Web Development 2

Assignment – Conor Davis

C20441826

Website:

General:

My general website design includes eight php pages, with a cascading style sheet to style my website. I have a check on every page to make sure the user is logged in and if they are not, they will not be able to access any functionality on my website without logging in or registering a new account. I have a common header and footer across all pages, which has a dynamic system to check if the user is logged in or not. If they are logged in, it will display their username logged in as, alongside the option to logout or register a new account. If they are not logged in, it will simply have an option to log in or register. My footer has an option to travel to index.php alongside my student number and the year. My connection to my database is made inside the header and the connection is closed inside the footer.

index.php:

This is the main page of my website. Like every other page, if you are not signed in, you cannot access the functionality without signing in. It has links to 'Search For Book' (search_book.php), 'Reserve A Book' (reserve_book.php) and 'View Your Reserved Books' (view_book.php). It also includes the common functionality of the header and footer described in the general section.

login.php:

This is the login page for my website. Like every other page, if you are not signed in, you cannot access the functionality without signing in. Here the user can enter the details for an already created account stored in the database in order to log in and use the website. If they have not created an account, they have the option to register instead. It will check to see if the entered username exists and will tell the user if it is not. It will also check to see if the password is valid to that username and will tell the user if it is not. Once the user has entered valid login details and hits the login button, they will be given a confirmation message to proceed. It also includes the common functionality of the header and footer described in the general section.

register.php:

This is the register page for my website. Like every other page, if you are not signed in, you cannot access the functionality without signing in. Here the user can enter the details they want for a brand-new account to be added to the database. If they already have an account, they also have the option to login instead. While registering, the form will check to make sure that all entries have been filled, that the username is not already in use, that valid phone numbers have been entered, the password is six characters and matches the confirm password entry, alongside the mobile phone number being exactly ten digits long. If even one of these conditions is not met, the account cannot be created. Once all these conditions have been met, the user will be given a confirmation message and the account will be created. They will also be prompted to continue to the main page and will be logged into their new account. It also includes the common functionality of the header and footer described in the general section.

search_book.php:

This is the search page for my website. Like every other page, if you are not signed in, you cannot access the functionality without signing in. Here the user is given the option to search for a book in the database by book title, by book author and by category. You can use any at any time, in all three in tandem, one with one other or one by itself, there is not limit. You can partial search such as enter some characters of a name you may not remember fully. If the user wishes to see all the books without specification, they can hit submit and all results will display. Alongside every result, the user has the option to reserve the book (if it has not already been reserved) and they will be redirected towards the reservation page. It also includes the common functionality of the header and footer described in the general section.

reserve_book.php:

This is the reserve page for my website. Like every other page, if you are not signed in, you cannot access the functionality without signing in. This page can either be accessed from the main page or by clicking reserve from a search on the other page (which will auto complete). If you have accessed this page from the main page, you must enter a valid ISBN that must exist and must not already be reserved. Once you have, the book will be reserved and the date you reserved it will be recorded. It also includes the common functionality of the header and footer described in the general section.

view_book.php:

This is the view reservations page for my website. Like every other page, if you are not signed in, you cannot access the functionality without signing in. This page will display every reservation associated with your account including the details about the book and the date you reserved. It will also give you the option alongside each reservation, to remove that reservation which will redirect the user to the reserve delete page (which will then prompt them to return to this page. It also includes the common functionality of the header and footer described in the general section.

reserve_delete.php:

This is the delete reservations page for my website. Like every other page, if you are not signed in, you cannot access the functionality without signing in. This page is used to delete reservations as chosen from the view reservations page. It cannot be accessed from the main page or any other page aside from the view reservations page. If the user manages to access the page outside of this (such as by returning to previous page), nothing will happen, and they will be prompted to return to their viewed reservations. It also includes the common functionality of the header and footer described in the general section.

database.php:

This is the database php page for my website, it includes the php details to connect to my database. It is included in the header in every page in order to make sure each page is connected to the database.

close.php:

This is the close connection php page for my website. It includes the php details to close the connection to my database. It is included in the footer in every page in order to make sure the connection to the database is closed each time it is opened on every page

global.css:

This is for styling across all my pages.

Source Code:

index.php:

```php
<!DOCTYPE html>
<html lang="en">
    <head>
        <meta charset="utf-8">
        <title>Home</title>
        <link rel="stylesheet" href="assets/style/global.css"/>
    </head>
    <header>
        <h1>Library</h1>
        <!-- php header: check login -->
        <?php
            //session start
            session_start();
            //connecting to database
            //connecting to database
            require_once "database.php";
            error_reporting(E_ERROR | E_PARSE);
            //check login
            if(isset($_SESSION['Username']) && isset($_SESSION['Password']))
            {
                //tell user who they are logged in as
                echo 'Logged in as: <b>' . $_SESSION['Username'] . '</b> - <a
href="login.php">Logout</a> / <a href="register.php">Register</a>' . '';
            }//end if
            //if not logged in
            else
            {
                //display login / register
                echo '<b><a href="login.php">Login</a> / <a
href="register.php">Register</a>' . '</b>';
            }//end else
        ?>
    </header>
    <body>
        <!-- php: check for login -->
        <?php
            //check if user logged in
            if(isset($_SESSION['Username']) && isset($_SESSION['Password']))
            {
                //display options
                echo '<h4><a href="search_book.php">Search For Book</a></h4>';
                echo '<h4><a href="reserve_book.php">Reserve A Book</a></h4>';
                echo '<h4><a href="view_book.php">View Your Reserved
Books</a></h4>';
            }//end if
            //if user not logged in
```

```php
                else
                {
                    //tell user they have must be logged in
                    echo '<h4>Please <a href="login.php">Login</a> or <a
href="register.php">Register</a></h4>';
                }//end else
            ?>
        </body>
        <footer>

            <!-- return to home -->
            <h4><a href="index.php">Home</a></h4>
            <h6>C20441826 - 2021</h6>
            <!-- close database connection -->
            <?php
                require_once "close.php";
            ?>
        </footer>
</html>
```

