**LAB 10**

**1. Write a SQL statement to add a column to a table that contains/stores user email**

**Asked line**

db.run("ALTER TABLE Users ADD Email TEXT");

It took me a day to figure out that sqlite package should be installed in the same location where is all my js files. Anyway here is my Lab10\_CreateDB.js file

**var** sqlite3 = require('sqlite3').verbose();

**var** db = **new** sqlite3.Database('lab10.db');

db.serialize(**function** () {

db.run("CREATE TABLE Users (User TEXT, Password TEXT)");

db.run("INSERT INTO Users VALUES (?, ?)", ['shannon', 'pass']);

db.run("ALTER TABLE Users ADD Email TEXT");

db.run("INSERT INTO Users VALUES (?, ?, ?)", ['john', 'secret', 'john@doe.com']);

db.all("SELECT \* FROM Users", **function**(err, rows) {

rows.forEach(**function** (row) {

console.log(row);

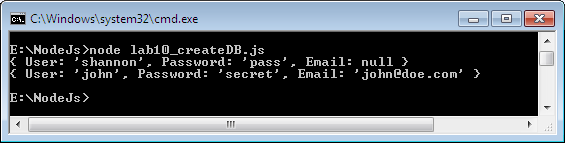
})

});

});

db.close();

**It creates table with columns User and Password first, then it adds Email column. Then retrieves all records from table Users and displays in console. It stores all database information in file called Lab10.db**



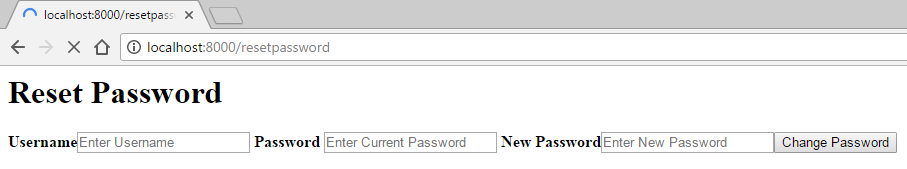
**2. Write a SQL statement that changes a user's password in table**

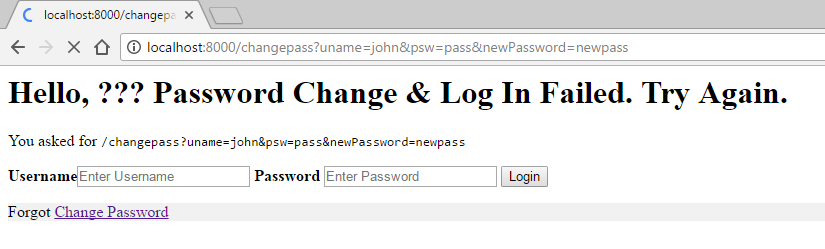
**Asked line**

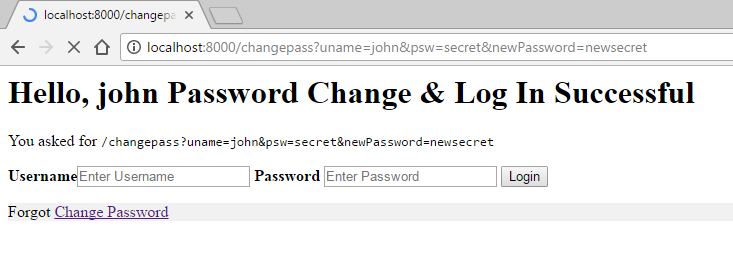
db.run("UPDATE Users SET Password = ? WHERE User = ? AND Password = ?", [newPassword, name, password]);











**Logging in with new password**



**Here is my Lab10\_Server.js file**

**var** http = require("http");

**var** url = require('url');

**function** queryDatabase(name, password, url, callback)

{

**var** sqlite3 = require('sqlite3').verbose();

**var** db = **new** sqlite3.Database('Lab10.db');

db.serialize(**function** () {

db.all("SELECT \* FROM Users WHERE User=? AND Password=?", [name, password], **function** (err, rows) {

