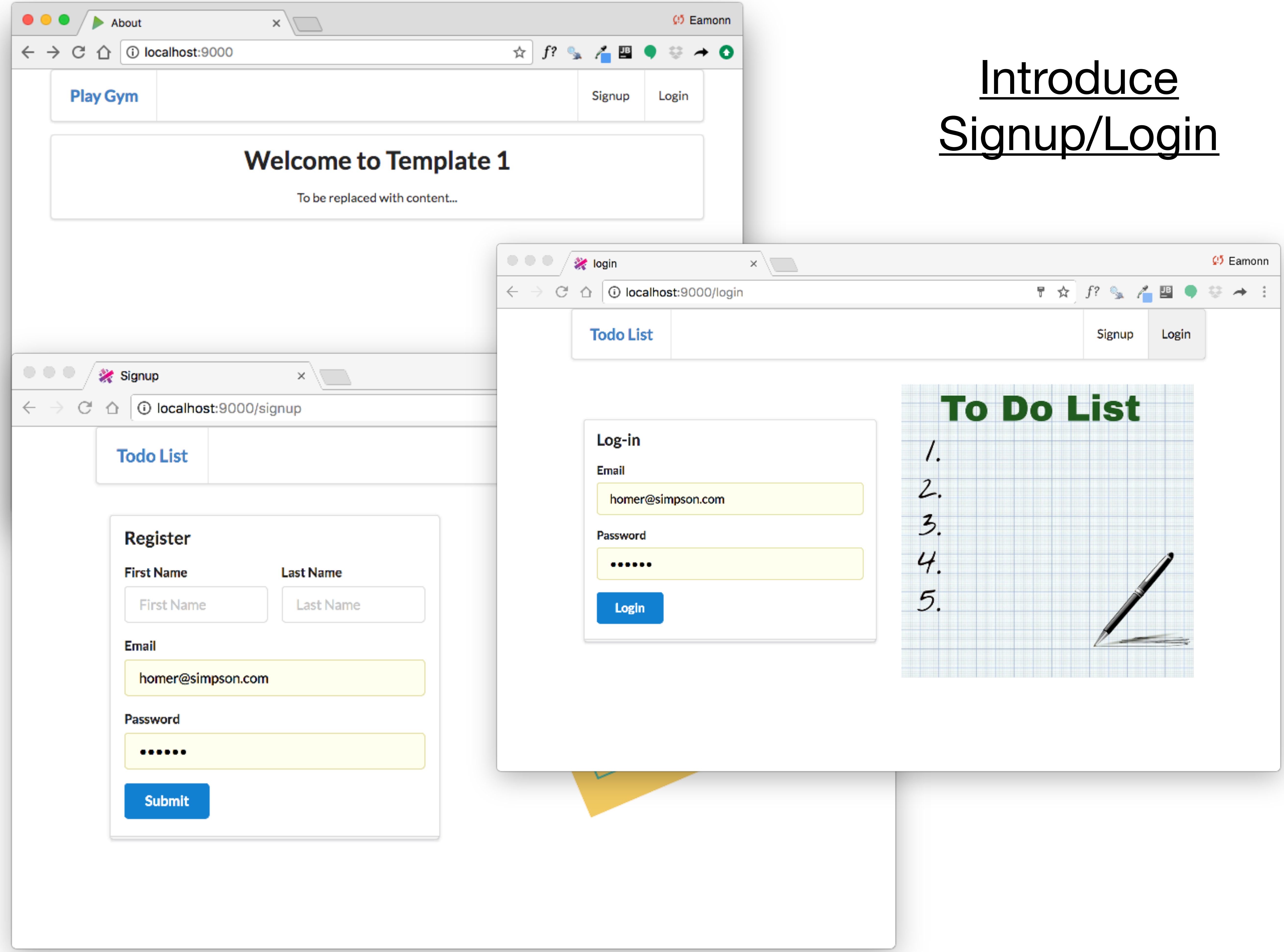
Dashboard deleteTodo Action

```
GET     /dashboard/deletetodo/{id}                   Dashboard.deleteTodo
```

```
  public static void deleteTodo(Long id)
  {
    Todo todo = Todo.findById(id);
    todo.delete();
    Logger.info("Deleting " + todo.title);
    redirect("/dashboard");
  }
```

```
...
    <div class="ui bulleted list">
      #{list items:todolist, as:'todo'}
      <tr>
        <td> ${todo.title} </td>
        <td> <a href="/dashboard/deletetodo/${todo.id} " class="ui tiny red button"> Delete </a> </td>
      #{/list}
    </div>
    </tbody>
  </table>
…
```

Introduce Signup/Login



About

Eamonn

localhost:9000

Play Gym

Signup Login

Welcome to Template 1

To be replaced with content...

