



IT 4403 ADVANCED MOBILE AND WEB APPLICATIONS STUDY GUIDE

MODULE 9: SPA UI: DATA LAYOUT

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OVERVIEW AND LEARNING OUTCOMES

In this module, we are going to see some best practices and patterns to display a set of data items (like search results), with the help of CSS and templates. In the next module, we are going to practice some SPA UI patterns of interacting with data.

After completing this module, students will:

1. Designing UI for presenting general search results.
2. Compare three basic data presentation and exploration layout formats: list, grid, and table.
3. Create data view layouts using basic CSS techniques (flexbox, card).
4. Use a client templating framework Mustache to work with a data structure like JSON.

This module is related to course level learning outcomes 3 and 5.

TASK LIST

1. Finish required readings.
2. Review the lecture notes and the examples given by the instructor. Try it yourself to rewrite the examples compare your code to the examples provided.
3. Research and discuss:
 - a. Which one is better, grid view or list view? Or should we ask how do we choose? Start from <http://ux.stackexchange.com/questions/60412/grid-view-vs-list-view-for-products>
 - b. What is the difference between flex-basis and width attribute of child items in a flex box?
 - c. What is the advantage of using logic-less template? What are the limitations of Moustache?
4. Lab 8: no submission. Practice, practice, and practice. Be sure to complete it before starting the milestone #4.

LEARNING MATERIALS

1. Core learning materials:
 - a. Results view layout: <https://uxmag.com/articles/designing-search-results-pages>
 - b. A Visual Guide to CSS3 Flexbox <https://scotch.io/tutorials/a-visual-guide-to-css3-flexbox-properties> (use the playground/demo page for quick result)
 - c. <https://blog.intercom.com/why-cards-are-the-future-of-the-web/>
 - d. Templating
 - i. https://en.wikipedia.org/wiki/JavaScript_templating
 - ii. Quick intro to Mustache: <https://www.youtube.com/watch?v=xIJuDcA6YBo>
 - iii. <http://www.sitepoint.com/creating-html-templates-with-mustachejs/>
 - iv. Complete reference: <https://mustache.github.io/mustache.5.html>
2. Lecture notes with examples
 - a. Lecture notes: data-layout.pdf
 - b. Code examples: data-layout-examples.zip, also see live demo at <http://it4203.jackzheng.net/demo/data-layout>
3. Lab 8 guide and exercises
4. Addition readings and resources

- a. jQuery Ajax Tutorial #3 - Delegating Events & Mustache.js Templating:
<https://www.youtube.com/watch?v=GbNWPn8vodo>
- b. <http://www.getelastic.com/grid-vs-list/>
- c. <https://css-tricks.com/snippets/css/a-guide-to-flexbox/>
- d. More templating
 - i. <http://jqueryhouse.com/top-5-best-javascript-template-engines/>
 - ii. <https://colorlib.com/wp/top-templating-engines-for-javascript/>
 - iii. <http://coenraets.org/blog/2011/12/tutorial-html-templates-with-mustache-js/>
 - iv. <http://code.tutsplus.com/tutorials/best-practices-when-working-with-javascript-templates--net-28364>
 - v. <https://engineering.linkedin.com/frontend/client-side-templating-throwdown-mustache-handlebars-dustjs-and-more>
 - vi. https://developer.mozilla.org/en-US/docs/JavaScript_templates
- e. <http://gridbyexample.com>