login.php:

```php
<!DOCTYPE html>
<html lang="en">
    <head>
        <meta charset="utf-8">
        <title>Login</title>
        <link rel="stylesheet" href="assets/style/global.css"/>
    </head>
    <header>
        <h1>Library</h1>
        <!-- php header: check login -->
        <?php
            //session start
            session_start();
            //unsets user on login page
            unset($_SESSION["Username"]);
            //connecting to database
            require_once "database.php";
            error_reporting(E_ERROR | E_PARSE);
            //check login
            if(isset($_SESSION['Username']) && isset($_SESSION['Password']))
            {
                //tell user who they are logged in as
                echo '<h4>Logged in as: ' . $_SESSION['Username'] . ' - <a
href="login.php">Logout</a> / <a href="register.php">Register</a>' . '</h4>';
            }//end if
            //if not logged in
            else
```

```php
                {
                    //display login / register
                    echo '<h4><a href="login.php">Login</a> / <a
href="register.php">Register</a>' . '</h4>';
                }//end else
            ?>
        </header>
        <body>
            <!-- php: check if user entered login details -->
            <?php
                //checking login credentials
                if (isset($_POST["Username"]) && isset($_POST["Password"]))
                {
                    //store user input
                    $entered_user = $_POST['Username'];
                    $entered_pass = $_POST['Password'];
                    //run queries to check for valid username then user password
                    $sql = "SELECT Username FROM users WHERE Username =
'$entered_user'";
                    $sql2 = "SELECT Password FROM users WHERE Username =
'$entered_user' and Password = '$entered_pass'";
                    //store results in variables
                    $result = $connection->query($sql);
                    $result2 = $connection->query($sql2);
                    //check to see if there is a result for valid username
                    if($result->num_rows > 0)
                    {
                        //check to see if a valid password has been entered for
that username
                        if($result2->num_rows > 0)
                        {
                            //store session
                            $_SESSION['Username'] = $entered_user;
                            $_SESSION['Password'] = $entered_pass;
                            //reset variables
                            $entered_user = 0;
                            $entered_pass = 0;
                            //allow user to proceed
                            echo '<h5>Login Successful - '.'<a
href="index.php">Proceed</a></h5>';
                        }//end if
                        //if an invalid password was entered for the valid
username
                        else
                        {
                            //tell user they have entered an invalid password
                            echo '<h5>Invalid Password! Please try again.</h5>';
                        }//end else
```

```php
                }//end else
                //if an invalid username is entered
                else
                {
                    //tell user they have entered an invalid username
                    echo '<h5>Invalid Username! Please try again.</h5>';
                }//end else
            }//end if
        ?>
        <!-- take user input for login -->
        <form method="post">
        <div class="form">
            <label for = "Username">Enter Username:</label>
            <input type = "text" id = "Username" name = "Username"><br>
            <br>
            <label for = "Password">Enter Password:</label>
            <input type = "text" id = "Password" name = "Password"><br>
            <br>
            <input type = "submit" value="Login" name="submit">
        </div>
        <h5>No Account? <a href="register.php">Register</a></h5>
    </form>
    </body>
    <footer>

        <!-- return to home -->
        <h4><a href="index.php">Home</a></h4>
        <h6>C20441826 - 2021</h6>
        <!-- close database connection -->
        <?php
            require_once "close.php";
        ?>
    </footer>
</html>
```

register.php:

```php
<!DOCTYPE html>
<html lang="en">
    <head>
        <meta charset="utf-8">
        <title>Register</title>
        <link rel="stylesheet" href="assets/style/global.css"/>
    </head>
    <header>
        <h1>Library</h1>
        <!-- php header: check login -->
        <?php
            //session start
```

```php
            session_start();
            //unsets user on register page
            unset($_SESSION["Username"]);
            //connecting to database
            //connecting to database
            require_once "database.php";
            error_reporting(E_ERROR | E_PARSE);
            //check login
            if(isset($_SESSION['Username']) && isset($_SESSION['Password']))
            {
                //tell user who they are logged in as
                echo 'Logged in as: <b>' . $_SESSION['Username'] . '</b> - <a
href="login.php">Logout</a> / <a href="register.php">Register</a>' . '';
            }//end if
            //if not logged in
            else
            {
                //display login / register
                echo '<b><a href="login.php">Login</a> / <a
href="register.php">Register</a>' . '</b>';
            }//end else
        ?>
    </header>
    <body>
        <!-- php: check all entered data and confirm new user -->
        <?php
            require_once "database.php";
            //checking that all entries have been filled
            if (isset($_POST["Username"]) && isset($_POST["Password"]) &&
isset($_POST["CPassword"]) && isset($_POST["Firstname"]) &&
isset($_POST["Surname"]) && isset($_POST["AddressLineOne"]) &&
isset($_POST["AddressLineTwo"]) && isset($_POST["City"]) &&
isset($_POST["Telephone"]) && isset($_POST["Mobile"]))
            {
                //store user input
                $entered_user = $connection-
>real_escape_string($_POST['Username']);
                $entered_pass = $connection-
>real_escape_string($_POST['Password']);
                //run queries to check if username already in use
                $sql = "SELECT Username FROM users WHERE Username =
'$entered_user'";
                //store results in variables
                $result = $connection->query($sql);
                //check to see if valid
                if(($result->num_rows == 0) && (is_numeric($_POST["Mobile"]))
&& (is_numeric($_POST["Telephone"])) && (strlen($_POST["Password"]) == 6) &&
($_POST["Password"] == $_POST["CPassword"]) && strlen($_POST["Mobile"]) == 10)
```

```php
                {
                    //store info in variables to be passed
                    $a = $connection->real_escape_string($_POST['Username']);
                    $b = $connection->real_escape_string($_POST['Password']);
                    $c = $connection->real_escape_string($_POST['Firstname']);
                    $d = $connection->real_escape_string($_POST['Surname']);
                    $e = $connection-
>real_escape_string($_POST['AddressLineOne']);
                    $f = $connection-
>real_escape_string($_POST['AddressLineTwo']);
                    $g = $connection->real_escape_string($_POST['City']);
                    $h = $connection->real_escape_string($_POST['Telephone']);
                    $i = $connection->real_escape_string($_POST['Mobile']);
                    //insert new user into database
                    $sql = "INSERT INTO users (Username, Password, Firstname,
Surname, AddressLineOne, AddressLineTwo, City, Telephone, Mobile) VALUES
('$a','$b','$c','$d','$e','$f','$g','$h','$i')";
                    $connection->query($sql);
                    //store session
                    $_SESSION['Username'] = $entered_user;
                    $_SESSION['Password'] = $entered_pass;
                    //reset variables
                    $entered_user = 0;
                    $entered_pass = 0;
                    //allow user to proceed
                    echo '<h5>Registration Successful - '.'<a
href="index.php">Proceed</a></h5>';
                }//end else
                //check if there are any usernames matching in database
                else if($result->num_rows > 0)
                {
                    //tell user they have entered a username already in use
                    echo '<h5>Username is in use. Please try again.</h5>';
                }//end else if
                //if password is not 6 characters
                else if(strlen($_POST["Password"]) != 6 &&
strlen($_POST["Password"]) > 0)
                {
                    //tell user they have entered a username already in use
                    echo '<h5>Password is not six characters long. Please try
again.</h5>';
                }//end else if
                //if password and confirm password aren't equal
                else if(($_POST["Password"] != $_POST["CPassword"]))
                {
                    //tell user they have entered a username already in use
                    echo '<h5>Please confirm your password correctly. Please
try again.</h5>';
```

```php
                }//end else if
                //if the mobile number is not numeric
                else if(strlen($_POST["Mobile"]) > 0)
                {
                    //tell user they have entered an invalid phone number
                    echo '<h5>Please make sure your telephone / mobile numbers
only include digits and that your mobile is ten digits long.</h5>';
                }//end else
                else
                {
                    //tell user they have to fill all fields
                    echo '<h5>Make sure you fill out all fields.</h5>';
                }
            }//end if
            //if all fields have not been filled
            else
            {
                //tell user they have to fill all fields
                echo '<h5>Make sure you fill out all fields.</h5>';
            }//end else
        ?>
        <!-- take user input for registration -->
        <form method="post">
        <div class="form">
            <label for = "Username">Enter Username:</label>
            <input type = "text" id = "Username" name = "Username"><br>
            <br>
            <label for = "Password">Enter Password:</label>
            <input type = "text" id = "Password" name = "Password"><br>
            <br>
            <label for = "CPassword">Confirm Password:</label>
            <input type = "text" id = "CPassword" name = "CPassword"><br>
            <br>
            <label for = "Firstname">Enter Firstname:</label>
            <input type = "text" id = "Firstname" name = "Firstname"><br>
            <br>
            <label for = "Surname">Enter Surname:</label>
            <input type = "text" id = "Surname" name = "Surname"><br>
            <br>
            <label for = "AddressLineOne">Enter Address (Line 1):</label>
            <input type = "text" id = "AddressLineOne" name =
"AddressLineOne"><br>
            <br>
            <label for = "AddressLineTwo">Enter Address (Line 2):</label>
            <input type = "text" id = "AddressLineTwo" name =
"AddressLineTwo"><br>
            <br>
            <label for = "City">Enter City:</label>
```

```html
            <input type = "text" id = "City" name = "City"><br>
            <br>
            <label for = "Telephone">Enter Telephone:</label>
            <input type = "text" id = "Telephone" name = "Telephone"><br>
            <br>
            <label for = "Mobile">Enter Mobile:</label>
            <input type = "text" id = "Mobile" name = "Mobile"><br>
            <br>
            <input type = "submit" value="Register" name="submit">
        </div>
        <h5>Already have an account? <a href="login.php">Login</a></h5>
    </form>
    </body>
    <footer>

        <!-- return to home -->
        <h4><a href="index.php">Home</a></h4>
        <h6>C20441826 - 2021</h6>
        <!-- close database connection -->
        <?php
            require_once "close.php";
        ?>
    </footer>
</html>
```

