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**TUNKU ABDUL RAHMAN UNIVERSITY COLLEGE**

FACULTY OF COMPUTING AND INFORMATION TECHNOLOGY

BAIT2133 WEB ENGINEERING

TUTORIAL 11

1. Explain any five of terminology of web application.

Web site testing – process of executing web site to find fault.

Orphan pages – pages which are part of the Web site but cannot access

through hyperlinks.

Web site – collection of interlinked web pages.

Error – Difference between a computed, observed or measured value or

condition and the true, specified or theoretically correct value or

condition.

Test case – Describe sets of inputs, execution conditions and expected

results, which are used to test specific aspect of the object under test.

1. Compare unit test level, integration test level, system test level and acceptance the level.

Unit test level – test on basic unit of web site, eg. A page, a function

script.

Integration test level- testing on the integration between units.

System test level – test different modules and entire systems at one go.

Acceptance test –test by customer with real data and in real conditions.

1. Explain any five of dimensions of quality for web application

Content is evaluated at both a syntactic and semantic level.

At the syntactic level, spelling, punctuation, and grammar are assessed for text-based

documents. At a semantic level, correctness (of information presented), consistency (across the

entire content object and related objects), and lack of ambiguity are all assessed.

Function is tested to uncover errors that indicate lack of conformance to stakeholder

requirements. Each WebApp function is assessed for correctness, instability, and general

conformance to appropriate implementation standards (e.g., Java or XML language standards).

Structure is assessed to ensure that it properly delivers WebApp content and function, is

extensible, and can be supported as new content or functionality is added.

Usability is tested to ensure that each category of user is supported by the interface

and can learn and apply all required navigation syntax and semantics.

Navigability is tested to ensure that all navigation syntax and semantics are exercised

to uncover any navigation errors (e.g., dead links, improper links, erroneous links).

1. Explain the objectives of content testing.

to uncover syntactic errors (e.g., typos, grammar mistakes) in text-based

documents, graphical representations, and other media,

to uncover semantic errors (i.e., errors in the accuracy or completeness of

information) in any content object presented as navigation occurs, and

to find errors in the organization or structure of content that is presented to the

end user.

1. Explain user interface testing strategy.

Verification and validation of a WebApp user interface occurs at three

distinct points in the WebE process.

1. Define usability testing.

Similar to interface semantics testing in the sense that it evaluates:

the degree to which users can interact effectively with the WebApp

the degree to which the WebApp guides users’ actions, provides meaningful

feedback and enforces a consistent interaction approach.

1. Explain any five testing strategies for web application.

Server-side. configuration test cases are designed to verify that the

projected server configuration [i.e., WebApp server, database server,

operating system(s), firewall software, concurrent applications] can

support the WebApp without error.

Client-side. On the client side, configuration tests focus more heavily on

WebApp compatibility with configurations that contain one or more

permutations of the following components.

1. Define four security test in web application.

Firewalls. A filtering mechanism that is a combination of hardware and software that examines

each incoming packet of information to ensure that it is coming from a legitimate source, blocking

any data that are suspect.

Authentication. A verification mechanism that validates the identity of all clients and servers,

allowing communication to occur only when both sides are verified.

Encryption. An encoding mechanism that protects sensitive data by modifying it in a way that

makes it impossible to read by those with malicious intent. Encryption is strengthened by using

digital certificates that allow the client to verify the destination to which the data are transmitted.

Authorization. A filtering mechanism that allows access to the client or server environment only by

those individuals with appropriate authorization codes (e.g., user ID and password).

1. Explain the objectives of load testing and stress testing.

Load testing determines how the WebApp and its server-side

environment will respond to various loading conditions.

Stress testing is a continuation of load testing, but in this instance the

variables, N, T, and D are forced to meet and then exceed operational

limits.