Software Requirements Specifications

Guru99 Banking Website (GBW)

SRS Reference No.	:	SRS-180816-01
Version No.	:	0.2
Release Date	:	8/22/2018

Prepared By	Date
Arnel L. Bagabagon Jr. Business Analyst/QA Engineer	8/18/2018

Approved By	Date
Sam Patrick Lead QA Engineer	8/18/2018

Co – Authors

Authored By	Affected System	Signature	Date
N/A			

Revision Management

Revision No	Date	Changed By	Change Details
0.1	8/16/2018	Arnel L. Bagabagon Jr.	• Initial SRS Draft
0.2	8/18/2018	Arnel L. Bagabagon Jr.	• Corrected requirements pertaining to Manager and Customer Users Maintenance. • Correct consistency issue in defined error messages for mandatory fields at Functional Requirements and Use Cases.

Approvals

Name	Role / Position	Signature	Date	Remarks
Krishna Sungta	Project Sponsor		8/18/2018	
Nick Price	Lead Software Engineer		8/18/2018	
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1 Introduction

1.1 Project Background

Currently, there is no available banking system for use of the Guru99 Banking Division personnel and their customers. Process is manual which leads to several human errors in customer records and their respective transactions. This project aims to develop an automated banking system with core banking functionalities and customer record-keeping capabilities so that such manual errors will be eliminated. Over a period of time, new functionalities will be provided to the system.

1.2 Objectives

Develop and implement an automated banking system for Guru99 Banking Division personnel and their customers so that errors resulting from manual processes will be eliminated.

1.3 Scope

1.3.1 Inclusions

- As mentioned earlier, the system will include the core banking functionalities and features namely the following:
    - Balance Inquiry
    - Deposit
    - Withdrawal
    - Fund Transfer
- Module for recording Customer information and their respective Accounts.
- Usable reports where users can inquire information about their transactions.
- Features to allow access of the system to authorized users only.
- The system is only expected to run properly at Google Chrome Web Browser. Compatibility with other Web Browsers such as Mozilla Firefox, Microsoft Edge, Opera, etc. will not be checked during the development of this project.

1.3.2 Exclusions

- Compatibility of the system with Web Browsers such as Mozilla Firefox, Microsoft Edge, Opera, etc.
- Non-functional capabilities of the system such as Performance, Endurance, Stress, etc.

1.4 Assumptions

- All modules contain a <Reset> Button but there are no specifications on what will happen if user would click on the button. It was then assumed that its functionality is to just clear values of the fields if there are any values entered or selected at them.
- User with Manager Role will only be able to perform transactions or produce reports of those Customers/Accounts associated with them. Association is achieved by having the User with the Manager Role adding the Customer to database records which in turn associates the user as well with all accounts added for the Customer.
- User with Customer Role will only be able to perform transactions or produce reports of those Accounts added to them.
- The requirement, "E-Mail is invalid!" for the New Customer module is assumed to be a validation of the E-Mail entered for the customer being added to the system. The validation will include checking the customer database records if the E-Mail is already added to an existing customer. The validation will be different with the Update Customer module: it will not include the current customer record being updated from the records to be checked.
- Transaction records of deleted Customers and Accounts will be left orphaned instead of being deleted once Customer/Account were deleted via Delete Customer and Delete Account modules respectively.

- The "Initial Deposit" Field will not be editable at the Update Account module. It is only practical to include the field at the New Account module only.
- Customized Statement date filters are optional. If the "From Date" is not set, filter will start at the very first transaction performed by the account. If the "To Date" is not set, filter will end at the very last transaction performed by the account.

1.5 Glossary

Terms Used	Definition
Manager	This refers to the internal end-users of the Guru99 Banking Website. This does not refer to a Managerial position from the Bank Division and only refers to a role that “manages” the system.
Customer	This refers to the external end-users or customers of the Guru99 Banking Website encoded by the managers from the Bank Division.
Mini Statement	Report that will include the last five (5) transactions performed by a bank account.
Payer’s Account Number	Source account number for the Fund Transfer Transaction module where the amount to be transferred will be deducted.
Payee’s Account Number	Destination account number for the Fund Transfer Transaction module where the amount to be transferred will be added.

1.6 References

Document Ref. No.	Document Name
N/A	

1.7 Intended Audience

Group / Division
Bank Division

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2 Detailed Requirements

2.1 Functional Requirements

<table>
<tr><th>Requirement ID</th><th>RQ-01</th></tr>
<tr><td>Title</td><td>Create a Login Module</td></tr>
<tr><td>User Story</td><td>As a system owner / admin /bank personnel / customer, I need my banking website to have a Login Screen so that only authorized users can have access to the website.</td></tr>
<tr><td>Priority</td><td>High</td></tr>
<tr><td>Severity</td><td>Significant</td></tr>
<tr><td>User/s</td><td>Bank Division / Customers</td></tr>
<tr><td>Front-end Requirement/s</td><td>The User Interface should include the following:
<table>
<tr><th>#</th><th>Name</th><th>Type</th></tr>
<tr><td>1</td><td>User ID</td><td>Text Box</td></tr>
<tr><td>2</td><td>Password</td><td>Text Box</td></tr>
<tr><td>3</td><td>Login</td><td>Button</td></tr>
<tr><td>4</td><td>Reset</td><td>Button</td></tr>
</table></td></tr>
<tr><td>Functional Requirement/s</td><td>1. If User ID is not found from records, a “User ID not found!” error message should be displayed and user will not be given access to the website.
2. If Password entered is not correct, an “Incorrect Password” error message should be displayed and user will not be given access to the website,
3. If either or both “User ID” and “Password” fields were left blank after clicking <Login> Button, a “User ID/Password field was left blank!” error message should be displayed. These fields are mandatory.
4. If no validation issues are found, user will be given access to the website and depending on the User Role, be presented with modules the user has predefined access to.
5. Clicking the <Reset> Button would clear all fields from the Login Screen.</td></tr>
<tr><td>Reference/s</td><td>N/A</td></tr>
</table>

