**Penetration Testing Methodologies**

it covers all stages of the penetration tests. they have a testing guide for looking at all these types of applications to ensure that you review the top threats to these applications and make sure that you do not miss any steps along your way

1. Penetration Testing Execution Standard
2. OWASP Testing Guide -> Open Web Application Security Project
3. NIST -> Technical Guide to Information Security Testing and Assessment
4. OSSTMM -> Open Source Security Testing Methodology Manual

**Asset vs Threat vs Vulnerability**

A threat is what we are trying to protect against.

A vulnerability is a weakness or gap in our protection efforts.

An asset is what we are trying to protect.

Risk is the intersection of assets, threats, and vulnerabilities.

A + T + V = R

That is, Asset + Threat + Vulnerability = Risk.

Risk is a function of threats exploiting vulnerabilities to obtain, damage, or destroy assets. Thus, threats (actual, conceptual, or inherent) may exist, but there is little/no risk if there are no vulnerabilities. Similarly, you can have a vulnerability, but you have little/no risk if you have no threat.