**Para Bank & Restful Booker Project**

**Software Requirements Specification**

**1.1**

**3/7/2025**

**Prepared for**

parabank.com

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1. **Introduction**This document serves as the Software Requirements Specification (SRS) for the testing of Para Bank and Restful Booker. It defines the scope, objectives, and features to be tested.
   1. **Purpose**The purpose of this document is to outline the testing plan for

**Para Bank** and **Restful Booker** to ensure their functionality, reliability, and security.

* **Para Bank** will be tested for its customer-related features, including account management, transactions, and fund transfers.
* **Restful Booker** will be tested exclusively through its **API**, focusing on endpoints for booking creation, modification, deletion, and authentication.
  1. **Scope  
     This testing project covers:  
     1.2.1 Para Bank Functional Testing:**
* Customer login and authentication
* Account creation, balance inquiry, and fund transfers
* Transaction history validation
* Error handling and UI responsiveness

**1.2.2 Restful Booker API Testing:**

* Endpoint validation for booking management (Create, Read, Update, Delete)
* Authentication testing with API tokens
* Negative testing for invalid requests
* Performance and security checks

1. **Specific Requirements**

The Para Bank has 2 roles

1. Admin
2. Customer

**2.1** Following features / modules will be available to these 2 different roles:

|  |  |
| --- | --- |
| **Admin** | **Customer** |
| Database | Open New Account |
| Data Access Mode | Accounts Overview |
| Web Service | Transfer Funds |
| Application Settings | Bill Pay |
| Accounts Overview | Find Transactions |
|  | Update Contact Info |
|  | Request Loan |
|  | Log in / Log out |

**2.2** Description of the modules

|  |  |  |
| --- | --- | --- |
| **Module Name** | **Applicable Roles** | **Description** |
| Database | Admin | **Admin:** Admin caninitialize and clear database. |
| JMS Service | Admin | **Admin:** Admin can start or stop the service. |
| Data Access Mode | Admin | **Admin:** Admin can select connection mode (SOAP, REST (XML/JSON), JDBC). |
| Web Service | Admin | **Admin:** Admin can select the website service [WSDL | WADL | OpenAPI], set the SOAP Endpoint and REST Endpoint. Also can set an Endpoint to the LoanProcessor Service. |
| Application Settings “Configure account and loan settings” | Admin | **Admin:** Admin can set the initial and minimum balance amount.  Also, admin can change:   * the Loan Provider (Web Service, JMS, Local). * Loan Processor (Available Funds, Down Payment, Combined).   And set the Threshold percentage. |
| Accounts Overview | Customer | **Customer:** Customer can see his information |
| Open New Account | Customer | **Customer:** Customer can open new account |
| Transfer Funds | Customer | **Customer:** Customer can transfer funds |
| Bill Pay | Customer | **Customer:** Customer can bill pay |
| Update Contact Info | Customer | **Customer:** Customer can update his contact information |
| Request Loan | Customer | **Customer:** Customer can request loan |
| Log in / Log out | Customer | **Customer:** Customer can log in and log out |

* 1. **Front End Details**

This section describes the Front end of **Para Bank**.

It also lists a few use cases to describe the functioning of the system.  
 Following is a list of module wise fields  
  
  
**Open New Account**

* Account type
* Deposited amount

**Transfer Funds**

* Amount of money
* From account no
* To account no

**Bill Pay**

* Payee name
* Address
* City
* State
* Zip code
* Phone
* Account no
* Verify Account
* Amount
* From account no

**Find Transactions**

* Account no
* Transaction ID
* Date
* Date Range
* Between
* And
* Amount

**Update Contact Info**

* First name
* Last name
* Address
* City
* State
* Zip code
* Phone

**Request Loan**

* Loan amount
* Down payment
* From account no

**3.2 Technical Requirements:**

**Personal Information**

**First Name**:

**T1.** Numbers are not allowed.

**T2.** Special characters are not allowed.

**T3.** Must not be blank.

**T4.** First character cannot have space.

**Last Name**:

**T5.** Numbers are not allowed.

**T6.** Special characters are not allowed.

**T7.** Must not be blank.

**T8.** First character cannot have space.

**Address**:

**T9.** Must not be blank.

**T10.** First character cannot have space.

**T11.** Special characters are not allowed.

**City**:

**T12.** Special characters are not allowed.

**T13.** Must not be blank.

**State**:

**T14.** Numbers are not allowed.

**T15.** Must not be blank.

**T16.** Special characters are not allowed.

**Zip Code**:

**T17.** Must be a 5-digit number (e.g., 12345).

**T18.** Must not be blank.

**T19.** Must not contain letters or special characters.

**Phone #**:

**T20.** Characters are not allowed.

**T21.** Must not contain special characters (except hyphens).

**T22.** Must not be blank.

**SSN**:

**T23.** Must be in the format: XXX-XX-XXXX (e.g., 123-45-6789).

**T24.** Must not contain letters or special characters (except hyphens).

**T25.** Must not be blank.

**Open New Account**

**Account Type Selection:**

**T26.** The user must select an account type before proceeding.

**T27.** Two account types must be available

* Checking Account
* Saving Account

**T28.** The selected account type determines the required fields during registration.

**T29.** The system must store the selected account type in the database.

**T30.** The selection cannot be left blank.

**Transfer Funds**

**Amount of Money**:

* 1. Must be a numeric value.
  2. Must be greater than zero.

