



IT 4403 ADVANCED MOBILE AND WEB APPLICATIONS STUDY GUIDE

MODULE 12: RESPONSIVE UI FRAMEWORK

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OVERVIEW AND LEARNING OUTCOMES

Web UI frameworks focus on front end user interfaces and user interactions. Many UI frameworks are also built with responsive design as a major feature. The use of frameworks greatly simplifies the development effort at the expense of flexibility.

In this module:

1. Survey the basic Web UI frameworks to develop mobile friendly web user interfaces.
2. Develop Web UI using Bootstrap.
3. Evaluate Bootstrap's responsive features.

This learning module is related to course learning outcome 4.

TASK LIST

1. Complete the core readings and the lecture notes listed in learning materials. Use the questions in "Review and Research" section to guide your reading.
2. Use the lecture notes as a reading and learning guide; follow the resources presented in the notes for further information and additional learning.
3. Review and research (optional; please discuss them in the discussion board if needed):
 - a. What is a UI or CSS framework?
 - b. What are the advantages of using client-side web UI frameworks? Would you like to use one? Why and why not? Start from here <http://www.zingdesign.com/5-reasons-not-to-use-twitter-bootstrap/> and <http://www.smashingmagazine.com/2014/02/19/responsive-design-frameworks-just-because-you-can-should-you/>
4. Lab: complete lab 11 on frameworks (no submission)

LEARNING MATERIALS

1. Core readings
 - a. Frameworks overview
 - i. <https://www.altexsoft.com/blog/engineering/most-popular-responsive-css-frameworks-bootstrap-foundation-materialize-pure-and-more/>
 - ii. <https://www.smashingmagazine.com/2014/02/responsive-design-frameworks-just-because-you-can-should-you/>
 - b. Bootstrap responsive features: <https://clutch.co/web-designers/resources/why-bootstrap-is-ideal-design-framework>
 - c. Bootstrap official docs (v4 is recommended as it is responsive by default)
 - i. Get started: <https://getbootstrap.com/docs/4.3/getting-started/introduction/>
 - ii. Layout: <https://getbootstrap.com/docs/4.3/layout/overview/>
 - iii. Table: <https://getbootstrap.com/docs/4.3/content/tables/>
 - iv. Menu: <https://getbootstrap.com/docs/4.3/components/navs/>
2. Lecture notes

3. Lab 9 Bootstrap guide
4. Additional resources and readings
 - a. Bootstrap history and background: <http://alistapart.com/article/building-twitter-bootstrap>
 - b. Frameworks
 - i. <https://logrocket.com/blog/history-of-frontend-frameworks/>
 - ii. <http://cssframeworks.org/>
 - iii. <http://mobile-frameworks-comparison-chart.com/>
 - iv. <http://usablica.github.io/front-end-frameworks/compare.html>
 - v. <https://agingcoder.com/mobile/2016/09/25/the-state-of-html-mobile-frameworks-in-2016/>
 - vi. <https://software.intel.com/en-us/html5/hub/blogs/comparing-html5-mobile-ui-frameworks/>
 - c. More Bootstrap learning resources
 - i. <http://www.w3schools.com/bootstrap/>
 - ii. https://www.youtube.com/playlist?list=PLUoqTnNH-2Xz_BURjcahKWDhPcUj-FTOt
 - iii. https://www.youtube.com/playlist?list=PLVDYxb1dYhnqUn0_liNeONyicF1Y3ajLp
 - iv. <http://www.w3resource.com/twitter-bootstrap/tutorial.php>