Signup

localhost:9000/signup

Todo List

Register

First Name: First Name

Last Name: Last Name

Email: homer@simpson.com

Password: ••••••

Submit

login

Eamonn

localhost:9000/login

Todo List

Signup Login

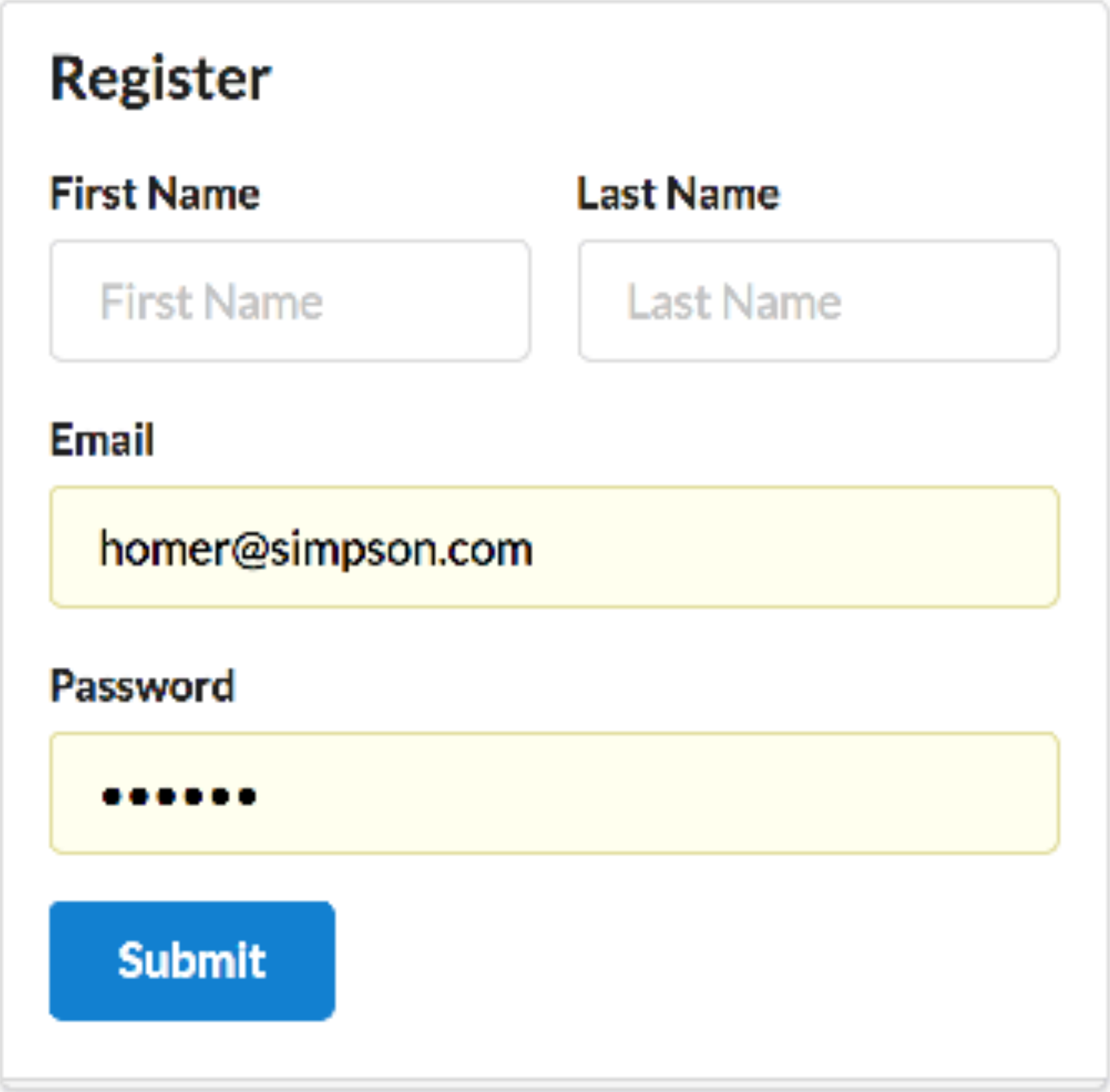
Log-in

Email: homer@simpson.com

Password: ••••••

Login

Signup Form



Register

First Name: First Name

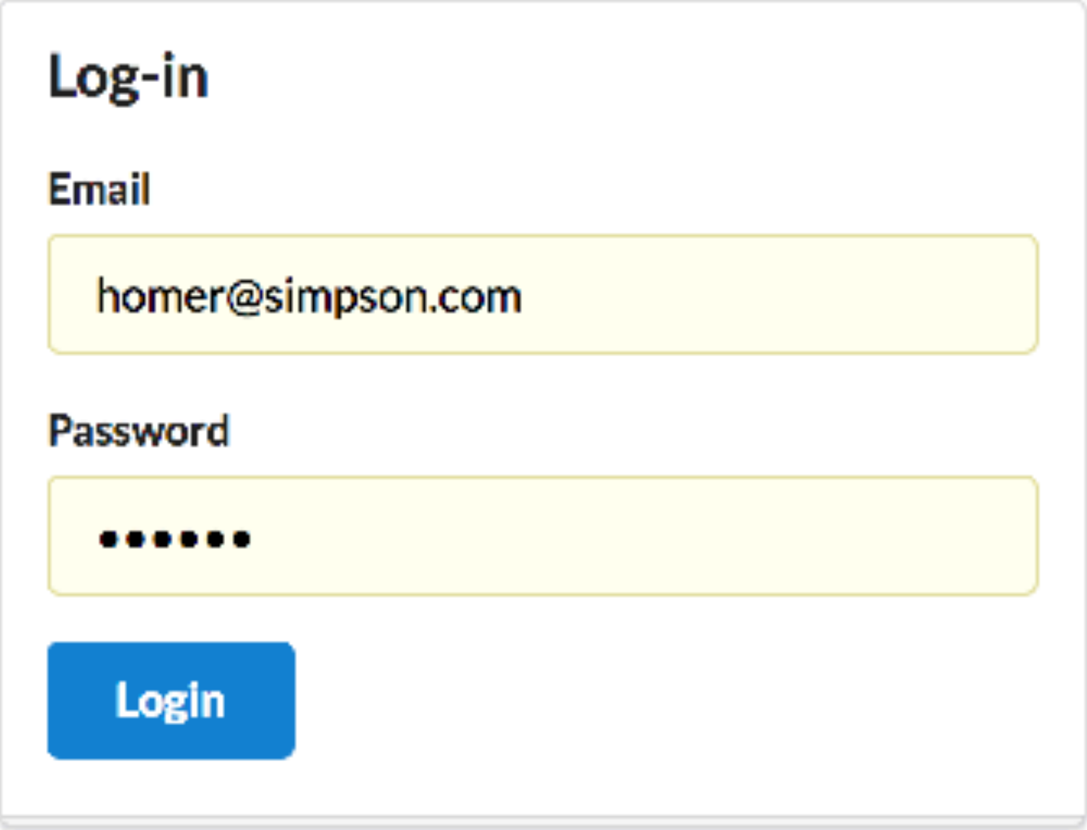
Last Name: Last Name

Email: homer@simpson.com

Password: ••••••

```
<div class="ui two column grid basic middle aligned segment">
  <div class="column">
    <form class="ui stacked segment form" action="/register" method="POST">
      <h3 class="ui header">Register</h3>
      <div class="two fields">
        <div class="field">
          <label>First Name</label>
          <input placeholder="First Name" type="text" name="firstname">
        </div>
        <div class="field">
          <label>Last Name</label>
          <input placeholder="Last Name" type="text" name="lastname">
        </div>
      </div>
      <div class="field">
        <label>Email</label>
        <input placeholder="Email" type="text" name="email">
      </div>
      <div class="field">
        <label>Password</label>
        <input type="password" name="password">
      </div>
      <button class="ui blue submit button">Submit</button>
    </form>
  </div>
  <div class="column">
    <img class="ui image" src="/public/images/tosdo-1.png">
  </div>
</div>
```

Login Form



Log-in

Email

homer@simpson.com

Password

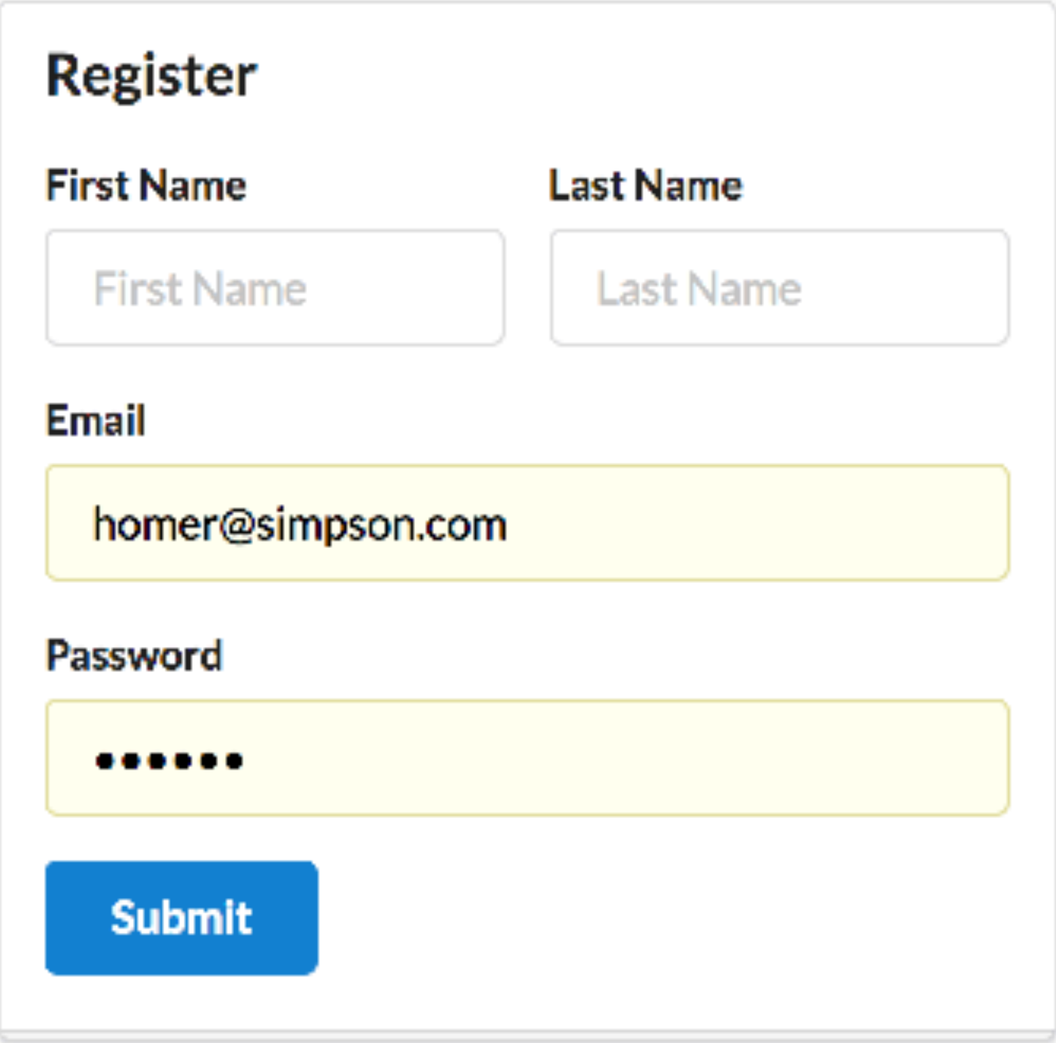
••••••

```
<div class="ui two column middle aligned grid basic segment">
  <div class="column">
    <form class="ui stacked segment form" action="/authenticate" method="POST">
      <h3 class="ui header">Log-in</h3>
      <div class="field">
        <label>Email</label> <input placeholder="Email" name="email">
      </div>
      <div class="field">
        <label>Password</label> <input type="password" name="password">
      </div>
      <button class="ui blue submit button">Login</button>
    </form>
  </div>
  <div class="column">
    <img class="ui image" src="/public/images/todo-2.jpg">
  </div>
</div>
```

