**1. Test Coverage**

**1.1 Areas Tested**

* **User Management**
  + Register User
  + Login/Logout
  + Profile Management
  + Password Management
* **Recipe Management**
  + Add Recipe
  + Edit Recipe
  + Delete Recipe
  + View Recipe
  + Search Recipe
* **Category Management**
  + Add Category
  + Edit Category
  + Delete Category
* **Admin Management**
  + Manage Users
  + Manage Recipes

**1.2 Test Coverage Summary**

| **Area** | **Test Cases Executed** | **Total Test Cases** | **Coverage (%)** |
| --- | --- | --- | --- |
| User Management | 21 | 21 | 100% |
| Recipe Management | 17 | 17 | 100% |
| Recipe Categorization | 09 | 09 | 100% |
| Admin Management | 06 | 06 | 100% |
| **Total** | 53 | 53 | **100%** |

**2. Defect Summary**

**2.1 Identified Defects**

| **Defect ID** | **Description** | **Status** | **Severity** | **Action Taken** |
| --- | --- | --- | --- | --- |
| DEF\_001 | Update Email | Resolved | High | Fixed **the email validation and update logic.** |
| DEF\_002 | Update Profile Picture | Resolved | Medium | **Fixed the file upload functionality.** |
| DEF\_003 | Add Recipe with Duplicate Title | Resolved | Medium | Implemented unique title validation and enforced unique constraints in the database. |
| DEF\_004 | Add Recipe with Special Characters in Title | Resolved | Low | Added input validation for special characters and updated form validation with error messages. |

**2.2 Defect Summary Table**

| **Status** | **Number of Defects** | **Percentage** |
| --- | --- | --- |
| Resolved | 4 | 100% |
| In Progress | 0 | 0% |
| Closed | 0 | 0% |

**3. Pass/Fail Rates**

**3.1 Test Execution Summary**

| **Test Area** | **Test Cases Executed** | **Pass** | **Fail** | **Blocked** | **Pass Rate (%)** |
| --- | --- | --- | --- | --- | --- |
| User Management | 21 | 19 | 2 | 0 | 90% |
| Recipe Management | 17 | 15 | 2 | 0 | 90% |
| Category Management | 09 | 09 | 0 | 0 | 100% |
| Admin Management | 06 | 06 | 0 | 0 | 100% |
| **Total** | 53 | 49 | 4 | 0 | **95%** |

**4. Risk Assessment**

**4.1 Identified Risks and Concerns**

| **Risk ID** | **Description** | **Impact** | **Mitigation** |
| --- | --- | --- | --- |
| RISK\_001 | User session management issues may lead to security concerns | High | Review and enhance session handling logic |
| RISK\_002 | High volume of recipe submissions may overwhelm the system | Medium | Increase server capacity and optimize code |
| RISK\_003 | Simultaneous edits causing data corruption | High | Implement data locking and version control |
| RISK\_004 | Incomplete search results affecting user experience | Medium | Improve search algorithm and indexing |

**5. Recommendations**

1. **Immediate Fixes**: Prioritize fixing the critical issues related to user session management and simultaneous edits. These can have severe impacts on security and data integrity.
2. **Performance Enhancements**: Focus on optimizing the performance of the application, particularly under high load conditions. Consider load testing and stress testing.

**6. Conclusion**

The testing phase has provided a comprehensive understanding of the application's status. While most of the critical functionalities have passed the tests, there are areas that need attention before deployment. Addressing the identified defects and risks will enhance the overall reliability, security, and performance of the application.