SIT 218/738: Secure coding

**Pass task 1.1P: Apply software security principles to answer the following questions.**

**Overview**

Your task is to explain what software security principles are being applied or validated in the below scenarios.

1. A software company adds security features (eg. input validation, encryption etc.) only when they experience cyber-attacks and not by default. Explain briefly which software security principle is being violated and how to mitigate it.
2. An application uses credentials stored in database to authenticate users. But in the event of database failure the authentication gets bypassed and unauthorised users can get access to the application. Explain briefly which software security principle is violated and the method to mitigate it.
3. In the software development process, you set guidelines that a developer should not be able to mark the software ready for production/release without the approval of quality assurance team. What type of security principle are you applying here?
4. An “Application A” makes an API call to email handling “Application B” to generate a to-do list from user flagged emails. However, the developer also provides read access to the contact list which is not required by the “Application A”. Which secure coding principle must be applied by developers to reduce the security risks posed by this unused access rights.
5. The mitigation strategy for CSRF attacks requires applying security measures at various levels such as input validation, validating session cookies, verifying origin headers. What kind of secure coding principle is being applied here explain briefly.

Please do your own research and try to collect as much information as possible. When you use information from other sources, remember to cite them, else it will be considered as plagiarism. You CAN NOT do direct copy paste even if you provide proper in-text citations and bibliographic references at the end.

**Submission Requirements:**

Submit one PDF file with your answers in OnTrack.

**Submission Due**

The due for each task has been stated via its OnTrack task information dashboard.