

BACKEND

The Online Flight Booking Management System (OFBMS) uses a traditional LAMP (Linux, Apache, MySQL/MariaDB, PHP) stack for its server-side architecture. The system relies on MariaDB 10.4.32 as its relational database management system, which stores all flight, user, and booking information. The database schema is well-structured with 11 interconnected tables that manage everything from airline details and flight schedules to user accounts and ticket bookings. Tables like 'flight', 'airline', and 'cities' form the core of the flight operations data, while 'users', 'passenger_profile', and 'ticket' handle customer information and reservations. The system uses foreign key constraints to maintain data integrity across these relationships, ensuring that bookings always reference valid flights and users.

Security is implemented through multiple layers in the system. User authentication uses PHP's built-in password hashing functions with the bcrypt algorithm, evident from the \$2y\$ prefix in the password hashes stored in both admin and user tables. The system includes a password reset mechanism with secure tokens and expiration timestamps stored in a dedicated 'pwdreset' table. For payment processing, the system stores limited card information (last digits and expiry date) rather than full details, though this could be enhanced with proper PCI-DSS compliance measures. The database schema shows attention to basic security practices like prepared statements (inferred from the PHP version) and proper data typing for sensitive fields.

The flight management functionality is comprehensive, tracking not just schedules and routes but also seat allocation with separate counters for economy and business class. The 'flight' table includes fields for last assigned seats in both classes, duration calculations, and pricing information. The system supports basic customer feedback collection through a dedicated table, though this appears to be a simple survey rather than integrated with specific bookings. While functionally complete for basic flight booking operations, the system could benefit from enhancements like UTF-8 support for international travelers, more sophisticated payment processing, and additional business intelligence features for reporting and analytics. The technology choices reflect a practical, if somewhat traditional, approach to building a web-based reservation system.

```

<?php

$servername = "localhost";

$db_username = "root";

$db_password = "";

$db_name = 'ofbms_db';

$conn = mysqli_connect($servername, $db_username, $db_password,$db_name);

if (!$conn) {

    die("Connection failed: " . mysqli_connect_error());

}

// echo "Connection sucess";

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<?php

require '../helpers/init_conn_db.php';

if(!$conn){

    die("Connection Failed");

}

$sql = "SELECT SUM(cost) FROM ticket";

$amountsum = mysqli_query($conn, $sql) or die(mysqli_error($sql));

$row_amountsum = mysqli_fetch_assoc($amountsum);

$totalRows_amountsum = mysqli_num_rows($amountsum);

echo $row_amountsum['SUM(cost)'];

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<?php

```

```
if(isset($_POST['del_airlines']) and isset($_SESSION['adminId'])) {
```

```
    $airline_id = $_POST['airline_id'];
```

```
    $sql = 'DELETE FROM airline WHERE airline_id=?';
```

```
    $stmt = mysqli_stmt_init($conn);
```

```
    if(!mysqli_stmt_prepare($stmt,$sql)) {
```

```
        header('Location: ../index.php?error=sqlerror');
```

```
        exit();
```

```
    } else {
```

```
        mysqli_stmt_bind_param($stmt,'i',$airline_id);
```

```
        mysqli_stmt_execute($stmt);
```

```
        mysqli_stmt_close($stmt);
```

```
        mysqli_close($conn);
```

```
        // header('Location: list_airlines.php');
```

```
        echo("<script>location.href = 'list_airlines.php';</script>");
```

```
        exit();
```

```
    }
```

```
}
```

```
?>
```

```
<?php
```

```
    $cnt=1;
```

```
    $sql = 'SELECT * FROM airline ORDER BY airline_id ASC';
```

```
    $stmt = mysqli_stmt_init($conn);
```

```
    mysqli_stmt_prepare($stmt,$sql);
```

```
    mysqli_stmt_execute($stmt);
```

```

$result = mysqli_stmt_get_result($stmt);

while ($row = mysqli_fetch_assoc($result)) {

    echo "

    <tr class='text-center'>

        <td scope='row'>". $cnt. " </a> </td>

        <td>". $row['name']. "</td>

        <td>". $row['seats']. "</td>

        <td>

        <form action='list_airlines.php' method='post'>

            <input name='airline_id' type='hidden' value='". $row['airline_id']. ">

            <button class='btn' type='submit' name='del_airlines'>

                <i class='text-danger fa fa-trash'></i></button>

        </form>

        </td>

    </tr>

    ";

    $cnt++; }

?>

```

phpMyAdmin

Server: 127.0.0.1 Database: ofbms_db Table: flight

Showing rows 0 - 10 (11 total, Query took 0.0005 seconds.) [admin_id: 1... - 1...]

