**Internet Technologies Assignment-4**

**Note :**

1. Give appropriate title to each web page.

2. Format web pages with appropriate background color, text color, images etc.

3. Formatting can be applied other than mentioned in the question if required.

4. you are required to submit the codes, scripts and the screenprints related to the output of the webpages as a single file with your id number as file name,

**5. Technologies such as HTML, CSS, JS, DOM, Apache, MySQL and PHP features are to be considered in the design and development of web applications.**

**6. The code/scripts should contain the comments section to describe the logic of the statements in the program.**

**7. Assume relevant data/elements of the webpage wherever it is required.**

*In this exercise, you will implement a basic registration and login system, without worrying about any styling issues. You will get practice with forms, sending requests, and working with a MySQL database.*

*Part 1: Make the database connection*

Write a PHP file that can be added to other PHP files using the `include` or `require` functions. This file should:

- Make a connection to a MySQL database, and log in with valid credentials. The connection resource should be stored in a variable with an appropriate name.
- Create a database ITLAB if it does not exist.
- Select the ITLAB database.
- Create a table ITLABexerciseusers if it does not exist with the following fields:
  - USERNAME VARCHAR(100)
  - PASSWORD CHAR(40)
  - PHONE VARCHAR(10)
- The USERNAME field should be designated as UNIQUE.
- If any of these operations cause an error, stop execution and print the error message

*Part 2: Write the registration form*

Note that all of this part should be done in the *same* PHP file. The script should respond differently depending on the situation (whether a POST request exists, whether the username is already taken, etc.).

Write a PHP file that will output a form containing 3 fields: username, password, and phone number. These fields should be sent via POST to the same file, which should take care of inserting them into a database named ITLAB and table named ITLABexerciseusers (as shown above), and then confirm the registration by displaying the username and phone number back to the browser.

If the username already exists, your INSERT query should fail if you designated the USERNAME field as unique. You should query the database before attempting the insert, and if the username exists already, display an error message and a blank registration form again.

Note that the PASSWORD field assumes that you are storing a hex-string representation of a SHA-1 hash OR MD5 of the password. As explained in the lectures, you should never store passwords in plaintext. There are more secure ways of storing the password. If you choose to use a different method, the PASSWORD field of the table may no longer be CHAR(40) and you should change it as appropriate.

Remember to properly escape user input before making the database query.

## Part 3: Write the login form

Write a PHP file that will output a form containing 2 fields: username and password. Upon submission of the form, the code should check against the database to see whether the username-password pair was correct. If so, display a welcome message. If not, display the message "Invalid username or password" followed by the same login form.

Once again, there should only be one PHP file, and you should redirect to the same place after submitting. The output should be one of three options:
1. The login form.
2. The welcome message, if successful login.
3. The invalid message and the login form, if failed login.

## Exercise: I lost my password!

*This exercise is a continuation of the previous exercise, implementing more features than a simple register and login process.*

*As with the previous exercise, each part should be in a single PHP file. The script should respond accordingly to the situation, but forms should redirect to the same page.*

### Part 1: Write the reset password form
Write a form to allow a user to reset their password with their username and phone number. If the username and phone number match entries in the database, you should generate a random string as a password (make it of reasonable length, alphanumeric), inform the user of the random string generated, and make appropriate changes in the database. Remember that the database stores the hashed version of the password.

If the username and phone number combination does not exist, inform the user of the failure to reset the password, and display the reset form below the message.

### Part 2: Write the change password form
Write a form to allow a user to change their password. It should take 3 fields: the username, current password, and new password. When the form is submitted, the code should make appropriate checks against the database, and if the username and password are correct, modify the entry to reflect the change in password. The user should receive a message that informs them of the successful password change. Remember that the database stores the hash of the password.

If the username and current password combination is not correct, the password should not be changed. Inform the user of the failure to change the password, and display the change password form below the message.

2) Create a web page having frames (use CSS as given in previous Assignment3 Q6).

| Your Name<br>Punch line etc. | | |
|---|---|---|
| Objective<br><br>Personal Information<br><br>Family Information<br><br>Educational Information<br><br>Experience<br><br>Achievements<br><br>Other | Display information here of selected link | Display relevant images here |
| Your contact details | | |

The frame which includes Objective, Personal Information etc. are the hyperlinks. Display the relevant information in the next frame on selecting the link. The information should be well formatted. The colour scheme of hyperlinks should be as follows: default – green; active – red; visited – blue

3) Consider the problem statement of Assignment 3- Q8, add the following features:

  a) User authentication
  b) Display appropriate web pages(functions) for different types of users:
     (Admin, Faculty and Students)

4) Remembering Things (Using Cookies)

Start with your code from the exercise 1 of this assignment

Add a "Remember me!" checkbox to the login form. If the box is checked and the login is successful, save a cookie that identifies the user to the server. On further visits to the page, the user should appear logged in, even if the browser has been closed.

You may choose a reasonable expiration time for the cookie. Remember also that if the user manually logs out by clicking the "Log Out" button that the cookie should be deleted (set the expiration to be some time in the past).

5) Design and develop a "Pizza Order Form"

Pizza Order Form:
1. User makes selections in the form , the total price is calculated in real time.
2. When submit button is clicked in order.html form, the total price and the selected pizza should be forwarded to the address.html form.



Order.html

Address.html