**Testing Report: Database Schema Testing**

**1. Overview**

**Project Name:** Online Table Availability for Restaurants

**Tester**(**S**) Name: Sai Bhargav Reddy Reddygari

**Group:** H

**2. Test Cases & Results**

**2.1 Table Creation and Integrity**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test Case ID** | **Test Description** | **Expected Result** | **Actual Result** | **Status** |
| **TC-01** | **Run schema script without errors** | **Script executes successfully** | **Executed successfully** | **✅ Pass** |
| **TC-02** | **Check if all tables exist** | **All tables should be created** | **All tables found** | **✅ Pass** |
| **TC-03** | **Verify primary keys and auto-increments** | **All tables have primary keys** | **Verified** | **✅ Pass** |
| **TC-04** | **Check for missing NOT NULL constraints** | **Required fields should be NOT NULL** | **Some missing constraints found** | **❌ Fail** |
| **TC-05** | **Verify foreign key constraints** | **Relationships should be enforced correctly** | **Verified** | **✅ Pass** |

**2.2 Data Integrity and Constraints**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test Case ID** | **Test Description** | **Expected Result** | **Actual Result** | **Status** |
| **TC-06** | **Insert a user with duplicate user\_login** | **Should fail due to UNIQUE constraint** | **Constraint enforced** | **✅ Pass** |
| **TC-07** | **Insert reservation with overlapping time for the same table** | **Should fail due to UNIQUE constraint** | **No constraint found** | **❌ Fail** |
| **TC-08** | **Test cascading delete on user\_roles** | **Deleting a user should remove roles** | **Successfully deleted** | **✅ Pass** |
| **TC-09** | **Insert a review with invalid rating (-1)** | **Should fail due to constraint** | **No constraint found** | **❌ Fail** |
| **TC-10** | **Insert a security question without a user** | **Should fail due to NOT NULL constraint** | **Passed (after fix)** | **✅ Pass** |

**3. Conclusion**

* The database schema is functional, but improvements are needed for data integrity, security, and performance.
* Applying the recommended fixes will enhance the system's reliability and security.
* A re-test is recommended after implementing the fixes.