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Subject - Information security

Roll no - 52 (1022762)

Q1 Any

i) SQL injection vulnerabilities → SQL injection vulnerabilities refer to areas in website code where direct user input is passed to database. Bad actors utilize these form to inject malicious code, sometimes called payloads into a website database. This allows the ~~cy~~ cybercriminal to access the website in a variety of ways including.

- Injecting malicious/spam posts into a site.
- Stealing customer information

ii) Cross site scripting (XSS) - Cross site scripting targets an application's users by injecting code, usually a client side script such as javascript into a web application's output. The concept of XSS is to manipulate client-side scripts of a web application to execute in a the manner desired by the attacker. XSS allows attackers to execute

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Scripts in the victim's browser which can hijack user sessions, deface websites or redirect the user to malicious sites

- Session hijacking

- Spam content being distributed to unsuspecting visitors.

3) Command injection - Command injection vulnerabilities allow attackers to remotely pass and execute code on the website's hosting server. This is done when user input that is passed to the server, such as header information, is not properly validated allowing attackers to include shell commands with the user information.

- Hijack an entire site

- Hijack an entire hosting server

4) Cross-site Request Forgery (CSRF) - Cross site Request Forgery is forged request come from the cross site

CSRF attack is an attack that occurs when a malicious website, email or program

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Caused a user's browser to perform an unwanted ⁽³⁾ action on a trusted site for which the user is currently authenticated.

As a result, attackers may be able to take the following actions using valid user input:

- Change order values and product prices
- Transfer funds one account to another

4) Security misconfiguration - security misconfiguration encompasses several types of vulnerabilities all centered on a lack of maintenance or a lack of attention to the web application configuration. A secure configuration must be defined and deployed for the application, framework, application, server, web server, database and platform.

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