search_book.php:

```php
<!DOCTYPE html>
<html lang="en">
    <head>
        <meta charset="utf-8">
        <title>Search For Book</title>
        <link rel="stylesheet" href="assets/style/global.css"/>
    </head>
    <header>
        <h1>Library</h1>
        <!-- php header: check login -->
        <?php
            //session start
            session_start();
            //connecting to database
            require_once "database.php";
            error_reporting(E_ERROR | E_PARSE);
            //check login
            if(isset($_SESSION['Username']) && isset($_SESSION['Password']))
            {
                //tell user who they are logged in as
                echo 'Logged in as: <b>' . $_SESSION['Username'] . '</b> - <a
href="login.php">Logout</a> / <a href="register.php">Register</a>' . '';
```

```php
            }//end if
            //if not logged in
            else
            {
                //display login / register
                echo '<b><a href="login.php">Login</a> / <a
href="register.php">Register</a>' . '</b>';
            }//end else
        ?>
    </header>
    <body>
        <h2>Search For Book</h2>
        <!-- php: check for login -->
        <?php
            //check if user logged in
            if(isset($_SESSION['Username']) && isset($_SESSION['Password']))
            {
                //show form
                echo '
                <form method="post">
                <div class="form">
                    <label for = "book_title">Enter Book Title:</label>
                    <input type = "text" id = "book_title" name = "book_title"
value=""><br>
                    <br>
                    <label for = "book_author">Enter Book Author:</label>
                    <input type = "text" id = "book_author" name =
"book_author" value=""><br>
                    <br>
                    <label for = "book_category">Select Book Category:</label>
                    <select id = "book_category" name = "book_category">
                        <option value = ""></option>
                        <option value = "1">Health</option>
                        <option value = "2">Business</option>
                        <option value = "3">Biography</option>
                        <option value = "4">Technology</option>
                        <option value = "5">Travel</option>
                        <option value = "6">Self-Help</option>
                        <option value = "7">Cookery</option>
                        <option value = "8">Fiction</option>
                    </select><br>
                    <br>
                    <input type = "submit" value="Submit" name="submit">
                </div> ';
                //store variables
                $book_title = $connection-
>real_escape_string($_POST['book_title']);
```

```php
                $book_author = $connection-
>real_escape_string($_POST['book_author']);
                $book_category = $connection-
>real_escape_string($_POST['book_category']);
                //search for title, author, category
                if((strlen($_POST["book_title"]) > 0) &&
(strlen($_POST["book_author"]) > 0) && is_numeric($_POST["book_category"]))
                {
                    //query
                    $sql = "SELECT books.ISBN, books.BookTitle, books.Author,
books.Edition, books.Year, books.Reserved, categories.CategoryDesc FROM books
INNER JOIN categories ON books.Category = categories.CategoryID WHERE
(books.BookTitle LIKE '%$book_title%') and (books.Author LIKE
'%$book_author%') and (books.Category LIKE '%$book_category%')";
                    $result = $connection->query($sql);
                    //allow table to be shown
                    $show = 1;
                }//endif
                //search for title, author
                else if((strlen($_POST["book_title"]) > 0) &&
(strlen($_POST["book_author"]) > 0))
                {
                    //query
                    $sql = "SELECT books.ISBN, books.BookTitle, books.Author,
books.Edition, books.Year, books.Reserved, categories.CategoryDesc FROM books
INNER JOIN categories ON books.Category = categories.CategoryID WHERE
(books.BookTitle LIKE '%$book_title%') and (books.Author LIKE
'%$book_author%')";
                    $result = $connection->query($sql);
                    //allow table to be shown
                    $show = 1;
                }//end else if
                //search for title, category
                else if((strlen($_POST["book_title"]) > 0) &&
is_numeric($_POST["book_category"]))
                {
                    //query
                    $sql = "SELECT books.ISBN, books.BookTitle, books.Author,
books.Edition, books.Year, books.Reserved, categories.CategoryDesc FROM books
INNER JOIN categories ON books.Category = categories.CategoryID WHERE
(books.BookTitle LIKE '%$book_title%') and (books.Category LIKE
'%$book_category%')";
                    $result = $connection->query($sql);
                    //allow table to be shown
                    $show = 1;
                }//end else if
                //search for author, category
```

```php
                else if((strlen($_POST["book_author"]) > 0) &&
is_numeric($_POST["book_category"]))
                {
                    //query
                    $sql = "SELECT books.ISBN, books.BookTitle, books.Author,
books.Edition, books.Year, books.Reserved, categories.CategoryDesc FROM books
INNER JOIN categories ON books.Category = categories.CategoryID WHERE
(books.Author LIKE '%$book_author%') and (books.Category LIKE
'%$book_category%')";
                    $result = $connection->query($sql);
                    //allow table to be shown
                    $show = 1;
                }//end else if
                //search for title
                else if(strlen($_POST["book_title"]) > 0)
                {
                    //query
                    $sql = "SELECT books.ISBN, books.BookTitle, books.Author,
books.Edition, books.Year, books.Reserved, categories.CategoryDesc FROM books
INNER JOIN categories ON books.Category = categories.CategoryID WHERE
(books.BookTitle LIKE '%$book_title%')";
                    $result = $connection->query($sql);
                    //allow table to be shown
                    $show = 1;
                }//end else if
                //search for author
                else if(strlen($_POST["book_author"]) > 0)
                {
                    //query
                    $sql = "SELECT books.ISBN, books.BookTitle, books.Author,
books.Edition, books.Year, books.Reserved, categories.CategoryDesc FROM books
INNER JOIN categories ON books.Category = categories.CategoryID WHERE
(books.Author LIKE '%$book_author%')";
                    $result = $connection->query($sql);
                    //allow table to be shown
                    $show = 1;
                }//end else if
                //search for category
                else if(is_numeric($_POST["book_category"]))
                {
                    //query
                    $sql = "SELECT books.ISBN, books.BookTitle, books.Author,
books.Edition, books.Year, books.Reserved, categories.CategoryDesc FROM books
INNER JOIN categories ON books.Category = categories.CategoryID WHERE
(books.Category LIKE '%$book_category%')";
                    $result = $connection->query($sql);
                    //allow table to be shown
                    $show = 1;
```

```php
            }//end else if
            //display all books when hitting submit
            else if(isset($_POST['submit']))
            {
                //query
                $sql = "SELECT books.ISBN, books.BookTitle, books.Author,
books.Edition, books.Year, books.Reserved, categories.CategoryDesc FROM books
INNER JOIN categories ON books.Category = categories.CategoryID";
                $result = $connection->query($sql);
                //allow table to be shown
                $show = 1;
            }//end else
            //display table
            if($result->num_rows > 0 && $show == 1)
            {
                //title
                echo '<h4>Results:</h4>';
                //print table in while loop
                echo '<table class="center">';
                while($row = $result->fetch_assoc())
                {
                    echo "<tr><td>";
                    echo ("ISBN: " . htmlentities($row["ISBN"]));
                    echo "</td><td>";
                    echo (htmlentities($row["BookTitle"]));
                    echo "</td><td>";
                    echo (htmlentities($row["Author"]));
                    echo "</td><td>";
                    echo ("Edition " . htmlentities($row["Edition"]));
                    echo "</td><td>";
                    echo ("Published in " . htmlentities($row["Year"]));
                    echo "</td><td>";
                    echo (htmlentities($row["CategoryDesc"]));
                    echo "</td><td>";
                    //check if reserved
                    if($row["Reserved"] == "Y")
                    {
                        echo ("N/A");
                        echo "</td></tr>\n";
                    }//end if
                    //if not reserved
                    else
                    {
                        //allow user to reserve
                        $_SESSION['Reserve'] = $row["ISBN"];
                        echo ('<a
href="reserve_book.php?id='.htmlentities($row["ISBN"]).'">Reserve</a>');
                        echo "</td></tr>\n";
```

```php
                }//end else
            }//end while
            //close table
            echo "</table>";
        }//end if
        //if no results
        else if($show == 1)
        {
            //tell user no results
            echo "0 Results.";
        }//end else
    }//end if
    //if user not logged in
    else
    {
        //tell user they have must be logged in
        echo '<h4>Please <a href="login.php">Login</a> or <a
href="register.php">Register</a></h4>';
    }//end else
    ?>
</body>
<footer>

    <!-- return to home -->
    <h4><a href="index.php">Home</a></h4>
    <h6>C20441826 - 2021</h6>
    <!-- close database connection -->
    <?php
        require_once "close.php";
    ?>
</footer>

</html>
```

