CITS5502 Software Processes
Week 10 Workshop – ISO standards, software inspections

Exercise 1

You are a developer in a team that makes use of *pair programming* to ensure continuous code review. A new starter with the team says that they are worried that problems might still be getting into their code, since the person they are paired with is not much more experienced than them. Do you think this is a problem, or not? What would you suggest to them?

Exercise 2

You are a developer in a team that uses `Git` for version control of source code. One of your colleagues complains to you that when she is reviewing code changes from some of the junior developers on your team, for merging with the main development branch of the code, their submissions frequently violate the code style guide your team uses. For instance, they will commit code which is poorly formatted, contains methods which lack cohesion, or fail to mark class attributes as "`private`". As a result, she frequently has to send code back to be re-worked (and in some cases, she says, she simply does the re-work herself, as it is quicker).

How would you suggest improving this situation? Would you make any changes to your teams processes, and if so, what, and why?

Exercise 3

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.

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. If you believe that insufficient information is given, then state what you would ask in order 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. 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.
4. 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.
5. 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 pentration testing of the system.