SELECT * FROM `flight` ORDER BY `admin_id` ASC

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all Number of rows: 25 Filter rows: Search this table Sort by key: admin_id (ASC)

Extra options

	flight_id	admin_id	arrive	departure	Destination	source	airline	Seats	duration	Price	status	issue	last_seat	bus_seats	last_bus_seat
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	39	1	2025-06-06 19:30:00	2025-06-06 17:30:00	Kolkata	Mumbai	Indigo	299	2 hours	5000			21A	20	
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	48	1	2025-06-16 18:15:00	2025-06-16 15:45:00	Bihar	Kolkata	Vistara	178	2 hrs 30 min	4000			21B	20	
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	47	1	2025-06-16 17:25:00	2025-06-16 14:25:00	Mumbai	New Delhi	IndiGo	180	2 hours	4500	issue	30		20	
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	46	1	2025-06-13 17:08:00	2025-06-13 15:08:00	Assam	Mumbai	IndiGo	180	2 hours	3000				20	
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	45	1	2025-06-12 20:00:00	2025-06-12 18:30:00	Kerala	Mumbai	IndiGo	180	1 hrs 30 mins	0				18	18
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	44	1	2025-06-12 22:30:00	2025-06-12 20:30:00	New Delhi	Mumbai	IndiGo	180	2 hours	5000				20	
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	43	1	2025-06-12 22:00:00	2025-06-12 20:00:00	Kashmir	Mumbai	Vistara	177	2 hrs & 30 mins	8000			21C	20	
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	42	1	2025-06-11 16:37:00	2025-06-11 14:43:00	Goa	Mumbai	Indigo	300	2 hours	300				20	
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	41	1	2025-06-09 13:00:00	2025-06-09 11:00:00	Goa	Delhi	Indigo	300	2 hours	4700				18	18
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	40	1	2025-06-06 18:20:00	2025-06-06 17:40:00	Handwar	Delhi	SkyWay	350	40 mins	1500				20	
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	49	1	2025-06-16 14:00:00	2025-06-16 13:58:00	NARK	EARTH	YAMACHA REDA	-2	2 MIN	0 dep			21D	20	

Check all With selected Edit Copy Delete Export

Show all Number of rows: 25 Filter rows: Search this table Sort by key: admin_id (ASC)

Query results operations

Print Copy to clipboard Export Display chart Create view

phpMyAdmin

Server: 127.0.0.1 Database: ofbms_db Table: ticket

Showing rows 0 - 8 (9 total, Query took 0.0003 seconds.)

SELECT * FROM `ticket`

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all Number of rows: 25 Filter rows: Search this table Sort by key: None

Extra options

	ticket_id	passenger_id	flight_id	user_id	seat_no	cost	class
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	75	1	41	8	1A	7050	B
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	77	1	43	8	21A	16000	E
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	79	5	43	8	21C	8000	E
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	80	1	45	8	1A	0	B
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	81	7	45	8	1B	0	B
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	82	1	48	11	21A	4000	E
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	83	9	48	11	21B	4000	E
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	84	1	49	11	21A	0	E
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	85	2	49	11	21B	0	E

Check all With selected Edit Copy Delete Export

Show all Number of rows: 25 Filter rows: Search this table Sort by key: None

Query results operations

Print Copy to clipboard Export Display chart Create view

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Label: ☐ Let every user access this bookmark

localhost/phpmyadmin/index.php?route=/sql&pos=0&db=ofbms_db&table=passenger_profile