

CITS5501 Software Testing and Quality Assurance

Semester 1, 2018

Workshop 6 – Systems, standards, and web applications

Overview

The organisation you are employed in is developing *Panopticon*, a web-based personnel management system, for use by H.R. staff in the organisation. You are a senior developer in the testing team.

Task 1

One requirement of the application is stated as: “When a user visits the application home page, it should display a login form which requests the user’s user-name and password. When these are successfully entered, a welcome screen is displayed.”

One of the junior staff in the team, Hans, has written the part of the test plan which deals with testing this requirement, as follows:

8.3 System tests: login page

1. Test that a copy of the application home page can be retrieved from the home page address
 2. If a copy of the application home page can be retrieved, test that the retrieved HTML contains an `<input>` element with the `id` attribute “user-name”, and an `<input>` element with the `id` attribute “password”.
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(If you are unfamiliar with the details of how HTML forms work, you may find it useful to refer to mozilla.org’s [tutorial](#) on the topic.)

Another junior staff-member, Rudi, has implemented the first of Hans’s tests, and verified that it passes – the HTML returned looks like this:

```
<html>
<head>
  <title>Panopticon Login Page</title>
</head>
<body>
```

```
<h1>Panopticon Login Page</h1>
<form action="/welcome.html" >
  User name: <input type="text" name="uid"><br>
  User password: <input type="text" name="pwd"><br>
  <button type="submit">
</form>
</body>
</html>
```

- Do you think Hans's tests are a sufficient test of the requirement? If not, what sort of additional tests would be required?
- In order to ensure the quality of the final software, do you think additional information about requirements is needed? What sort?

Task 2

Your organisation is ISO 9001 certified, and uses the ISO IEC 90003 standard. (A summary of ISO IEC 90003 guidelines can be found [here](#).) Consider each of the cases below and decide whether it is a non-compliance from the standard and, if so, give the clause number. If you believe that insufficient information is given, then state the clause that may be at risk and phrase a question that you would ask to clarify the matter.

1. The project manager has a two-month-old copy of the project plan with certain tasks highlighted as critical. The development team leader has a current copy of the plan with different critical tasks listed.
2. You discover no provision has been made for formally reviewing the Panopticon design. The project manager states that a walkthrough of the design has been done, but there are no records of this.
3. Two different software source files both have the identifier **PANOP007** in the Software Configuration Management System.
4. Mia and Carmen, two developers on the Panopticon project, are using the Serpent programming language and the Reinhardt web application framework, but have not attended the required training course for the language.
5. Carmen discovers that the login page for Panopticon displays the user's password in "clear text", and does not encrypt the password when the form is submitted. She knows this is an unsafe practice, so she amends the requirements for the login page to state that all submitted data should be encrypted, and adds a test which checks that when the login form is submitted, it goes to a secure "https://" link.
6. The PCs of several of your team are found to be running the "RainbowCrack" password-cracking application. They say this is for use in performing [penetration testing](#) of the Panopticon system, but the testing plan makes no provision for penetration testing of the system.