



Introduction to Thymeleaf

Thyme



- Thyme (/taɪm/) is an aromatic perennial evergreen herb with culinary, medicinal, and ornamental uses. (Wikipedia)
- Egyptians used thyme for embalming.
- Greeks believed thyme was a source of courage

Thymeleaf

- Thymeleaf is a Java Template Engine
- Open Source Project Released in 2011
- Created by Spanish Software Engineer Daniel Fernandez
- Using Apache License 2.0 Open Source License
- Pronounced /'taim/ - (time)

Thymeleaf Features

- Thymeleaf is a Java template engine producing XML, XHTML, and HTML5.
- Thymeleaf is a replacement for JSPs (Java Server Pages)
- Thymeleaf is a 'Natural' Template Engine.
- Is not tied to web environment. (ie can be used for producing HTML for emails)
- Thymeleaf is not a web framework

Thymeleaf vs JSP

- Thymeleaf templates are valid HTML documents you can view in the browser.
- JSP files are not valid HTML, and look awful in the browser
- The natural templating ability allows you to perform rapid development, without the need to run a container to parse the template/JSP to view the product in a browser.
- Speeds development time

Thymeleaf Performance

- Thymeleaf typically does benchmark slower than other template engines such as JSP, Freemarker, and Velocity
 - Note: Spring 5 no longer supports Velocity
- Thymeleaf 3.0 did bring significant performance improvements
 - Beware of old benchmark data!



Fuel Economy and Environment



Gasoline Vehicle

Fuel Economy



27 **MPG**

combined city/hwy

24

city

32

highway

3.7 gallons per 100 miles

Midsized cars range from 13 to 58 MPGe.
The best vehicle rates 121 MPGe.

You save
\$1,750
in fuel costs
over 5 years
compared to the
average new vehicle.

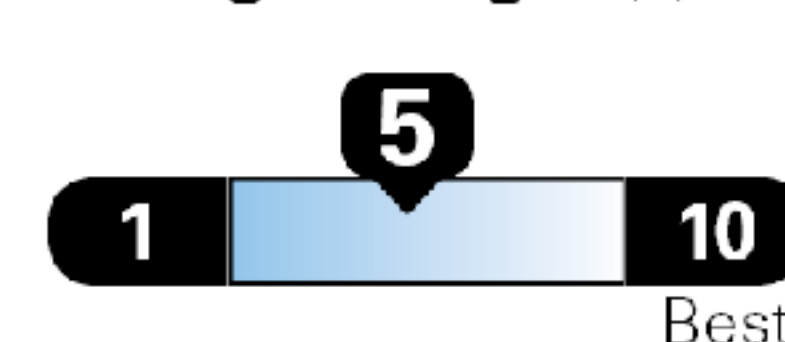
Annual fuel cost
\$1,950

Fuel Economy & Greenhouse Gas Rating (tailpipe only)



This vehicle emits 329 grams CO₂ per mile. The best emits 0 grams per mile (tailpipe only). Producing and distributing fuel also create emissions; learn more at fuelconomy.gov.

Smog Rating (tailpipe only)



Actual results will vary for many reasons, including driving conditions and how you drive and maintain your vehicle. The average new vehicle gets 23 MPG and costs \$11,500 to fuel over 5 years. Cost estimates are based on 15,000 miles per year at \$3.50 per gallon. MPGe is miles per gasoline gallon equivalent. Vehicle emissions are a significant cause of climate change and smog.

fuelconomy.gov

Calculate personalized estimates and compare vehicles



Smartphone
QR Code™




```

<!DOCTYPE html>
<html lang="en" xmlns:th="http://www.thymeleaf.org">
<head>
  <meta charset="UTF-8"/>
  <title>Show Recipe</title>

  <!-- Latest compiled and minified CSS -->
  <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
        integrity="sha384-BVYiISIFeK1dGmJRAkycuHAHRg320mUcww7on3RYdg4Va+PmSTsz/K68vbdEjh4u" crossorigin="anonymous"
        th:href="@{/webjars/bootstrap/3.3.7-1/css/bootstrap.min.css}">

  <script src="/webjars/jquery/1.11.1/jquery.min.js"></script>

  <!-- Latest compiled and minified JavaScript -->
  <script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/js/bootstrap.min.js"
        integrity="sha384-Tc5IQib027qvyjSMfHjOMaLkfuWVxZxUPnCJA712mCWNIpG9mGCD8wGNICPD7Txa"
        crossorigin="anonymous" th:src="@{/webjars/bootstrap/3.3.7-1/js/bootstrap.min.js}"></script>
</head>
<body>
  <!--/*@thymesVar id="recipe" type="guru.springframework.domain.Recipe"*/-->
  <div class="container-fluid" style="...">
    <div class="row">
      <div class="col-md-6 col-md-offset-3">
        <div class="panel-group">
          <div class="panel panel-primary">
            <div class="panel-heading">
              <div class="row">
                <div class="col-md-3">
                  <h1 class="panel-title" th:text="${recipe.description}">Recipe Description Here!</h1>
                </div>

                <div class="col-md-1">
                  <a class="btn btn-default" href="#"
                    th:href="@{'/recipe/' + ${recipe.id} + '/image'}" role="button">Change Image</a>
                </div>
              </div>
            </div>
          </div>
        </div>
      </div>
    </div>
  </div>

```

