02 - Test Execution - Basic Operations

FHIR Testing and Certification – Exercise

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During this hands-on session of the FHIR Testing tutorial we will explore TestScript Execution within the Touchstone Project environment. This exercise examines a series of basic FHIR operations (read, search, create, update and delete). Each operation's TestScript illustrates the use of different TestScript elements and as well as the basic mechanics of executing tests within Touchstone.

TestScripts for this exercise are in the Touchstone Test Definitions folder **FHIRSandbox/AEGIS/FHIR3-0-1-DevDays18-11/FHIRTesting/02-BasicOperations*

**For detailed test execution guidance please refer to the online Touchstone User Guide, Section 'Executing Tests': https://touchstone.aegis.net/touchstone/userguide/html/executing-tests/index.html

TestScript Descriptions

All TestScripts for this exercise use the Patient resource type. Each TestScript progressively illustrates the use of more and varied TestScript features.

01-Read

Test the read operation for a Patient resource using a hard-coded resource id of 'example'.
Features
- ❖ Asserts test for HTTP response code, Content-Type header and correct FHIR resource type payload
- ❖ Observe use of hard-coded resource id; *how does this limit the usefulness of this TestScript?*

02-Search

Test the search operation for Patient resources matching a hard-coded family search parameter of 'Chalmers'.
Features
- ❖ Asserts test for HTTP response code, Content-Type header and correct FHIR resource type payload
- ❖ Observe use of hard-coded search parameter; *how does this limit the usefulness of this TestScript?*

03-Create

There are two TestScripts:
- ➢ First - tests the create operation of a Patient resource only
- ➢ Second - tests the create operation with another test to search for the created Patient resource

Features
- ❖ Introduces the use of fixtures; *examine the fixture and note the static contents*
- ❖ Observe the asserts for the create operation; *why only test for HTTP response code and Location header?*
- ❖ Observe the 2nd TestScript use of the search operation; *why might this be useful/necessary?*

04-Update

Test the update operation of a Patient resource. A second test with a read operation is used to validate the update operation's success.

Features

- ❖ Introduces the use of variables; *examine the variable definitions and use in the asserts following the read operation*
- ❖ Introduces the use of the setup element prior to all tests; *examine the setup and note the use of the conditional delete and create operations; what is the benefit of using setup versus tests?*
- ❖ Introduces the use of profiles; *asserts invoke the FHIR Validation Engine using profiles*
- ❖ Note the use of a single test with multiple operations - update followed by read; *what is the benefit of this paradigm versus individual tests (one per operation)?*

05-Delete

Test the delete operation of a Patient resource. A second test with a read operation is used to validate the delete operation's success.

Features

- ❖ Continues the use of variables; *examine the variable definitions and their use*
- ❖ Continues the use of the setup element prior to all tests; *examine the setup and note the use of the conditional delete and create operations*

Note the use of a single test with multiple operations - delete followed by read; *what is the benefit of this paradigm versus individual tests (one per operation)?*

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The detailed tutorial documents for these exercises can be found at:

https://github.com/rettema/DevDays-Exercises/DevDays18-Amsterdam/FHIR Testing and Certification

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Have fun! And, remember to ask for help if you get stuck