Initial Accounts Routes + Controller

```
GET     /signup                                       Accounts.signup
GET     /login                                        Accounts.login
```

```
public class Accounts extends Controller
{
  public static void signup()
  {
    render("signup.html");
  }

  public static void login()
  {
    render("login.html");
  }
}
```



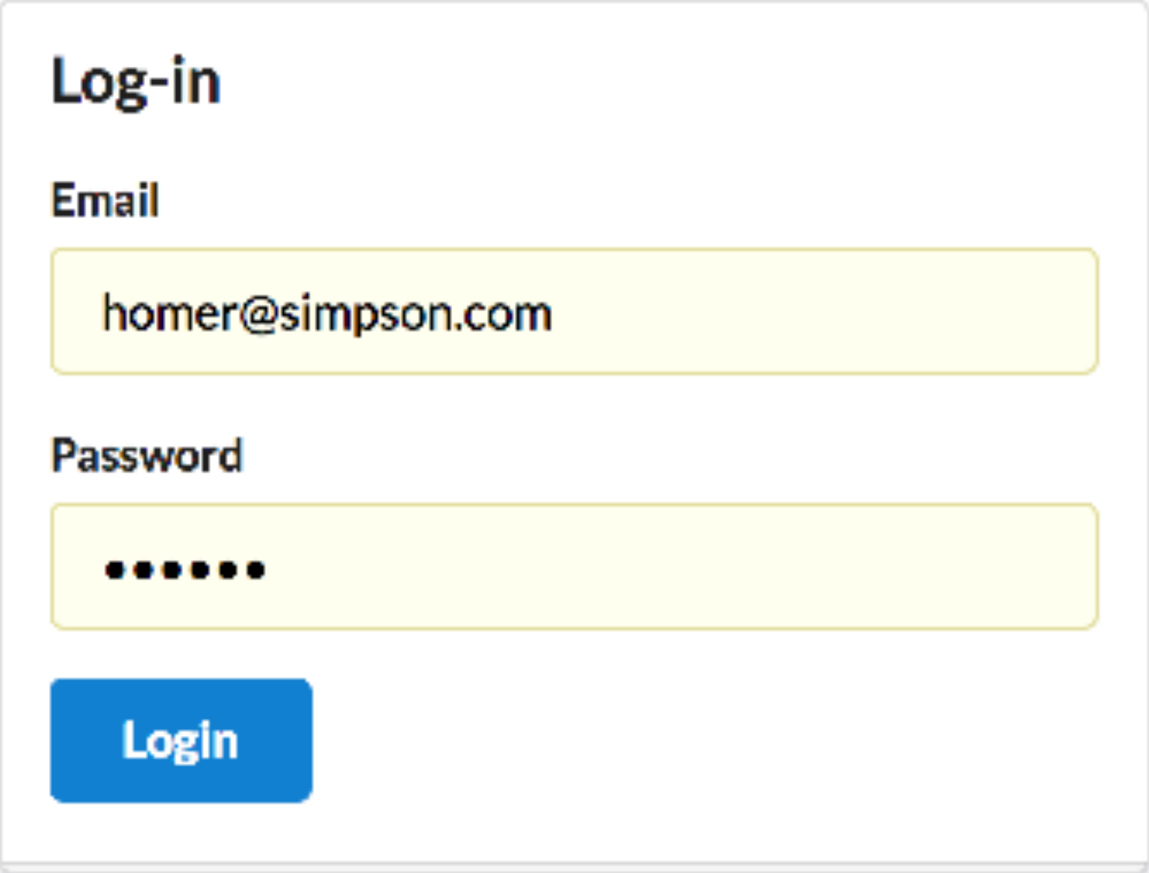
Register

First Name: First Name

Last Name: Last Name

Email: homer@simpson.com

Password: ••••••



Log-in

Email: homer@simpson.com

Password: ••••••

Todo Model

```
@Entity
public class Todo extends Model
{
  public String title;

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

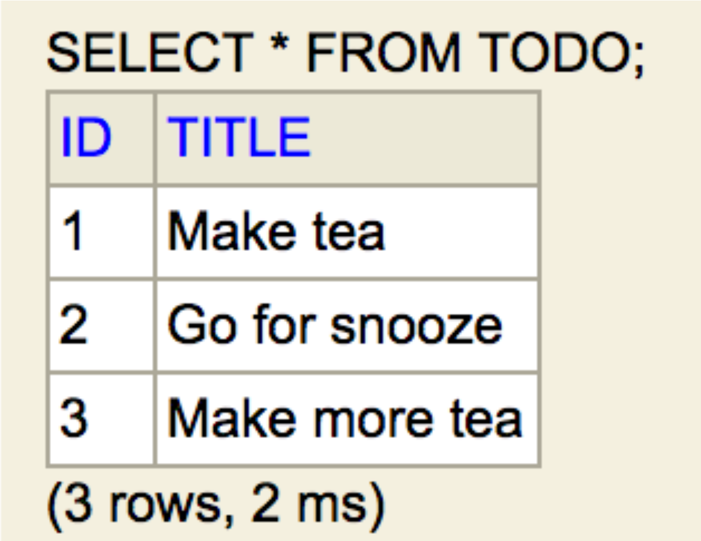
```
Todo(t1):
  title: Make tea

Todo(t2):
  title: Go for snooze

Todo(t3):
  title: Make more tea
```

Member Model

```java
@Entity
public class Member extends Model
{
  public String firstname;
  public String lastname;
  public String email;
  public String password;

  @OneToMany(cascade = CascadeType.ALL)
  public List<Todo> todolist = new ArrayList<Todo>();

  public Member(String firstname, String lastname,
                String email,     String password)
  {
    this.firstname = firstname;
    this.lastname = lastname;
    this.email = email;
    this.password = password;
  }

  public static Member findByEmail(String email)
  {
    return find("email", email).first();
  }

  public boolean checkPassword(String password)
  {
    return this.password.equals(password);
  }
}
```