reserve_book.php:

```html
<!DOCTYPE html>
<html lang="en">
    <head>
        <meta charset="utf-8">
        <title>Reserve Book</title>
        <link rel="stylesheet" href="assets/style/global.css"/>
    </head>
    <header>
        <h1>Library</h1>
        <!-- php header: check login -->
        <?php
            //session start
            session_start();
```

```php
            //connecting to database
            require_once "database.php";
            error_reporting(E_ERROR | E_PARSE);
            //check login
            if(isset($_SESSION['Username']) && isset($_SESSION['Password']))
            {
                //tell user who they are logged in as
                echo 'Logged in as: <b>' . $_SESSION['Username'] . '</b> - <a
href="login.php">Logout</a> / <a href="register.php">Register</a>' . '';
            }//end if
            //if not logged in
            else
            {
                //display login / register
                echo '<b><a href="login.php">Login</a> / <a
href="register.php">Register</a>' . '</b>';
            }//end else
        ?>
    </header>
    <body>
        <h2>Reserve A Book</h2>
        <!-- php: check for login -->
        <?php
            //check if user logged in
            if(isset($_SESSION['Username']) && isset($_SESSION['Password']))
            {
                require_once "database.php";
                //check if page has been accessed from search
                if(isset($_GET['id']))
                {
                    $id = $_GET['id'];
                    $sql = "SELECT BookTitle, Author, Reserved FROM books
WHERE ISBN = '$id'";
                    $result = $connection->query($sql);
                    if($result->num_rows > 0)
                    {
                        //fetching result
                        $row = $result->fetch_assoc();
                        //if not reserved
                        if($row['Reserved'] == "N")
                        {
                            //tell user book is being reserved
                            echo "Reserving Book... " . $row['BookTitle'] . "
by " . $row['Author'];
                            //take variables to be passed
                            $a = $connection->real_escape_string($_GET['id']);
                            $b = $connection-
>real_escape_string($_SESSION['Username']);
```

```php
                            $c = $connection->real_escape_string(date('Y-m-
d'));

                            //query to insert into reservations
                            $sql2 = "INSERT INTO reservations VALUES
('$a','$b','$c')";

                            $connection->query($sql2);
                            //query to update main table
                            $sql3 = "UPDATE books SET Reserved = 'Y' WHERE
ISBN = '$a'";

                            $connection->query($sql3);
                            //return user
                            echo ('<br><br><a href="view_book.php">View
Reservations</a>');
                    }//end if
                    //if reserved
                    else
                    {
                            echo "<h5>The item you have entered has already
been reserved. Please enter another!</h5>";
                    }//end else
                }//end if
                //no results
                else if(strlen($_GET['id']) > 0)
                {
                        echo "<h5>This item does not exist in our database!
Please check your entered ISBN.</h5>";
                }//end else
            }//end if
            //if page has been clicked from index
            else
            {
                //enter book isbn
                echo '
                <form method="post">
                <div class="form">
                        <label for = "ISBN">Enter ISBN:</label>
                        <input type = "text" id = "ISBN" name = "ISBN"
value=""><br>

                        <br>
                        <input type = "submit" value="Submit" name="submit">
                </div> ';
                $id = $_POST['ISBN'];
                $sql = "SELECT Reserved, BookTitle, Author FROM books
WHERE ISBN = '$id'";
                $result = $connection->query($sql);
                if($result->num_rows > 0)
                {
                        //fetching result
```

```php
                        $row = $result->fetch_assoc();
                        //if not reserved
                        if($row['Reserved'] == "N")
                        {
                            //tell user book is being reserved
                            echo "Reserving Book... " . $row['BookTitle'] . "
by " . $row['Author'];
                            //take variables to be passed
                            $a = $connection-
>real_escape_string($_POST['ISBN']);
                            $b = $connection-
>real_escape_string($_SESSION['Username']);
                            $c = $connection->real_escape_string(date('Y-m-
d'));
                            //query to insert into reservations
                            $sql2 = "INSERT INTO reservations VALUES
('$a','$b','$c')";

                            $connection->query($sql2);
                            //query to update main table
                            $sql3 = "UPDATE books SET Reserved = 'Y' WHERE
ISBN = '$a'";

                            $connection->query($sql3);
                            //return user
                            echo ('<br><br><a href="view_book.php">View
Reservations</a>');
                        }//end if
                        //if reserved
                        else
                        {
                            echo "<h5>The item you have entered has already
been reserved. Please enter another!</h5>";
                        }//end else
                    }//end if
                    //no results
                    else if(strlen($_POST['ISBN']) > 0)
                    {
                        echo "<h5>This item does not exist in our database!
Please check your entered ISBN.</h5>";
                    }//end else
                }//end else
            }//end if
            //if user not logged in
            else
            {
                //tell user they have must be logged in
                echo '<h4>Please <a href="login.php">Login</a> or <a
href="register.php">Register</a></h4>';
            }//end else
```

```php
        ?>
    </body>
    <footer>

        <!-- return to home -->
        <h4><a href="index.php">Home</a></h4>
        <h6>C20441826 - 2021</h6>
        <!-- close database connection -->
        <?php
            require_once "close.php";
        ?>
    </footer>
</html>
```

