## Express web templating vs JSP (2nd semester)

## **Express**

A template engine enables you to use static template files in your application. At runtime, the template engine replaces variables in a template file with actual values, and transforms the template into an HTML file sent to the client. This approach makes it easier to design an HTML page.

- Some popular template engines that work with Express are <u>Jade</u>, <u>Mustache</u>, and <u>EJS</u>.
  The <u>Express application generator</u> uses Jade as its default, but it also supports several others.
  - To render template files, set the following <u>application setting properties</u>:
  - views, the directory where the template files are located. Eg: app.set('views', './views'). This defaults to the views directory in the application root directory.
  - view engine, the template engine to use. For example, to use the Jade template engine: app.set('view engine', 'jade').
    - Then install the corresponding template engine npm package

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## JSP

- The web server needs a JSP engine ie. container to process JSP pages. The JSP container is responsible for intercepting requests for JSP pages. This tutorial makes use of Apache which has built-in JSP container to support JSP pages development.
- A JSP container works with the Web server to provide the runtime environment and other services a JSP needs. It knows how to understand the special elements that are part of JSPs
- JSP Processing:
  - o browser sends an HTTP request to the web server
  - The web server recognizes that the HTTP request is for a JSP page and forwards it to a JSP engine
  - The JSP engine loads the JSP page from disk and converts it into a servlet content
  - The JSP engine compiles the servlet into an executable class and forwards the original request to a servlet engine
  - A part of the web server called the servlet engine loads the Servlet class and executes it. During execution, the servlet produces an output in HTML format, which the servlet engine passes to the web server inside an HTTP response
  - The web server forwards the HTTP response to your browser in terms of static HTML content
  - Finally web browser handles the dynamically generated HTML page inside the HTTP response exactly as if it were a static page