```
Todo(t1):
  title: Make tea

Todo(t2):
  title: Go for snooze

Todo(t3):
  title: Make more tea

Member(m1):
  firstname: homer
  lastname: simpson
  email: homer@simpson.com
  password: secret
  todolist:
  - t1
  - t2
```

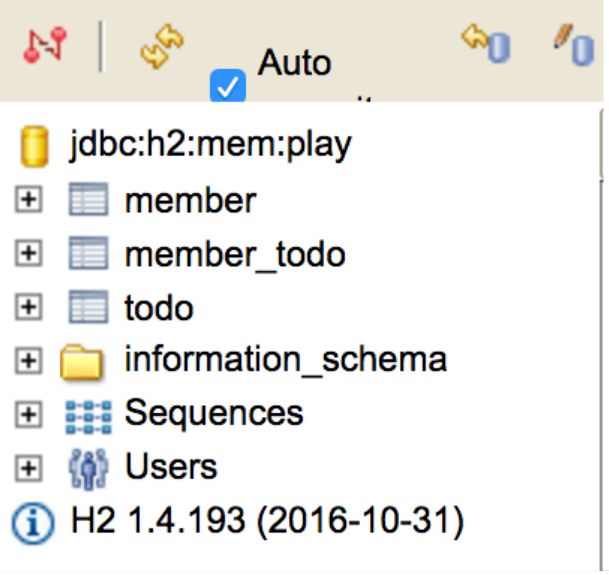
```
Todo(t1):
  title: Make tea

Todo(t2):
  title: Go for snooze

Todo(t3):
  title: Make more tea

Member(m1):
  firstname: homer
  lastname: simpson
  email: homer@simpson.com
  password: secret
  todolist:
  - t1
  - t2
```

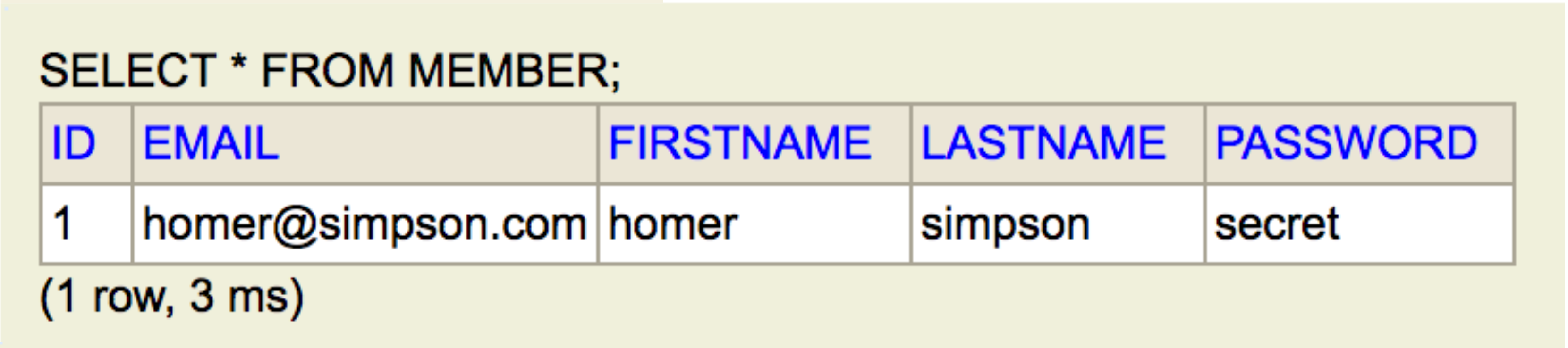


SELECT * FROM TODO;

ID	TITLE
1	Make tea
2	Go for snooze
3	Make more tea

(3 rows, 2 ms)

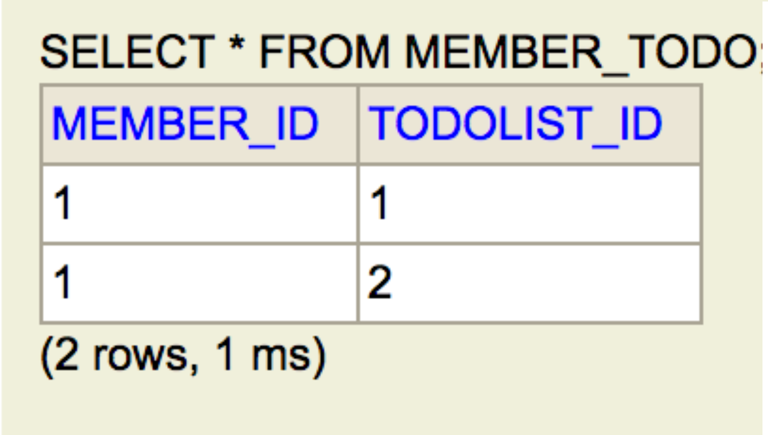




SELECT * FROM MEMBER;

ID	EMAIL	FIRSTNAME	LASTNAME	PASSWORD
1	homer@simpson.com	homer	simpson	secret

(1 row, 3 ms)



SELECT * FROM MEMBER_TODO;

MEMBER_ID	TODOLIST_ID
1	1
1	2

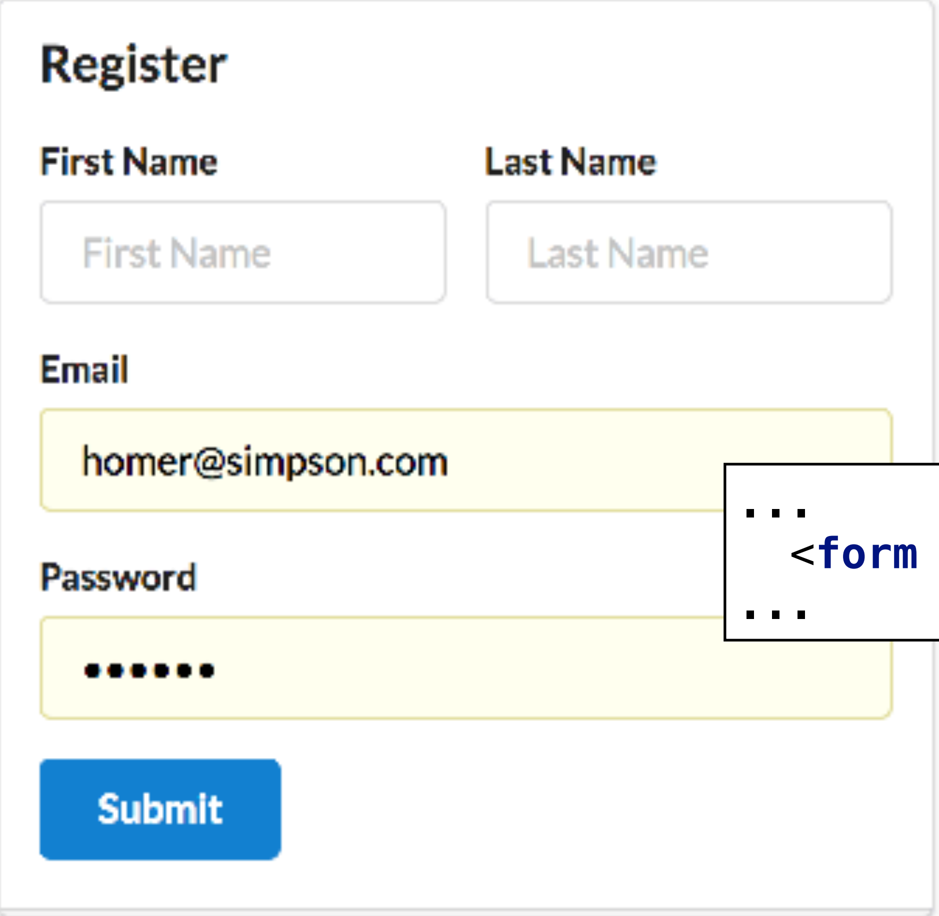
(2 rows, 1 ms)

```
public class Member extends Model

{
  public String firstname;
  public String lastname;
  public String email;
  public String password;

  @OneToMany(cascade = CascadeType.ALL)
  public List<Todo> todolist = new ArrayList<Todo>();
}
```

Database

