



IT 4403 ADVANCED MOBILE AND WEB APPLICATIONS STUDY GUIDE

MODULE 7: AJAX

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OVERVIEW AND LEARNING OUTCOMES

AJAX (Asynchronous JavaScript and XML) is a way to utilize the abilities of JavaScript, the DOM (Document Object Model), and XML to create interactive web applications. AJAX is a variation that uses JSON instead. In this module we are looking at some AJAX concepts, basic implementations and applications using jQuery. In the next module, we are going to see how AJAX is used for RESTful APIs in cross-domain environments.

After completing this module, you will:

1. Compare the traditional web page request/response model with AJAX.
2. Explain how asynchronous design change the user interaction model.
3. Use jQuery AJAX functions to make AJAX calls in various situations.
4. Develop a small web applications using AJAX (jQuery).
5. Develop application to consume RESTful Web services in AJAX.

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

TASK LIST

1. Complete all core learning resources.
2. Review the lecture notes and refer to the resources presented in the notes.
3. Review the examples given by the instructor. Try it yourself to rewrite the examples compare your code to the examples provided.
4. Research and discuss:
 - a. What are the advantages of AJAX model? What kind of applications best benefit from this model? What do you think about the new web app architecture styles driven by AJAX?
 - b. What are the major methods/functions used in jQuery for AJAX?
5. Lab 6: no submission. Practice, practice, and practice. Be sure to complete it before starting the milestone #3.

LEARNING MATERIALS

1. Core learning resources
 - a. AJAX concepts
 - i. What is AJAX (short video from lynda.com) <https://www.youtube.com/watch?v=RDo3hBL1rfA>
 - ii. AJAX: A New Approach to Web Applications (this is the original concept by Jesse Garrett) <http://www.adaptivepath.com/ideas/ajax-new-approach-web-applications/>
 - b. jQuery AJAX
 - i. <http://www.tutorialspoint.com/jquery/jquery-ajax.htm> or http://www.w3schools.com/jquery/jquery_ajax_intro.asp
 - ii. Video tutorial:
 1. Part 1 https://www.youtube.com/watch?v=fEYx8dQr_cQ
 2. Part 2 <https://www.youtube.com/watch?v=5nL7X1UMWsc>
 - iii. Major references:
 1. <http://api.jquery.com/category/ajax/shorthand-methods/>
 2. <http://api.jquery.com/category/ajax/>
 3. http://www.w3schools.com/jquery/jquery_ref_ajax.asp
2. Lecture notes with examples

- a. Lecture notes: ajax.pdf
 - b. Code examples: ajax examples.zip, also see live demo at <http://it4203.jackzheng.net/demo/ajax>
3. Lab 6 guide
4. Additional readings and resources
- a. https://www.tutorialspoint.com/ajax/ajax_quick_guide.htm
 - b. <https://www.safaribooksonline.com/library/view/ajax-design-patterns/0596101805/ch01.html>
 - c. <http://blog.octo.com/en/new-web-application-architectures-and-impacts-for-enterprises-1/>
 - d. Ajax and PHP http://www.w3schools.com/PHP/php_ajax_database.asp
 - a. AJAX+REST as the latest architectural mirage: <http://stage.vambenepe.com/archives/1801>