view_book.php:

```php
<!DOCTYPE html>
<html lang="en">
    <head>
        <meta charset="utf-8">
        <title>Reserved Book</title>
        <link rel="stylesheet" href="assets/style/global.css"/>
    </head>
    <header>
        <h1>Library</h1>
        <!-- php header: check login -->
        <?php
            //session start
            session_start();
            //connecting to database
            require_once "database.php";
            //error_reporting(E_ERROR | E_PARSE);
            //check login
            if(isset($_SESSION['Username']) && isset($_SESSION['Password']))
            {
                //tell user who they are logged in as
                echo 'Logged in as: <b>' . $_SESSION['Username'] . '</b> - <a
href="login.php">Logout</a> / <a href="register.php">Register</a>' . '';
            }//end if
            //if not logged in
            else
            {
                //display login / register
                echo '<b><a href="login.php">Login</a> / <a
href="register.php">Register</a>' . '</b>';
            }//end else
        ?>
    </header>
    <body>
```

```php
        <h2>View Your Reserved Books</h2>
        <!-- php: check for login -->
        <?php
            //check if user logged in
            if(isset($_SESSION['Username']) && isset($_SESSION['Password']))
            {
                //take username
                $username = $_SESSION['Username'];
                //call reserved books of user
                $sql = "SELECT ISBN, UserName, ReservedDate FROM reservations
WHERE UserName = '$username'";
                $result = $connection->query($sql);
                //check for results
                if($result->num_rows > 0)
                {
                    //store data
                    $i = 0;
                    $j = $result->num_rows;
                    $k = 0;
                    $store_isbn = array();
                    $store_date = array();
                    //fetch rows
                    while($row = $result->fetch_assoc())
                    {
                        //store isbn
                        $store_isbn[$i] = htmlentities($row["ISBN"]);
                        //store reserved date
                        $store_date[$i] = htmlentities($row["ReservedDate"]);
                        $i = $i + 1;
                    }//end while
                    //for loop to display results
                    echo '<table class="center">';
                    for($k = 0;$k < $j; $k++)
                    {
                        //query
                        $sql2 = "SELECT books.ISBN, books.BookTitle,
books.Author, books.Edition, books.Year, books.Reserved,
categories.CategoryDesc FROM books INNER JOIN categories ON books.Category =
categories.CategoryID WHERE ISBN = '$store_isbn[$k]'";
                        $result2 = $connection->query($sql2);
                        echo "<tr><td>";
                        while($row2 = $result2->fetch_assoc())
                        {
                            echo ("ISBN: " . htmlentities($row2["ISBN"]));
                            echo "</td><td>";
                            echo (htmlentities($row2["BookTitle"]));
                            echo "</td><td>";
                            echo (htmlentities($row2["Author"]));
```

```php
                                echo "</td><td>";
                                echo ("Edition " .
htmlentities($row2["Edition"]));
                                echo "</td><td>";
                                echo ("Published in " .
htmlentities($row2["Year"]));
                                echo "</td><td>";
                                echo (htmlentities($row2["CategoryDesc"]));
                                echo "</td><td>";
                                echo ("Reserved: " . $store_date[$k]);
                                echo "</td><td>";
                                echo ('<a
href="reserve_delete.php?id='.htmlentities($row2["ISBN"]).'">Delete</a>');
                        }//end while
                    }//end for
                    echo "</td></tr>\n";
                    //close table
                    echo "</table>";
                }//end if
                //if no books reserved
                else
                {
                    echo "No books currently reserved.";
                }
            }//end if
            //if user not logged in
            else
            {
                //tell user they have must be logged in
                echo '<h4>Please <a href="login.php">Login</a> or <a
href="register.php">Register</a></h4>';
            }//end else
        ?>
    </body>
    <footer>

        <!-- return to home -->
        <h4><a href="index.php">Home</a></h4>
        <h6>C20441826 - 2021</h6>
        <!-- close database connection -->
        <?php
            require_once "close.php";
        ?>
    </footer>
</html>
```