```
@Entity
public class Todo extends Model
{
  public String title;
}
```

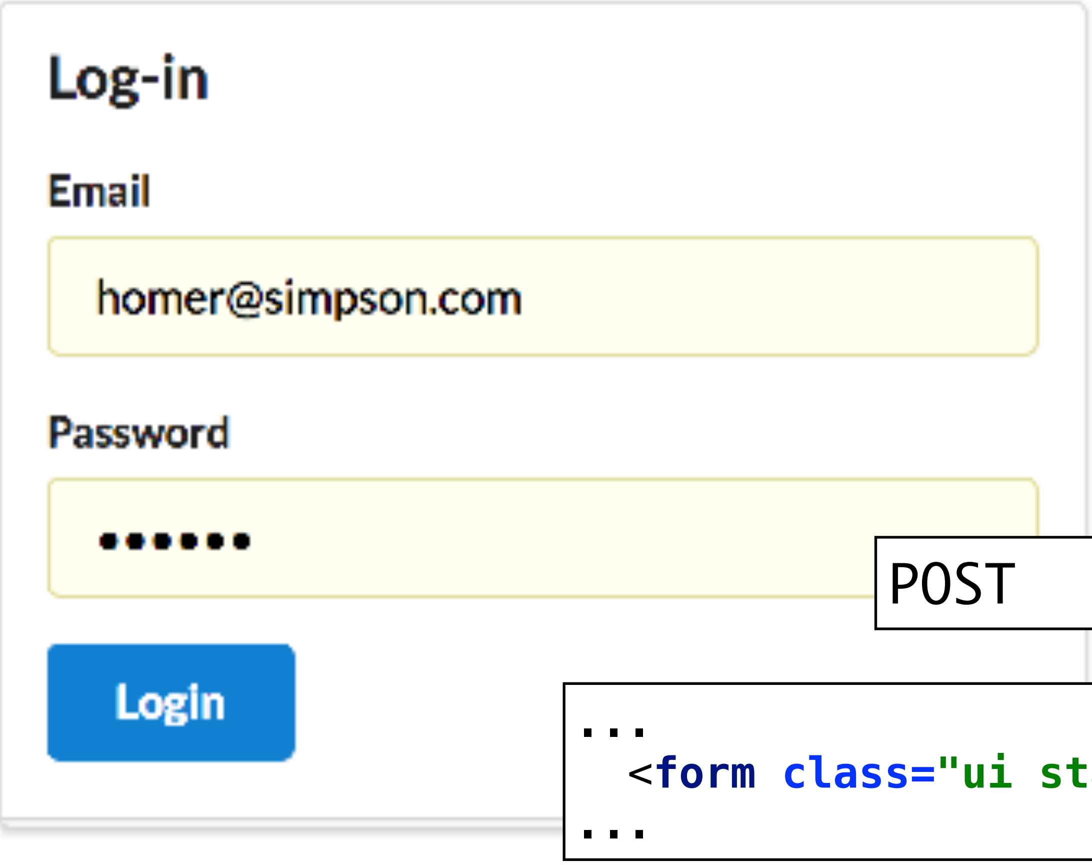
Signup Member: Register



```
...
  <form class="ui stacked segment form" action="/register" method="POST">
...
```

```
POST    /register                    Accounts.register
```

```
public class Accounts extends Controller
{
...
  public static void register(String firstname, String lastname, String email, String password)
  {
    Logger.info("Registering new user " + email);
    Member member = new Member(firstname, lastname, email, password);
    member.save();
    redirect(“/");
  }
...
}
```



Log-in

Email

homer@simpson.com

Password

••••••

Login Member: Authenticate

```
POST    /authenticate               Accounts.authenticate
```

```
...
  <form class="ui stacked segment form" action="/authenticate" method="POST">
...
```

```
public class Accounts extends Controller
{
  public static void authenticate(String email, String password)
  {
    Logger.info("Attempting to authenticate with " + email + ":" + password);

    Member member = Member.findByEmail(email);
    if ((member != null) && (member.checkPassword(password) == true)) {
      Logger.info("Authentication successful");
      session.put("logged_in_Memberid", member.id);
      redirect ("/dashboard");
    } else {
      Logger.info("Authentication failed");
      redirect("/login");
    }
  }
...
}
```

Login Member: Authenticate

Find Member in DB

If member found & passwords match

Store members id in the Session object

Render Dashboard

Back to login

```
public class Accounts extends Controller
{
 public static void authenticate(String email,
                                   String password)
  {

    Member member = Member.findByEmail(email);


    if ((member != null) &&
        (member.checkPassword(password) == true)) {



      session.put("logged_in_Memberid", member.id);


      redirect ("/dashboard");

    } else {

      redirect("/login");

