8-2 Journal: Portfolio Reflection

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Portfolio Reflection

Secure coding is paramount to software application reliability and security. Secure coding is the process of coding in a way that the code is immune to attacks and vulnerabilities like SQL injections, cross-site scripting (XSS), and buffer overflows. With security being implemented at the very initial stage of the development phase, instead of the afterthought, developers can prevent and resolve probable security flaws early. This proactive measure not only reduces the risk of security breach but also saves time and resources that would be utilized in patching vulnerabilities in the future. During the course, in the course readings, it was held that industry-standard coding practices, such as OWASP (Open Web Application Security Project) guidelines, needed to be adhered to build strong and secure applications.

Risk assessment and evaluation involve the determination of threats and vulnerabilities, risk likelihood and impact determination, and mitigation action. Cost-benefit analysis of risk mitigation assists organizations in prioritizing their actions based on the trade-off between the cost of implementing security measures and the probable effect of a security breach. The implementation of a zero-trust policy is one of the key methods of security risk mitigation. Zero trust assumes that no user or device is ever trusted by default, and every access request must be authenticated and monitored. Zero trust necessitates strict authentication, monitoring in real time, and granular access controls in such a way that only the authenticated users are allowed access to the high-value assets. Implementation of security controls such as multi-factor authentication, encryption, and regular security audits enhances the security posture of an organization. In conjunction with a zero-trust policy, they provide a complete and robust security posture that can address evolving threats and protect key assets.