**From Account No**:

* 1. Must be selected.
  2. Must be an exist account number.

**To Account No**:

* 1. Must be selected.
  2. Must be an exist account number.

**Bill Pay**

**Payee Name**:

**T37.** Numbers are not allowed.

**T38.** Special characters are not allowed.

**T39.** Must not be blank.

**Address**:

**T40.** Must not be blank.

**T41.** First character cannot have space.

**T42.** Special characters are not allowed.

**City**:

**T43.** Special characters are not allowed.

**T44.** Must not be blank.

**State**:

**T45.** Numbers are not allowed.

**T46.** Must not be blank.

**T47.** Special characters are not allowed.

**Zip Code**:

**T48.** Must be a 5-digit number (e.g., 12345).

**T49.** Must not contain letters or special characters.

**Phone**:

**T50.** Characters are not allowed.

**T51.** Must not contain special characters (except hyphens).

**T52.** Must not be blank.

**Account No**:

**T53.** Must not be blank.

**T54.** Must be a valid account number.

**Verify Account**:

**T55.** Must match the account number provided.

**Amount**:

**T56.** Must be a numeric value.

**T57.** Must be greater than zero.

**From Account No**:

**T58.** Must not be blank.

**T59.** Must be a valid account number.

**Find Transactions**

**Transaction ID**:

**T60.** Must not be blank.

**T61.** Must be a valid transaction ID.

**T62.** Must not contain characters or special characters.

**Date**:

**T63.** Must be in the format: MM/DD/YYYY.

**T64.** Must be a valid date.

**Date Range**:

**Between**:

**T65.** Must be in the format: MM/DD/YYYY.

**T66.** Must be a valid date.

**And**

**T67.** Must be in the format: MM/DD/YYYY.

**T68.** Must be a valid date.

**Amount**:

**T69.** Must be a numeric value.

**T70.** Must be greater than zero.

**Update Contact Info**

**First Name**:

**T71.** Numbers are not allowed.

**T72.** Special characters are not allowed.

**T73.** Must not be blank.

**T74.** First character cannot have space.

**Last Name**:

**T75.** Numbers are not allowed.

**T76.** Special characters are not allowed.

**T77.** Must not be blank.

**T78.** First character cannot have space.

**Address**:

**T79.** Must not be blank.

**T80.** First character cannot have space.

**T81.** Special characters are not allowed.

**City**:

**T82.** Special characters are not allowed.

**T83.** Must not be blank.

**T84.** First character cannot have space.

**State**:

**T85.** Numbers are not allowed.

**T86.** Must not be blank.

**T87.** Special characters are not allowed.

**T88.** First character cannot have space.

**Zip Code**:

**T89.** Must be a 5-digit number (e.g., 12345).

**T90.** Must not contain letters or special characters.

**Phone**:

**T91.** Characters are not allowed.

**T92.** Must not contain special characters (except hyphens).

**T93.** Must not be blank.

**Request Loan**

**Loan Amount**:

**T94.** Must be a numeric value.

**T95.** Must be greater than zero.

**Down Payment**:

**T96.** Must be a numeric value.

**T97.** Must be greater than or equal to zero.

**From Account No**:

**T98.** Must not be blank.

**T99.** Must be a valid account number.

**Customer Care**

**Name Field:**  
 T100. Must not be blank.

1. Numbers are not allowed.
2. Special characters are not allowed.
3. First character cannot be a space.

**Email Field:**

1. Must not be blank.
2. Must be a valid email format (e.g., user@example.com).

**Phone Field:**

1. Must not be blank.
2. Must contain only numbers.
3. Must be at least 10 digits.

**Message Field:**

**T109.** Must not be blank.  
 **T110.** Must allow at least 10 characters.  
 **T111.** Maximum length should not exceed 500 characters.

**Register Page:**

**First Name**:

**T112.** Numbers are not allowed.

**T113.** Special characters are not allowed.

**T114.** Must not be blank.

**T115.** First character cannot have space.

**Last Name**:

**T116.** Numbers are not allowed.

**T117.** Special characters are not allowed.

**T118.** Must not be blank.

**T119.** First character cannot have space.

**Address**:

**T120.** Must not be blank.

**T121.** First character cannot have space.

**T122.** Special characters are not allowed.

**City**:

**T123.** Special characters are not allowed.

**T124.** Must not be blank.

**State**:

**T125.** Numbers are not allowed.

**T126.** Must not be blank.

**T127.** Special characters are not allowed.

**Zip Code**:

**T128.** Must be a 5-digit number (e.g., 12345).

**T129.** Must not be blank.

**T130.** Must not contain letters or special characters.

**Phone #**:

**T131.** Characters are not allowed.

**T132.** Must not contain special characters (except hyphens).

**T133.** Must not be blank.

**Account Credentials:**

**Username:**  
**T134.** Must not be blank.  
**T135.** Must be unique.  
**T136.** Minimum length is 6 characters.  
**T137.** Maximum length is 20 characters.  
**T138.** Special characters are not allowed.