reserve_delete.php:

```php
<!DOCTYPE html>
<html lang="en">
    <head>
        <meta charset="utf-8">
        <title>Deleting Reservation</title>
        <link rel="stylesheet" href="assets/style/global.css"/>
    </head>
    <header>
        <h1>Library</h1>
        <!-- php header: check login -->
        <?php
            //session start
            session_start();
            //connecting to database
            require_once "database.php";
            error_reporting(E_ERROR | E_PARSE);
            //check login
            if(isset($_SESSION['Username']) && isset($_SESSION['Password']))
            {
                //tell user who they are logged in as
                echo 'Logged in as: <b>' . $_SESSION['Username'] . '</b> - <a
href="login.php">Logout</a> / <a href="register.php">Register</a>' . '';
            }//end if
            //if not logged in
            else
            {
                //display login / register
                echo '<b><a href="login.php">Login</a> / <a
href="register.php">Register</a>' . '</b>';
            }//end else
        ?>
    </header>
    <body>
        <h2>Delete Reservation</h2>
        <!-- php: check for login -->
        <?php
            //check if user logged in
            if(isset($_SESSION['Username']) && isset($_SESSION['Password']))
            {
                //check if id is set
                if(isset($_GET['id']))
                {
                    //take id into variable
                    $get_isbn = $_GET['id'];
                    //queries to remove reservation
                    $sql = "DELETE FROM reservations WHERE ISBN =
'$get_isbn'";
```

```php
                    $sql2 = "UPDATE books SET Reserved = 'N' WHERE ISBN =
'$get_isbn'";

                    $result = $connection->query($sql);
                    $result2 = $connection->query($sql2);
                    echo "Your reservation has been deleted.<br><br>";
                }//end if
                //if id not set
                else
                {
                    //tell user an error has occurred
                    echo "You cannot delete this reservation
anymore.<br><br>";
                }//end else
                //return user
                echo ('<a href="view_book.php">Return</a>');
            }//end if
            //if user not logged in
            else
            {
                //tell user they have must be logged in
                echo '<h4>Please <a href="login.php">Login</a> or <a
href="register.php">Register</a></h4>';
            }//end else
        ?>
    </body>
    <footer>

        <!-- return to home -->
        <h4><a href="index.php">Home</a></h4>
        <h6>C20441826 - 2021</h6>
        <!-- close database connection -->
        <?php
            require_once "close.php";
        ?>
    </footer>
</html>
```

database.php:

```php
<?php
    //connecting to database
    //variables - login credentials
    $servername = "localhost";
    $username = "conord";
    $password = "conord";
    $dbname = "librarydb";
    //create connection
    $connection = new mysqli($servername,$username,$password,$dbname);
?>
```

close.php

```php
<?php
    $connection->close();
?>
```

global.css

```css
html
{
    background-color: #f2f6fc;
    font-family: Tahoma, sans-serif;
}

header
{
    background-color:#f2f6fc;
    text-align: center;
    padding-bottom: 2%;
}

body
{
    width: 80%;
    background-color:#e4e9f0;
    margin: auto;
    text-align: center;
}

a
{
    text-decoration: solid;
    color: #4c6385;
    width: 90%;
}

a:hover
{
    text-decoration: underline;
}

.form
{
    margin-top: 3%;
    margin-bottom: 3%;
}

.center
```
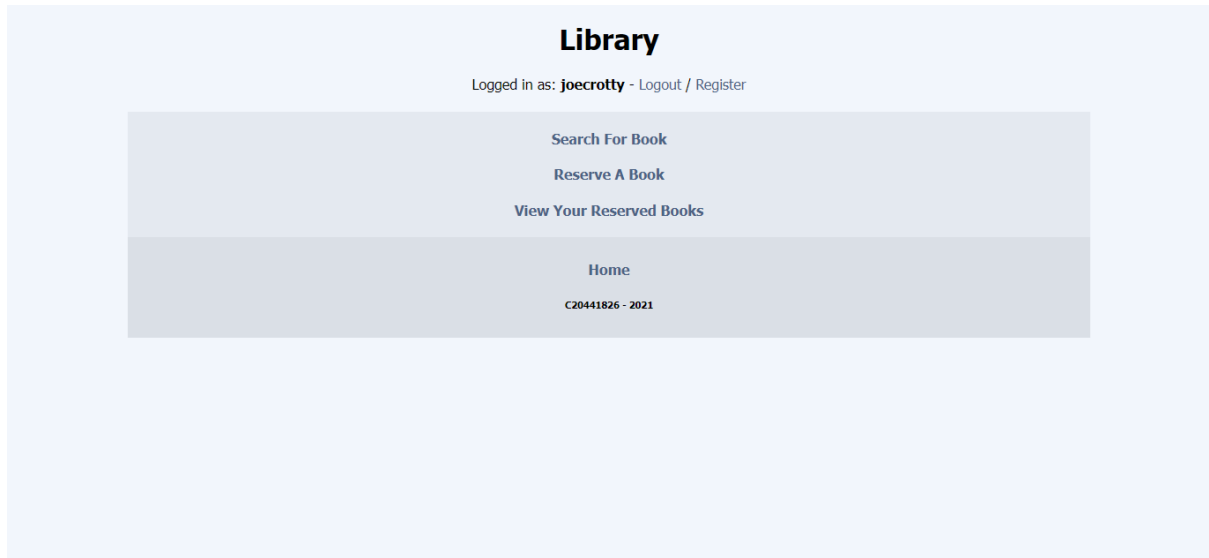
```css
{
    border: '1';
    margin-left: auto;
    margin-right: auto;
    text-align: left;
    width: 90%;
    margin-top: 3%;
    margin-bottom: 3%;
}

.center, th, td
{
    border: 1px solid #979ea8;
}

footer
{
    background-color:#dadfe6;
    text-align: center;
    align-self: center;
    margin-top: 1%;
    padding-top: 0.5%;
    padding-bottom: 0.5%;
    margin-bottom: 5%;
}
```

Screenshots of Pages:

index.php

Library

Logged in as: **joecrotty** - Logout / Register

Search For Book
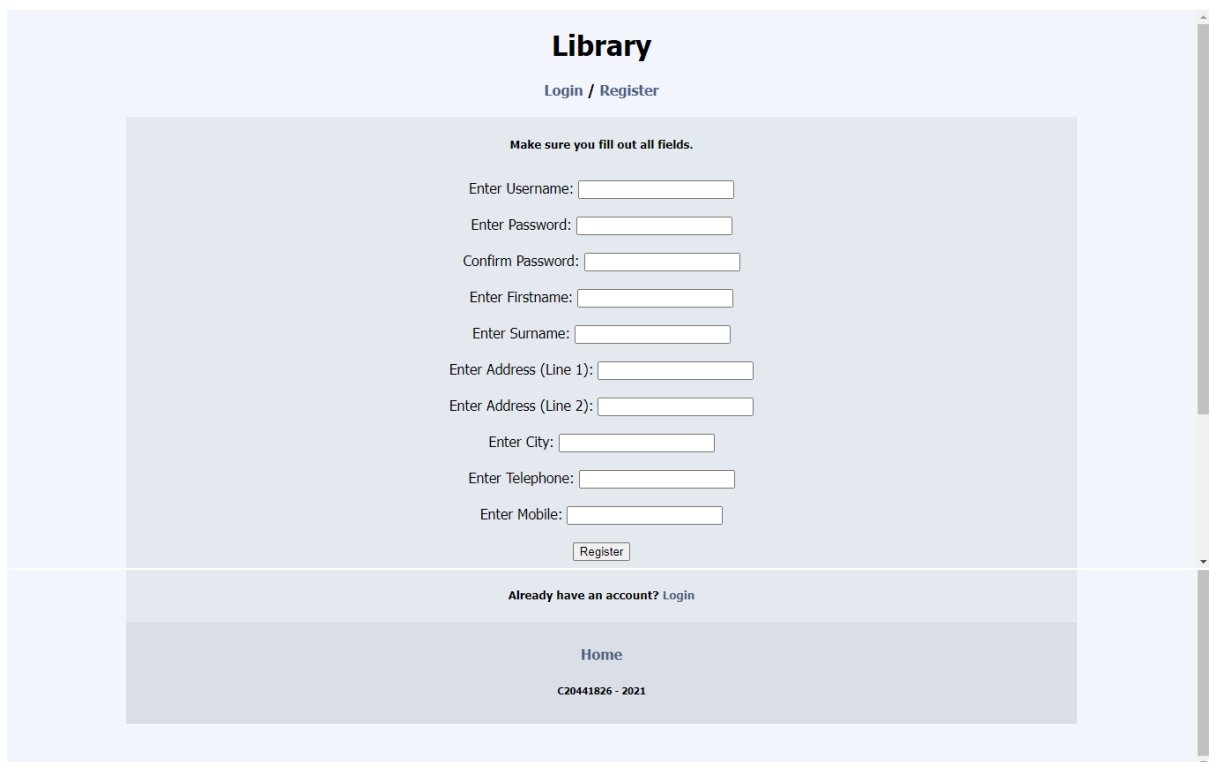
Reserve A Book

View Your Reserved Books

Home

C20441826 - 2021

register.php

Library

Login / Register

Make sure you fill out all fields.

Enter Username: [   ]

Enter Password: [   ]

Confirm Password: [   ]

Enter Firstname: [   ]

Enter Surname: [   ]

Enter Address (Line 1): [   ]

Enter Address (Line 2): [   ]

Enter City: [   ]

Enter Telephone: [   ]

Enter Mobile: [   ]

[Register]

Already have an account? Login

Home

C20441826 - 2021

login.php

Library

Login / Register

Enter Username: [ ]
Enter Password: [ ]

[Login]

No Account? Register

Home

C20441826 - 2021

search_book.php

Library

Logged in as: **joecrotty** - Logout / Register

Search For Book

Enter Book Title: [ ]
Enter Book Author: [ ]
Select Book Category: [Health ▾]

[Submit]

Results:

ISBN: 23u8-923849	A Guide to Nutrition	John Thorpe	Edition 2	Published in 1997	Health	Reserve
ISBN: 9823-23984	My Life In Picture	Kevin Graham	Edition 8	Published in 2004	Health	Reserve
ISBN: 98234-029384	My Ranch In Texas	George Bush	Edition 1	Published in 2005	Health	N/A
ISBN: 993-004-00	My Life In Bits	John Smith	Edition 1	Published in 2001	Health	Reserve
ISBN: 9987-0039882	Shooting History	Jon Snow	Edition 1	Published in 2003	Health	Reserve

Home

C20441826 - 2021

reserve_book.php

Library

Logged in as: **joecrotty** - Logout / Register

Reserve A Book

Enter ISBN: [98234-029345]

[Submit]

Home

C20441826 - 2021

view_book.php

Library

Logged in as: **joecrotty** - Logout / Register

View Your Reserved Books

ISBN: 98234-029384	My Ranch In Texas	George Bush	Edition 1	Published in 2005	Health	Reserved: 2008-10-11	Delete

Home

C20441826 - 2021

reserve_delete.php

Library

Logged in as: **joecrotty** - Logout / Register

Delete Reservation

Your reservation has been deleted.

Return

Home

C20441826 - 2021

Website & Database Design:

Website Design
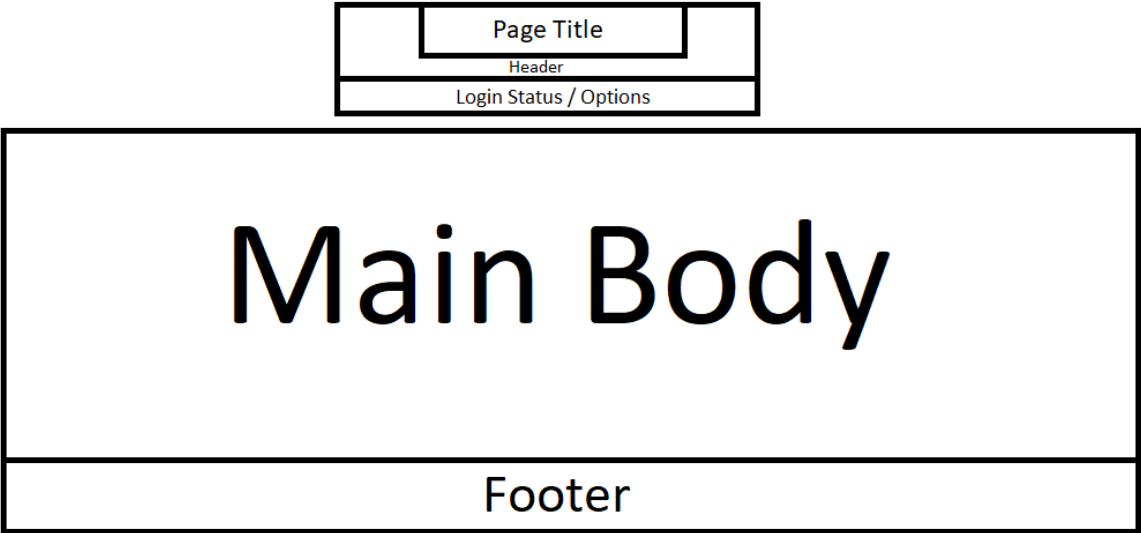
Database

Table	Action							Rows	Type	Collation	Size	Overhead
books	☆	🔲 Browse	🔧 Structure	🔍 Search	➕ Insert	🗑 Empty	⛔ Drop	14	InnoDB	utf8mb4_general_ci	32.0 KiB	-
categories	☆	🔲 Browse	🔧 Structure	🔍 Search	➕ Insert	🗑 Empty	⛔ Drop	8	InnoDB	utf8mb4_general_ci	16.0 KiB	-
reservations	☆	🔲 Browse	🔧 Structure	🔍 Search	➕ Insert	🗑 Empty	⛔ Drop	2	InnoDB	utf8mb4_general_ci	32.0 KiB	-
users	☆	🔲 Browse	🔧 Structure	🔍 Search	➕ Insert	🗑 Empty	⛔ Drop	3	InnoDB	utf8mb4_general_ci	16.0 KiB	-
4 tables	**Sum**							**27**	**InnoDB**	**utf8mb4_general_ci**	**96.0 KiB**	**0 B**