    }
  }
...
}
```

Utility Method: getLoggedInMember()

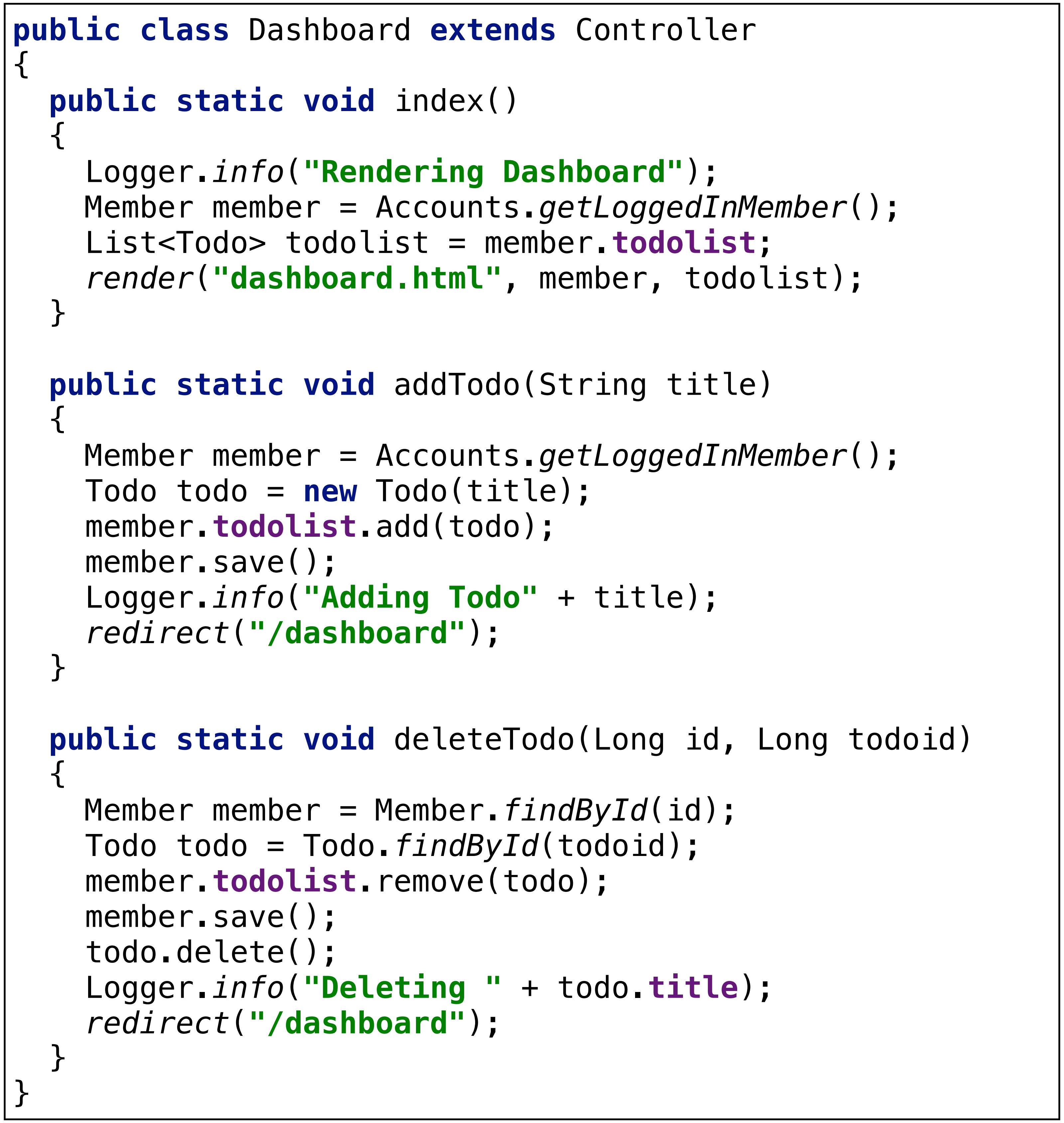
```java
public class Accounts extends Controller
{
...
  public static Member getLoggedInMember()
  {
    Member member = null;
    if (session.contains("logged_in_Memberid")) {
      String memberId = session.get("logged_in_Memberid");
      member = Member.findById(Long.parseLong(memberId));
    } else {
      login();
    }
    return member;
  }
...
}
```

Read the session object, and locate the member id

Find Member in database

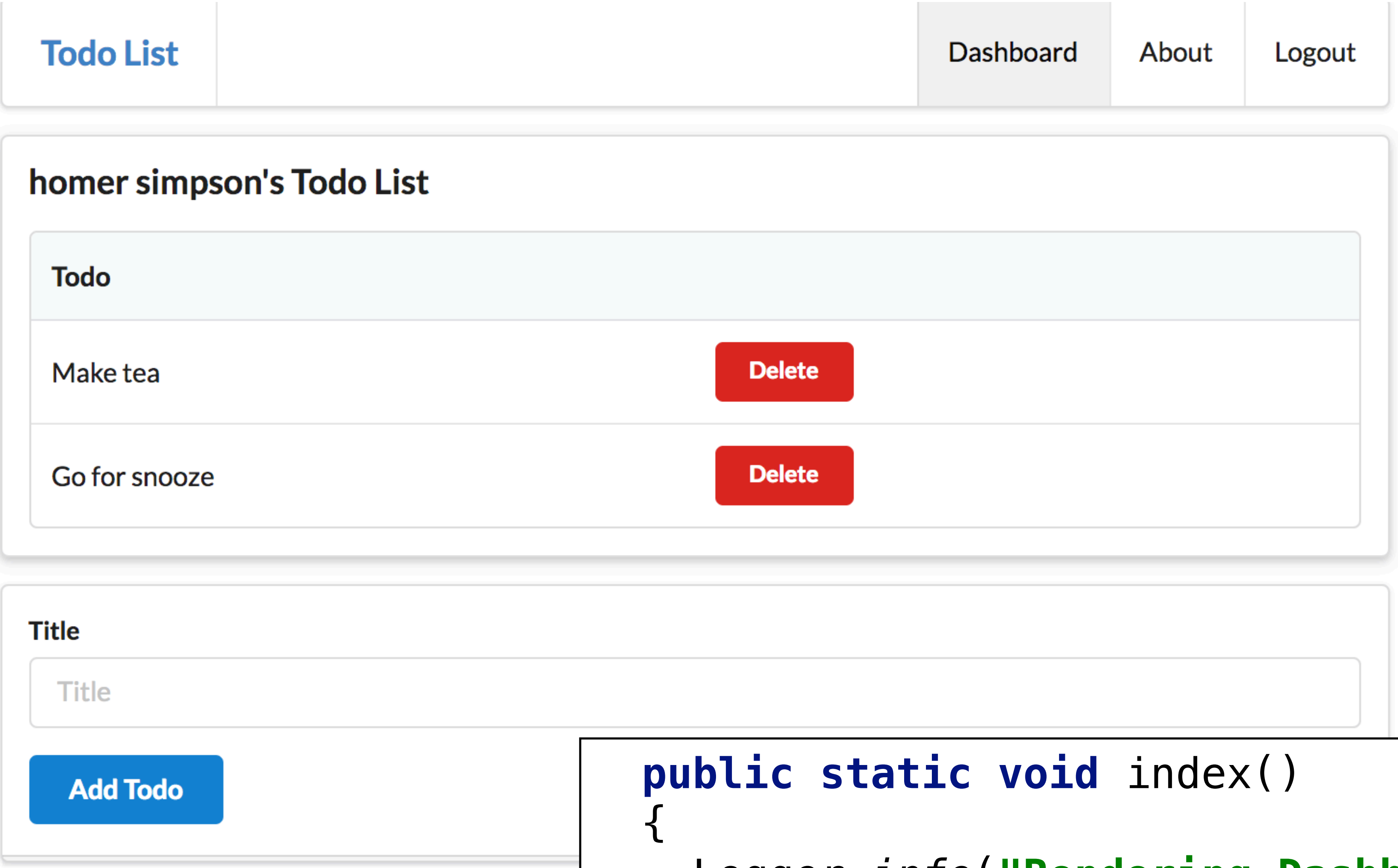
Return the member (or null)

Revised Dashboard Actions



```java
public class Dashboard extends Controller
{
  public static void index()
  {
    Logger.info("Rendering Dashboard");
    Member member = Accounts.getLoggedInMember();
    List<Todo> todolist = member.todolist;
    render("dashboard.html", member, todolist);
  }

  public static void addTodo(String title)
  {
    Member member = Accounts.getLoggedInMember();
    Todo todo = new Todo(title);
    member.todolist.add(todo);
    member.save();
    Logger.info("Adding Todo" + title);
    redirect("/dashboard");
  }

  public static void deleteTodo(Long id, Long todoid)
  {
    Member member = Member.findById(id);
    Todo todo = Todo.findById(todoid);
    member.todolist.remove(todo);
    member.save();
    todo.delete();
    Logger.info("Deleting " + todo.title);
    redirect("/dashboard");
  }
}
```

Dashboard index()



homer simpson's Todo List

Todo	
Make tea	Delete
Go for snooze	Delete

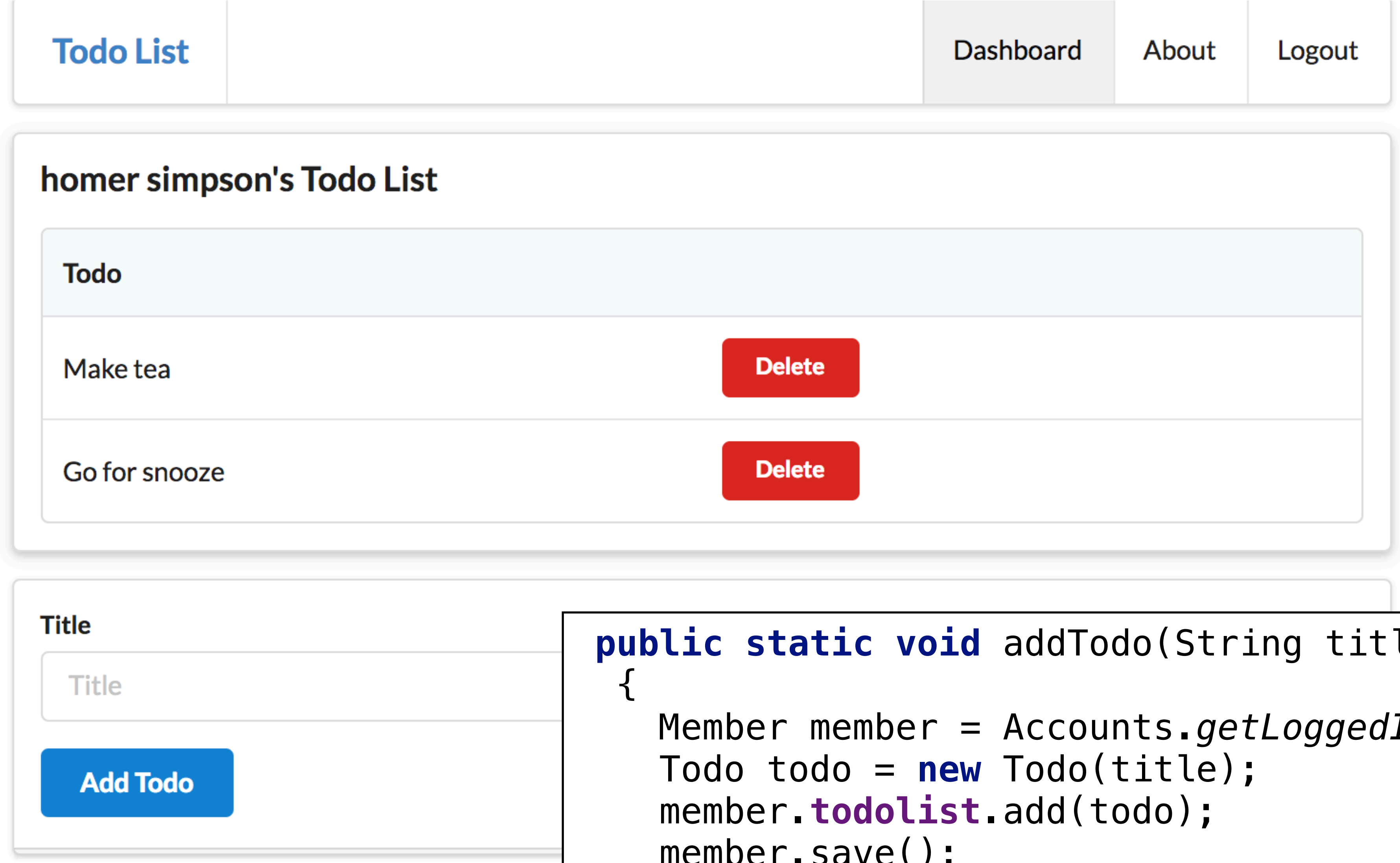
Title

Title

