Library Management System

1. Objectives:

The **Library Management System** that helps manage books in a library. The key objectives include:

- **Adding Books**: Allow users to add new books by specifying details like title, author, ISBN, genre, and availability status.

- **Viewing Books**: Display a list of all books stored in the database with their details.

- **Updating Books**: Provide functionality to update the details of an existing book, such as its availability or genre.

- **Deleting Books**: Allow users to remove books from the system.

The system should be simple, user-friendly, and efficient in managing book records for a library.

2. Code:

01.CSS Code (styling the user interface):

```css
body {
    font-family: Arial, sans-serif;
    margin: 20px;
}
h1 {
    text-align: center;
}
form {
    margin-bottom: 20px;
}
input, button, select {
    padding: 10px;
    margin: 5px;
}
```

```css
table {
    width: 100%;
    border-collapse: collapse;
}
th, td {
    border: 1px solid #ddd;
    padding: 8px;
    text-align: center;
}
th {
    background-color: #f4f4f4;
}
```

02.PHP Code (Database operations):

```php
// Database connection
$host = 'localhost';
$user = 'root';
$password = '';
$dbname = 'library_db';
$conn = new mysqli($host, $user, $password, $dbname);
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

// Add book
function addBook($title, $author, $isbn, $genre, $status) {
    global $conn;
    $sql = "INSERT INTO books (title, author, isbn, genre, availability_status) VALUES (?, ?, ?, ?, ?)";
    $stmt = $conn->prepare($sql);
```

```php
    $stmt->bind_param('sssss', $title, $author, $isbn, $genre, $status);

    $stmt->execute();

    return $stmt->affected_rows > 0;

}


// Get books

function getBooks() {

    global $conn;

    $result = $conn->query("SELECT * FROM books");

    return $result->fetch_all(MYSQLI_ASSOC);

}


// Update book

function updateBook($id, $title, $author, $isbn, $genre, $status) {

    global $conn;

    $sql = "UPDATE books SET title=?, author=?, isbn=?, genre=?, availability_status=? WHERE id=?";

    $stmt = $conn->prepare($sql);

    $stmt->bind_param('sssssi', $title, $author, $isbn, $genre, $status, $id);

    $stmt->execute();

    return $stmt->affected_rows > 0;

}


// Delete book

function deleteBook($id) {

    global $conn;

    $sql = "DELETE FROM books WHERE id=?";

    $stmt = $conn->prepare($sql);

    $stmt->bind_param('i', $id);

    $stmt->execute();

    return $stmt->affected_rows > 0;
```

```
}
```

03.HTML Form and Table (User Interface):

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <link rel="stylesheet" href="css/style.css">
    <title>Library Management System</title>
</head>
<body>
    <h1>Library Management System</h1>
    <form method="post">
        <input type="text" name="title" placeholder="Book Title" required>
        <input type="text" name="author" placeholder="Author" required>
        <input type="text" name="isbn" placeholder="ISBN" required>
        <input type="text" name="genre" placeholder="Genre">
        <select name="status">
            <option value="Available">Available</option>
            <option value="Checked Out">Checked Out</option>
        </select>
        <button type="submit" name="add">Add Book</button>
    </form>

    <table>
        <thead>
            <tr>
                <th>ID</th>
```

```html
          <th>Title</th>
          <th>Author</th>
          <th>ISBN</th>
          <th>Genre</th>
          <th>Status</th>
          <th>Actions</th>
        </tr>
      </thead>
      <tbody>
        <?php foreach ($books as $book): ?>
          <tr>
            <td><?= $book['id'] ?></td>
            <td><?= $book['title'] ?></td>
            <td><?= $book['author'] ?></td>
            <td><?= $book['isbn'] ?></td>


            <td><?= $book['genre'] ?></td>
            <td><?= $book['availability_status'] ?></td>
            <td>
              <form method="post" style="display:inline;">
                <input type="hidden" name="id" value="<?= $book['id'] ?>">
                <button type="submit" name="delete">Delete</button>
              </form>
            </td>
          </tr>
        <?php endforeach; ?>
      </tbody>
    </table>
</body>
</html>
```

3. **Input and Output:**

Library Management System

Book Title	Author	ISBN	Genre	Available ▾	Add Book

ID Title Author ISBN Genre Status Actions