**if** (rows.length > **0**) {

callback("<h1>Hello, " + name + " Log In Successful</h1><p>You asked for <code>" +

url + '</code></p> <form action="/login" method="get"> <div class="container"><label><b>Username</b></label><input type="text" placeholder="Enter Username" name="uname" required> <label><b>Password</b></label> <input type="password" placeholder="Enter Password" name="psw" required> <button type="submit">Login</button> </div></form><div class="container" style="background-color:#f1f1f1"><span class="psw">Forgot <a href="resetpassword">Change Password</a></span></div>');

}

**else** {

callback("<h1>Hello, ??? Log In Failed. Try Again.</h1><p>You asked for <code>" +

url + '</code></p> <form action="/login" method="get"> <div class="container"><label><b>Username</b></label><input type="text" placeholder="Enter Username" name="uname" required> <label><b>Password</b></label> <input type="password" placeholder="Enter Password" name="psw" required> <button type="submit">Login</button> </div></form><div class="container" style="background-color:#f1f1f1"><span class="psw">Forgot <a href="resetpassword">Change Password</a></span></div>');

}

});

});

db.close();

}

**function** modifyDatabase(name, newPassword, password, url, callback)

{

**var** sqlite3 = require('sqlite3').verbose();

**var** db = **new** sqlite3.Database('Lab10.db');

db.serialize(**function** () {

db.run("UPDATE Users SET Password = ? WHERE User = ? AND Password = ?", [newPassword, name, password]);

db.all("SELECT \* FROM Users WHERE User=? AND Password=?", [name, newPassword], **function** (err, rows) {

**if** (rows.length > **0**) {

callback("<h1>Hello, " + name + " Password Change & Log In Successful</h1><p>You asked for <code>" +

url + '</code></p> <form action="/login" method="get"> <div class="container"><label><b>Username</b></label><input type="text" placeholder="Enter Username" name="uname" required> <label><b>Password</b></label> <input type="password" placeholder="Enter Password" name="psw" required> <button type="submit">Login</button> </div></form><div class="container" style="background-color:#f1f1f1"><span class="psw">Forgot <a href="resetpassword">Change Password</a></span></div>');

}

**else** {

callback("<h1>Hello, ??? Password Change & Log In Failed. Try Again.</h1><p>You asked for <code>" +

url + '</code></p> <form action="/login" method="get"> <div class="container"><label><b>Username</b></label><input type="text" placeholder="Enter Username" name="uname" required> <label><b>Password</b></label> <input type="password" placeholder="Enter Password" name="psw" required> <button type="submit">Login</button> </div></form><div class="container" style="background-color:#f1f1f1"><span class="psw">Forgot <a href="resetpassword">Change Password</a></span></div>');

}

});

});

db.close();

}

**var** server = http.createServer(**function** (request, response) {

response.writeHead(**200**, { "Content-Type": "text/html" });

console.log(request.url);

**if** (request.url.includes("/login?")) {

**var** queryData = url.parse(request.url, **true**).query;

**var** userName = queryData.uname;

**var** userPassword = queryData.psw;

queryDatabase(userName, userPassword, request.url, **function** (res) {

response.write(res);

});

}

**else** **if** (request.url.includes("/changepass")) {

**var** queryData = url.parse(request.url, **true**).query;

**var** userName = queryData.uname;

**var** userPassword = queryData.psw;

**var** newPassword = queryData.newPassword;

modifyDatabase(userName, newPassword, userPassword, request.url, **function** (res) {

response.write(res);

});

}

**else** **if** (request.url.includes("/resetpassword")) {

response.write('<h1>Reset Password</h1></p> <form action="/changepass" method="get"> <div class="container"><label><b>Username</b></label><input type="text" placeholder="Enter Username" name="uname" required> <label><b>Password</b></label> <input type="password" placeholder="Enter Current Password" name="psw" required><label><b> New Password</b></label><input type="password" placeholder="Enter New Password" name="newPassword" required><button type="submit">Change Password</button> </div></form>');

}

**else** {

response.write('<h1>Please log in!!!</h1></p> <form action="/login" method="get"> <div class="container"><label><b>Username</b></label><input type="text" placeholder="Enter Username" name="uname" required> <label><b>Password</b></label> <input type="password" placeholder="Enter Password" name="psw" required> <button type="submit">Login</button> </div></form><div class="container" style="background-color:#f1f1f1"><span class="psw">Forgot <a href="resetpassword">Change Password</a></span></div>');

}

});

server.listen(**8000**);