```
public static void index()
{
  Logger.info("Rendering Dashboard");
  Member member = Accounts.getLoggedInMember();
  List<Todo> todolist = member.todolist;
  render("dashboard.html", member, todolist);
}
```

Only send Members Todo list to view

Dashboard addTodo()



homer simpson's Todo List

Todo
Make tea
Go for snooze

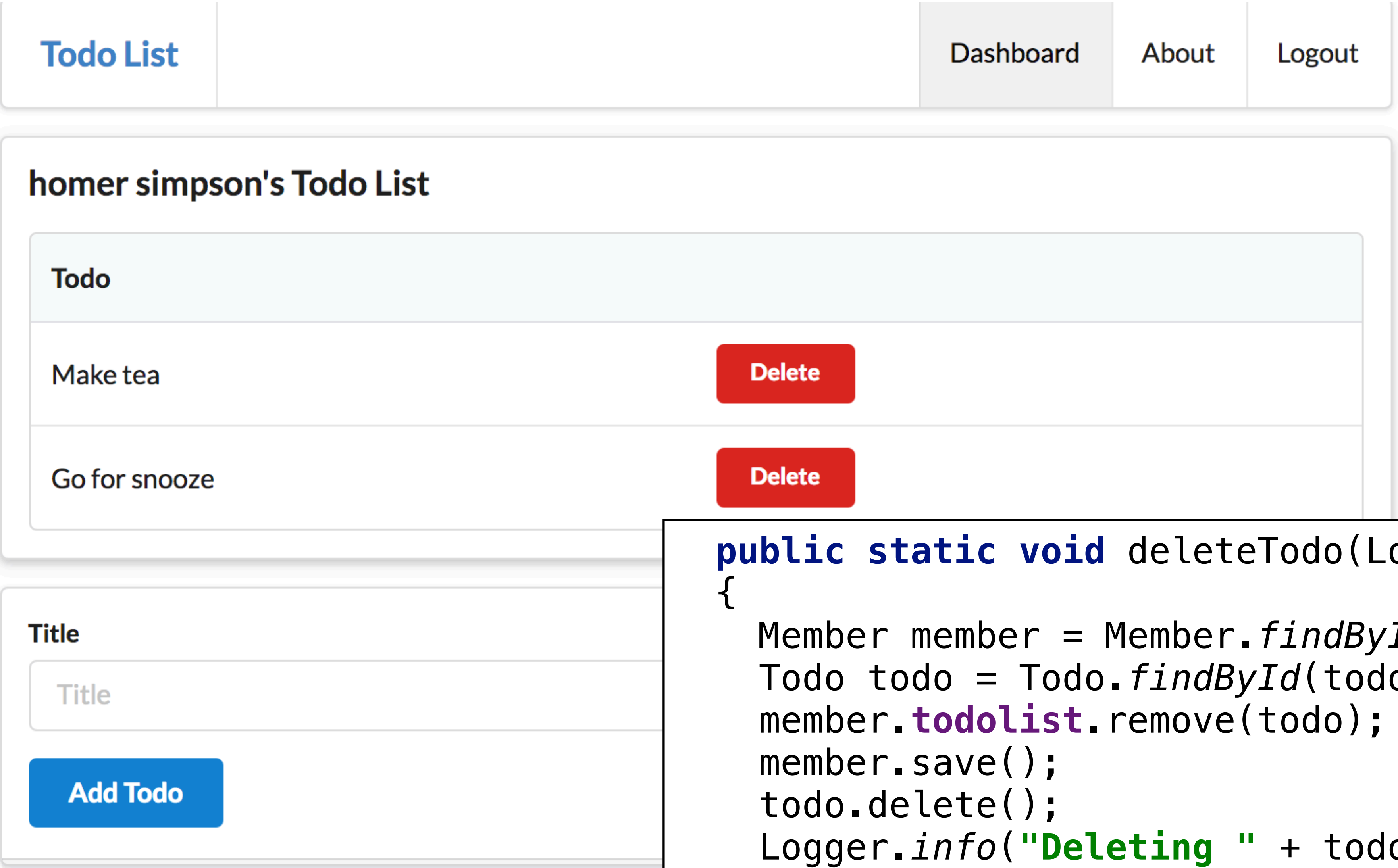
Title

Title

```
public static void addTodo(String title)
 {
   Member member = Accounts.getLoggedInMember();
   Todo todo = new Todo(title);
   member.todolist.add(todo);
   member.save();
   Logger.info("Adding Todo" + title);
   redirect("/dashboard");
 }
```

Add todo to the member list

Dashboard deleteTodo()



Todo List

Dashboard About Logout

homer simpson's Todo List

Todo	
Make tea	Delete
Go for snooze	Delete

Title

Title

Add Todo

