IS2545: Lecture 15

Web Testing with HTTP

What is HTTP?

Hypertext Transfer Protocol is the protocol used by the World Wide Web.

Everything that is rendered by a web browser is served by HTTP.

Parts of an HTTP request:

- URI
- Request method (GET, POST, etc.)
- Headers
- Payload
- Status code

URI

The web service host name + the route + any URI parameters.

http://hostname.com/api/route?parameter1Name=Parameter1Value&parameter2Name=Paremeter2Value

http://co1crmqa.dcsg.com/CustomerAPI/mkt/crm/v1/customers

http://co1crmqa.dcsg.com/CustomerAPI/mkt/crm/v1/customers?LoyaltyAccount=L01NB23RSFZI&LastName=Iser

Request Method

GET retrieves data

POST creates data

PUT updates data

DELETE deletes data

Headers

Contains things like

- Customer tokens
- Authorization keys
- For a complete list
  https://en.wikipedia.org/wiki/List_of_HTTP_header_fields

Payload

When requesting information, the response payload will contain the data you requested.

Response payloads

- JSON
- XML
- HTML
- JavaScript
- Anything really

Payload

When requesting information, the request may be too big or complex to fit in the URI. A payload may be used in the request as well.

Status code

A number that indicates the result of the request.

See https://en.wikipedia.org/wiki/List_of_HTTP_status_codes for a complete list.

Why test via HTTP?

We just learned how to automated the testing of web applications via the UI. Why do we need to learn about testing via HTTP?

Automated GUI tests are valuable, but we should not depend on these types of tests for all or even most of our test cases.
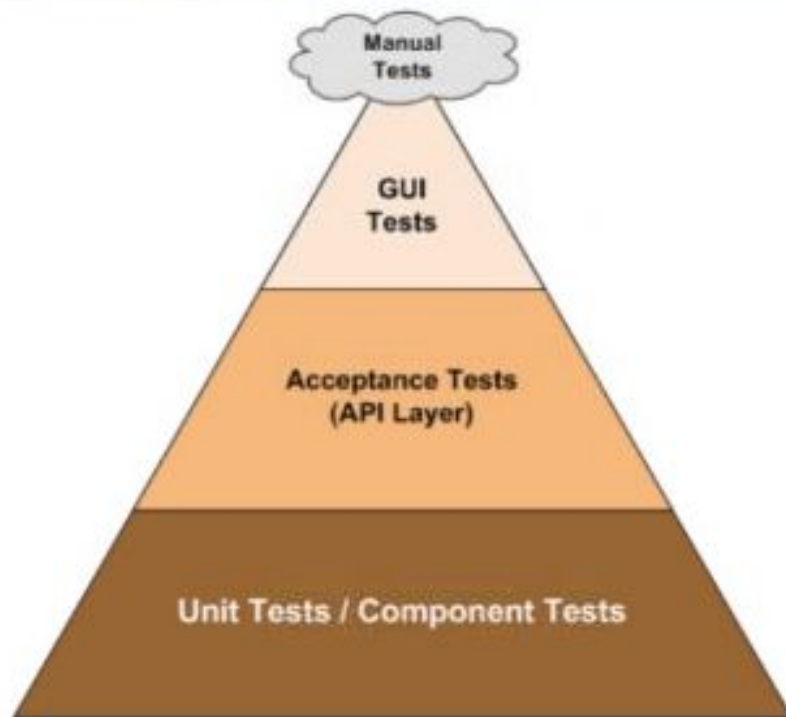
Two reasons:

- Speed
- Rigid

HTTP testing is integration testing

What is an integration test?

- Doesn't test a single unit.
- Doesn't test via a GUI.

Test Automation Pyramid

34

How to automate HTTP tests?

There are several automation tools out there. Just to name a few:

- SoapUI
- Fiddler
- PostMan

Tools are good for beginners. We quickly outgrow them though in favor of more robust solutions.