Functional & Testing

1. **Functional Testing**

   o Ensuring web applications follow secure coding standards to prevent vulnerabilities.

   o Validating access controls and authentication mechanisms to prevent unauthorized access.

   o Testing API security to prevent API abuse and data leaks.

   o Implementing encryption methods to protect sensitive data.

2. **Security Testing**

   o Conducting penetration testing using **Metasploit** and **Kali Linux** to simulate cyberattacks.

   o Using **Nessus** for vulnerability scanning and risk assessment.

   o Performing **static and dynamic code analysis** to detect security flaws early in the SDLC.

   o Testing network security with **Wireshark** to detect malicious activities.

3. **Performance & Compliance Testing**

   o Stress testing security measures under simulated attack scenarios.

   o Ensuring compliance with security frameworks like **OWASP Top 10** and regulatory standards.

   o Validating cloud security policies and configurations for secure deployment.