```
public static void deleteTodo(Long id, Long todoid)
{
  Member member = Member.findById(id);
  Todo todo = Todo.findById(todoid);
  member.todolist.remove(todo);
  member.save();
  todo.delete();
  Logger.info("Deleting " + todo.title);
  redirect("/dashboard");
}
```

Remove the todo from the members list

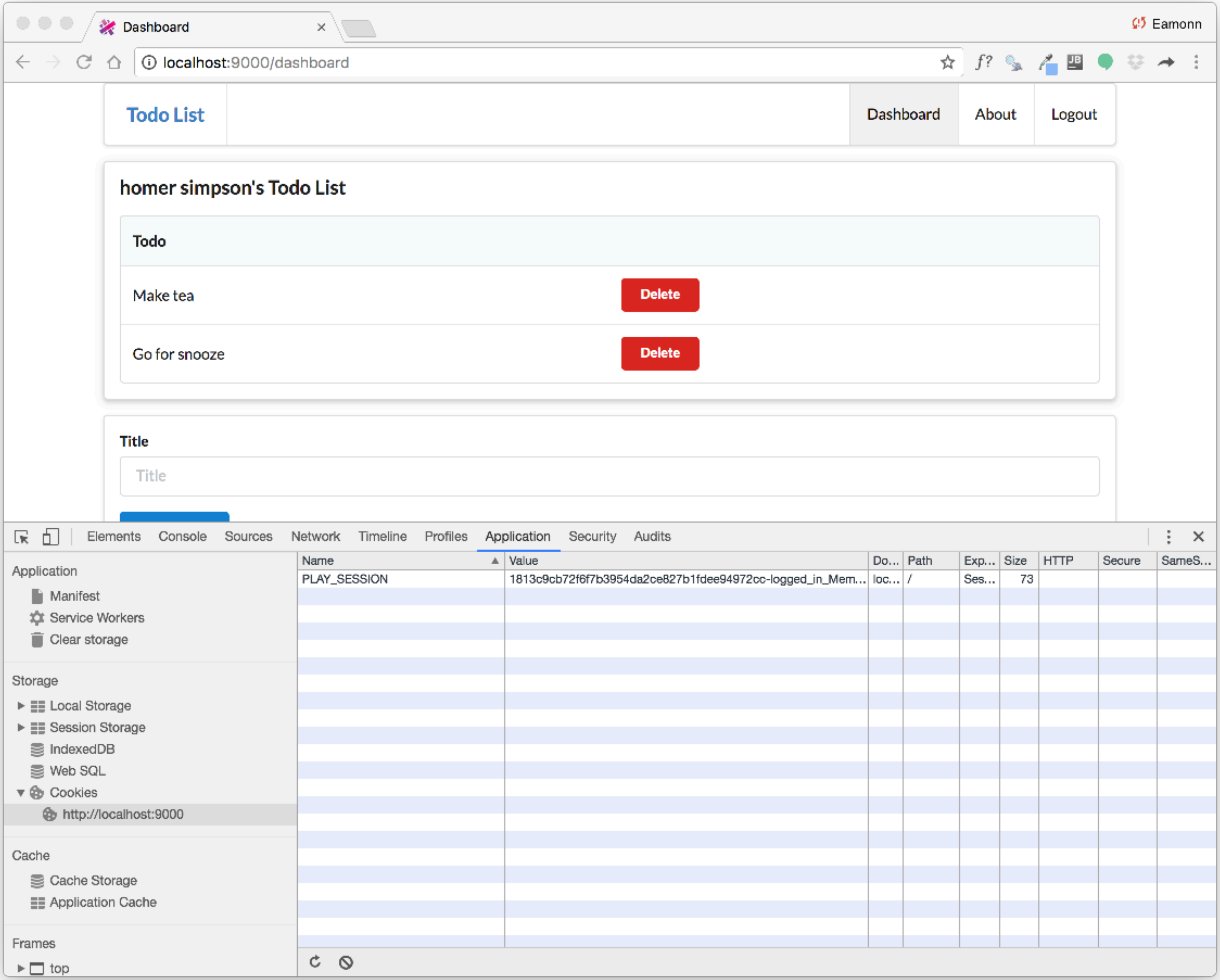
Accounts logout() action

```
GET     /logout                                 Accounts.logout
```

```
public static void logout()
{
  session.clear();
  redirect ("/");
}
```

Clear the session
Member id will no longer be found

Inspect the Session Cookie in Chrome



Todo List | Dashboard | About | Logout

homer simpson's Todo List

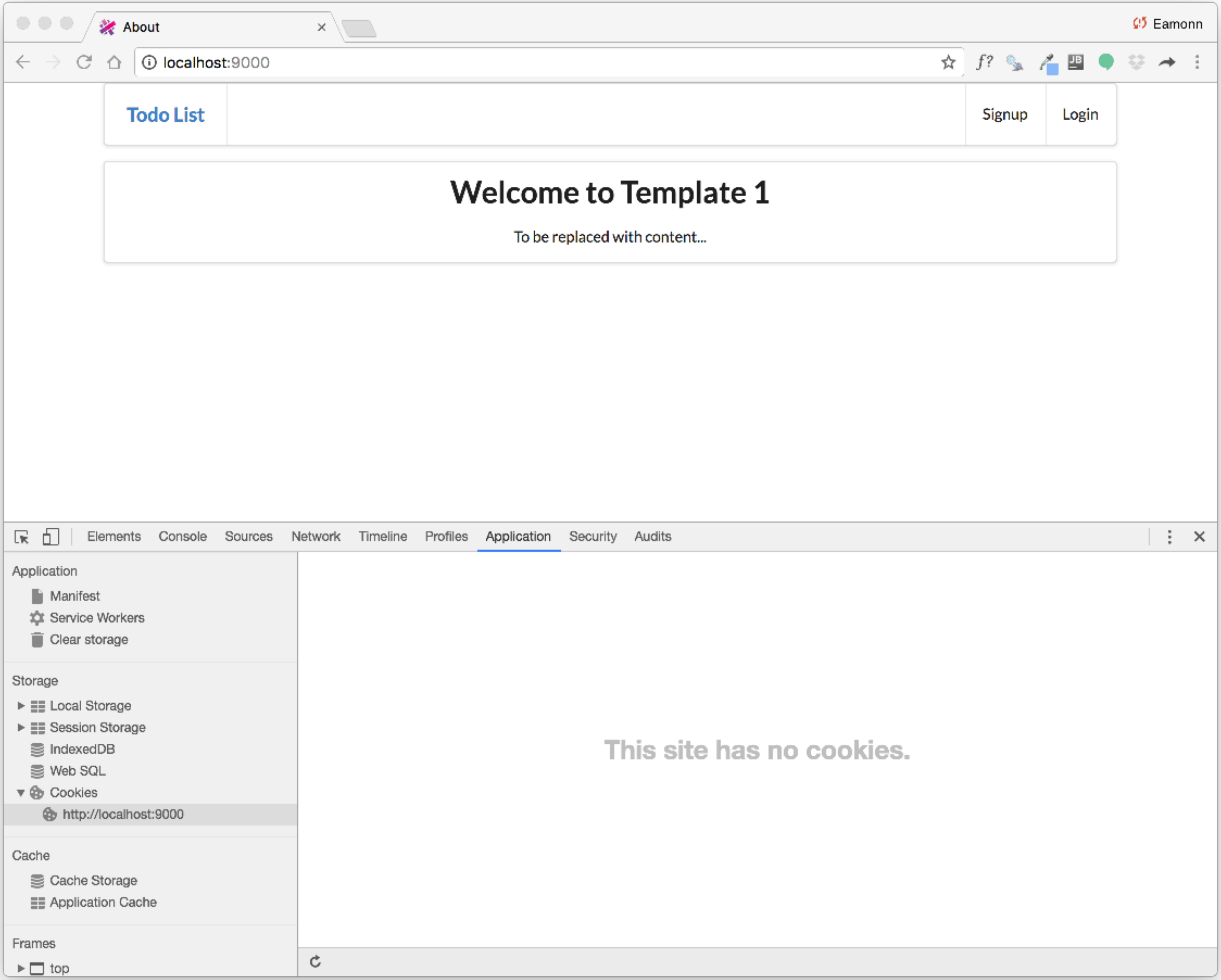
Todo	
Make tea	Delete
Go for snooze	Delete

Title

Title

Name	Value	Do...	Path	Exp...	Size	HTTP	Secure	SameS...
PLAY_SESSION	1813c9cb72f6f7b3954da2ce827b1fdee94972cc-logged_in_Mem...	loc...	/	Ses...	73			

Logout clears the Cookie



Welcome to Template 1

To be replaced with content...

This site has no cookies.