

Project Design

The plan is to design a Rental Equipment booking. The project will allow people to register with their username, email, and password and create an account to log in. Once the user is logged in, they will be directed to the rental equipment page, and there they can select an equipment item, a rental, and a return date. Once they have chosen equipment and the date, they will be taken to one last page confirming the user's booking was successful and thanking the user for using the booking service.

Technical details

Signup.php- This file securely stores users' credentials in the MySQL database using hashed passwords.

```
$hashed_password = password_hash($Password_, PASSWORD_DEFAULT);  
$conn = new mysqli($servername, $dbusername, $dbpassword, $dbname);  
  
if ($conn->connect_error) {  
    die("Connection failed: " . $conn->connect_error);  
}  
  
$sql = "SELECT * FROM customer WHERE username = ? OR email = ?";  
$stmt = $conn->prepare($sql);  
$stmt->bind_param("ss", $username, $email);  
$stmt->execute();  
$result = $stmt->get_result();  
  
if ($result->num_rows > 0) {  
    echo "Username or email already exists. Enter a different one.";
```

Login.php - This script verifies the user's credentials against the database and redirects them to equipment.html upon successful login.

```
if ($result->num_rows > 0) {  
    $user = $result->fetch_assoc();  
    if (password_verify($password, $user['Password_'])) {  
        echo "Account Saved, your Login was successful!";  
        header("Location: equipment.html");  
    } else {  
        echo "Invalid password, please try again.";  
    }  
} else {  
    echo "Error! Unable to find that username.";}
```

Equipment.html - This page provides a form allowing users to select equipment, rental, and return dates.

```
<div class="container">
  <h2>Rental Equipment Booking</h2>
  <form method="post" action="http://localhost/CIS_344/rental.php">
    <label for="equipment_id">Choose Equipment:</label>
    <select name="equipment_id" id="equipment_id">
      <option value="1">Sports Gear - $85.50 / month</option>
      <option value="2">Camera - $250.99 / month</option>
      <option value="3">Tools - $55.75 / month</option>
      <option value="4">Books - $10.25 / month</option>
```

Rental.php - This script processes the booking form, validates and reads the input, and sends the information to the database and equipment_log.txt.

```
$equipment_id = $_POST['equipment_id'];
$rental_date = $_POST['rental_date'];
$return_date = $_POST['return_date'];

if(empty($equipment_id) || empty($rental_date)) {
    echo "Error! Please enter all fields.";
} else {

    $equipment_information = "Equipment ID: $equipment_id\nRental
Date: $rental_date\nReturn Date: $return_date\n\n";

$textfile = fopen("Equipment_log.txt", "a");

if ($textfile) {

    fwrite($textfile, $equipment_information);
    fclose($textfile);
    echo "Your Booking was successful! Thank you for using our
services.";
} else {
```

```
echo "Error, please try again.";
```

All user information is stored in the MySQL database.
MySQL Workbench 8.0 was used

Database Schema

In the SQL schema, three tables store information

- Customer: This table stores information about the system user. It uses user authentication to associate bookings with specific customers.
- Equipment: This table stores information on the equipment available for rental and details about it.
- Rental: This table stores information about rentals. It links customers to the equipment they have rented and displays the rental transaction's period and status.

Credit:

- W3schools
- Stack Overflow
- Copilot(from Microsoft Visual Studio) (used to help fix small errors and make the code cleaner)