**Password:**  
**T139.** Must not be blank.  
**T140.** Minimum length is 8 characters.  
**T141.** Maximum length is 20 characters.  
**T142.** Must contain at least one uppercase letter.  
**T143.** Must contain at least one lowercase letter.  
**T144.** Must contain at least one number.  
**T145.** Must contain at least one special character .

**Confirm Password:**  
**T146**. Must match the entered password.

**Customer Care**

**Name Field:**  
**T147.** Must not be blank.  
**T148.** Numbers are not allowed.  
**T149.** Special characters are not allowed.  
**T150.** First character cannot be a space.

**Email Field:**  
**T151.** Must not be blank.  
**T152.** Must be a valid email format (e.g., user@example.com).

**Phone Field:**  
**T153.** Must not be blank.  
**T154.** Must contain only numbers.  
**T155.** Must be at least 10 digits.

**Message Field:**

**T156.** Must not be blank.  
**T157.** Must allow at least 10 characters.  
**T158.** Maximum length should not exceed 500 characters.

**4.1 Functional Validation:**

**Balance Enquiry**

**F1 (Manager):** Enter a valid account number → Balance is **displayed.**

**F2 (Manager):** Enter an invalid account number → Errormessage is displayed.

**F3 (Customer):** Enter a valid account number associated withthe customer → Balance is displayed.

**F4 (Customer**): Enter an account number that does not belong to the customer → Error message is displayed**.**

**Fund Transfer**

**F5 (Manager):** Enter a valid source and destination account → Transfer is successful.

**F6 (Manager):** Enter an invalid source or destination account → Error message is displayed.

**F7 (Manager):** Enter a valid source account with insufficient funds → Error message is displayed.

**F8 (Manager**): Enter a source account that does not belong to the manager → Error message is displayed.

**F9 (Customer):** Enter a valid source and destination account → Transfer is successful.

**F10 (Customer):** Enter the same source and destination account → Error message is displayed.

**F11 (Customer):** Enter a valid source account with insufficient funds → Error message is displayed**.**

**F12 (Customer):** Enter a source account that does not belongto the customer → Error message is displayed.

**Withdrawal**

**F13 (Manager):** Enter a valid source account with sufficient funds → Withdrawal is successful.

**F14 (Manager):** Enter an invalid source account → Error message is displayed.

**F15 (Manager):** Enter a source account with insufficient funds → Error message is displayed.

**F16 (Customer):** Enter a valid source account with sufficient funds → Withdrawal is successful**.**

**F17 (Customer):** Enter an invalid source account → Error message is displayed.

**F18 (Customer):** Enter a source account with insufficient funds → Error message is displayed.

**Deposit**

**F19 (Manager):** Enter a valid destination account → Deposit is successful.

**F20 (Manager):** Enter an invalid destination account → Error message is displayed.

**F21 (Customer):** Enter a valid destination account → Deposit is successful.

**F22 (Customer):** Enter an invalid destination account → Error message is displayed.

**Edit Account**

**F29 (Manager):** Enter a valid account number → Account details are updated.

**F30 (Manager):** Enter an invalid account number → Error message is displayed.

**New Account**

**F31 (Manager):** Enter a valid customer ID with sufficient initial deposit → New account is created.

**F32 (Manager):** Enter an invalid customer ID → Error message is displayed.

**F33 (Manager):** Enter an initial deposit lower than the required minimum → Error message is displayed.

**New Customer**

**F34 (Manager):** Enter a unique email and valid details → Customer is registered.

**F35 (Manager):** Enter an email that already exists → Error message is displayed.

**Edit Customer**

**F36 (Manager):** Enter a valid customer ID → Customer details are updated.

**F37 (Manager):** Enter an invalid customer ID → Error message is displayed.

**F38 (Manager):** Enter an email that already exists → Error message is displayed.

**Transaction History**

**F43 (Manager):** Enter a valid account number → Transaction history is displayed.

**F44 (Manager):** Enter an invalid account number → Error message is displayed.

**F45 (Manager):** Enter an account number with no transactions → Error message is displayed.

**F46 (Customer):** Enter a valid account number → Transaction history is displayed.

**F47 (Customer):** Enter an invalid account number → Error message is displayed.

**F48 (Customer):** Enter an account with no transactions → Error message is displayed.

**4.2 Inverse Requirements**

Nil.

**4.3 Design Constraints**Some users of Para Bank and Restful Booker may not have advanced technical knowledge. Therefore, the system must be user-friendly, intuitive, and easy to navigate to ensure a smooth experience for all users.

**4.4 Logical Database Requirements**

Nil.

**4.5 Other Requirements**

Nil.

**5. Analysis Models**

Nil

**6. Conclusion**

This document outlines the requirements and validation rules for testing Para Bank and Restful Booker. It ensures robust test coverage to verify functionality, security, and reliability for both platforms.