Books Table

+ Options

				ISBN	BookTitle	Author	Edition	Year	Category	Reserved
☐	🖉 Edit	⯀ Copy	⊖ Delete	093-403992	Computers in Business	Alicia O'Neill	3	1997	3	N
☐	🖉 Edit	⯀ Copy	⊖ Delete	23472-8729	Exploring Peru	Stephanie Birchie	4	2005	5	N
☐	🖉 Edit	⯀ Copy	⊖ Delete	237-34823	Business Strategy	Joe Peppard	2	2002	2	N
☐	🖉 Edit	⯀ Copy	⊖ Delete	23u8-923849	A Guide to Nutrition	John Thorpe	2	1997	1	N
☐	🖉 Edit	⯀ Copy	⊖ Delete	2983-3494	Cooking For Children	Annabelle Sharpe	1	2003	7	N
☐	🖉 Edit	⯀ Copy	⊖ Delete	82n8-308	Computers For Idiots	Susan O'Neill	5	1998	4	N
☐	🖉 Edit	⯀ Copy	⊖ Delete	9823-23984	My Life In Picture	Kevin Graham	8	2004	1	N
☐	🖉 Edit	⯀ Copy	⊖ Delete	9823-2403-0	DaVinci Code	Dan Brown	1	2003	8	N
☐	🖉 Edit	⯀ Copy	⊖ Delete	9823-98345	How To Cook Italian Food	Jamie Oliver	2	2005	7	Y
☐	🖉 Edit	⯀ Copy	⊖ Delete	9823-98487	Optimising Your Business	Cleo Blair	1	2001	2	N
☐	🖉 Edit	⯀ Copy	⊖ Delete	98234-029384	My Ranch In Texas	George Bush	1	2005	1	Y
☐	🖉 Edit	⯀ Copy	⊖ Delete	988745-234	Tara Road	Maeve Binchy	4	2002	8	N
☐	🖉 Edit	⯀ Copy	⊖ Delete	993-004-00	My Life In Bits	John Smith	1	2001	1	N
☐	🖉 Edit	⯀ Copy	⊖ Delete	9987-0039882	Shooting History	Jon Snow	1	2003	1	N

	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action						
☐	1	ISBN 🔑	varchar(13)	utf8mb4_general_ci		No	None			🖉 Change	⊖ Drop	▽ More
☐	2	BookTitle	varchar(30)	utf8mb4_general_ci		No	None			🖉 Change	⊖ Drop	▽ More
☐	3	Author	varchar(30)	utf8mb4_general_ci		No	None			🖉 Change	⊖ Drop	▽ More
☐	4	Edition	int(4)			No	None			🖉 Change	⊖ Drop	▽ More
☐	5	Year	int(4)			No	None			🖉 Change	⊖ Drop	▽ More
☐	6	Category 🔑	int(4)			No	None			🖉 Change	⊖ Drop	▽ More
☐	7	Reserved	varchar(1)	utf8mb4_general_ci		No	None			🖉 Change	⊖ Drop	▽ More

FK_CATEGORY

⊖ Drop ON DELETE [RESTRICT ▾]

ON UPDATE [RESTRICT ▾]

[Category ▾]   [librarydb ▾]   [categories ▾]   [CategoryID ▾]

+ Add column

Categories Table

	CategoryID ▲ 1	CategoryDesc
☐ 🖊 Edit ⧉ Copy ⊖ Delete	1	Health
☐ 🖊 Edit ⧉ Copy ⊖ Delete	2	Business
☐ 🖊 Edit ⧉ Copy ⊖ Delete	3	Biography
☐ 🖊 Edit ⧉ Copy ⊖ Delete	4	Technology
☐ 🖊 Edit ⧉ Copy ⊖ Delete	5	Travel
☐ 🖊 Edit ⧉ Copy ⊖ Delete	6	Self-Help
☐ 🖊 Edit ⧉ Copy ⊖ Delete	7	Cookery
☐ 🖊 Edit ⧉ Copy ⊖ Delete	8	Fiction

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
☐ 1	CategoryID 🔑	int(4)			No	None			🖊 Change ⊖ Drop ▽ More
☐ 2	CategoryDesc	varchar(20)	utf8mb4_general_ci		No	None			🖊 Change ⊖ Drop ▽ More

Reservations Table

←T→					ISBN	UserName	ReservedDate ▲ 1
☐	🖉 Edit	⫶⫶ Copy	⊖ Delete		9823-98345	tommy100	2008-10-11
☐	🖉 Edit	⫶⫶ Copy	⊖ Delete		98234-029384	joecrotty	2008-10-11

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action		
☐	1	ISBN 🔑	varchar(13)	utf8mb4_general_ci		No	*None*			🖉 Change	⊖ Drop	▽ More
☐	2	UserName 🔑	varchar(15)	utf8mb4_general_ci		No	*None*			🖉 Change	⊖ Drop	▽ More
☐	3	ReservedDate	date			No	*None*			🖉 Change	⊖ Drop	▽ More

	FK_ISBN					
⊖ Drop	ON DELETE	RESTRICT	ISBN ⌄	librarydb ⌄	books ⌄	ISBN ⌄
	ON UPDATE	RESTRICT	+ Add column			
	FK_USERNAME					
⊖ Drop	ON DELETE	RESTRICT	UserName ⌄	librarydb ⌄	users ⌄	Username ⌄
	ON UPDATE	RESTRICT	+ Add column			

Users Table

					Username	Password	Firstname	Surname	AddressLineOne	AddressLineTwo	City	Telephone	Mobile
☐	🖊 Edit	ᴣᵢ Copy	⊖ Delete		alanjmckenna	t1234s	Alan	McKenna	38 Cranley Road	Fairview	Dublin	09998377	0856625567
☐	🖊 Edit	ᴣᵢ Copy	⊖ Delete		joecrotty	kj7899	Joseph	Crotty	Apt 5 Clyde Road	Donnybrook	Dublin	08887889	0876654456
☐	🖊 Edit	ᴣᵢ Copy	⊖ Delete		tommy100	123456	Tom	Behan	14 Hyde Road	Dalkey	Dublin	09983747	0876738782

	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action			
☐	1	**Username** 🔑	varchar(15)	utf8mb4_general_ci		No	*None*			🖊 Change	⊖ Drop	▾ More	
☐	2	**Password**	varchar(6)	utf8mb4_general_ci		No	*None*			🖊 Change	⊖ Drop	▾ More	
☐	3	**Firstname**	varchar(15)	utf8mb4_general_ci		No	*None*			🖊 Change	⊖ Drop	▾ More	
☐	4	**Surname**	varchar(15)	utf8mb4_general_ci		No	*None*			🖊 Change	⊖ Drop	▾ More	
☐	5	**AddressLineOne**	varchar(20)	utf8mb4_general_ci		No	*None*			🖊 Change	⊖ Drop	▾ More	
☐	6	**AddressLineTwo**	varchar(20)	utf8mb4_general_ci		No	*None*			🖊 Change	⊖ Drop	▾ More	
☐	7	**City**	varchar(15)	utf8mb4_general_ci		No	*None*			🖊 Change	⊖ Drop	▾ More	
☐	8	**Telephone**	varchar(8)	utf8mb4_general_ci		No	*None*			🖊 Change	⊖ Drop	▾ More	
☐	9	**Mobile**	varchar(10)	utf8mb4_general_ci		No	*None*			🖊 Change	⊖ Drop	▾ More	

File Layout:

```
∨ webd
  ∨ assignment
  ∨ assets\style
    #  global.css
  🐘 database.php
  🐘 index.php
  🐘 login.php
  🐘 register.php
  🐘 reserve_book.php
  🐘 reserve_delete.php
  🐘 search_book.php
  🐘 view_book.php
```