<table>
<tr><th>Requirement ID</th><th>RQ-02</th></tr>
<tr><td>Title</td><td>Create a Manager User Registration Module</td></tr>
<tr><td>User Story</td><td>As a system owner / admin / bank personnel, I need to have a module where I could provide user access to the website so that I could control who should be given access to the website content.</td></tr>
<tr><td>Priority</td><td>High</td></tr>
<tr><td>Severity</td><td>Severe</td></tr>
<tr><td>User/s</td><td>Bank Division</td></tr>
<tr><td>Front-end Requirement/s</td><td>The User Interface should include the following:
<table>
<tr><th>#</th><th>Name</th><th>Type</th></tr>
<tr><td>1</td><td>E-Mail</td><td>Text Box</td></tr>
</table></td></tr>
<tr><td>Functional Requirement/s</td><td>1. If “E-Mail” is left blank, an “E-Mail field was left blank!” error message should be displayed. This field is mandatory.
2. If E-Mail Format entered at the “E-Mail” is not correct, an “E-Mail Format is invalid!” error message should be displayed. System should be able to identify if the E-Mail entered has a “@” Symbol and the suffix “.com” or “.co.uk”.
3. If no validation issues are found, system will save the E-Mail record, automatically generate a User ID and Password and display this information to the user.</td></tr>
<tr><td>Reference/s</td><td>N/A</td></tr>
</table>

<table>
<tr><th>Requirement ID</th><th>RQ-03</th></tr>
<tr><td>Title</td><td>Create a Change Password Module</td></tr>
<tr><td>User Story</td><td>As a system owner / admin / bank personnel / customer, I need a feature where we can change passwords of users registered on the system as an added security feature for the website.</td></tr>
<tr><td>Priority</td><td>High</td></tr>
<tr><td>Severity</td><td>Severe</td></tr>
<tr><td>User/s</td><td>Bank Division / Customers</td></tr>
<tr><td>Front-end Requirement/s</td><td>The User Interface should include the following:
<table>
<tr><th>#</th><th>Name</th><th>Type</th></tr>
<tr><td>1</td><td>Old Password</td><td>Text Box</td></tr>
<tr><td>2</td><td>New Password</td><td>Text Box</td></tr>
<tr><td>3</td><td>Confirm Password</td><td>Text Box</td></tr>
<tr><td>4</td><td>Submit</td><td>Button</td></tr>
<tr><td>5</td><td>Reset</td><td>Button</td></tr>
</table></td></tr>
<tr><td>Functional Requirement/s</td><td>1. This module is accessible to all User Roles.
2. If password entered at the “Old Password” Field is incorrect, an “Incorrect Password!” error message should be displayed and password will not be changed.
3. If old and new passwords entered are the same, a "Old and New Passwords entered are the same!” error message should be displayed.
4. If passwords entered on both “New Password” and “Confirm Password” Fields are not the same, a “Password does not match!” error message should be displayed and password will not be changed.
5. If New Password entered does not contain at least one (1) numeric and one (1) special character, an error message specifying this rule should be displayed.
6. If all or one of the fields is left blank, a “<Field Name> field was left blank!” error message should be displayed. These fields are mandatory.
a. Old Password
b. New Password
c. Confirm Password
7. If no validation issues are found, user’s password will be changed to the new password.
8. Users should only be able to change their own password.
9. Clicking the <Reset> Button would clear all fields from the Change Password Module.</td></tr>
<tr><td>Reference/s</td><td>N/A</td></tr>
</table>

Requirement ID	RQ-04
Title	Create a New Customer Module
User Story	As bank personnel, I need to have a feature in the website where I could add new customers so I could record customer information easily and conveniently to the system.
Priority	High
Severity	Significant
User/s	Bank Division

<table>
<tr><th>Requirement ID</th><th>RQ-04</th></tr>
<tr><td>Front-end Requirement/s</td><td>The User Interface should include the following:
<table>
<tr><th>#</th><th>Name</th><th>Type</th></tr>
<tr><td>1</td><td>Customer Name</td><td>Text Box</td></tr>
<tr><td>2</td><td>Gender</td><td>Text Box</td></tr>
<tr><td>3</td><td>Date of Birth</td><td>Date</td></tr>
<tr><td>4</td><td>Address</td><td>Text Box</td></tr>
<tr><td>5</td><td>City</td><td>Text Box</td></tr>
<tr><td>6</td><td>State</td><td>Text Box</td></tr>
<tr><td>7</td><td>PIN</td><td>Text Box</td></tr>
<tr><td>8</td><td>Telephone Number</td><td>Text Box</td></tr>
<tr><td>9</td><td>E-Mail</td><td>Text Box</td></tr>
<tr><td>10</td><td>Password</td><td>Text Box</td></tr>
<tr><td>11</td><td>Submit</td><td>Button</td></tr>
<tr><td>12</td><td>Reset</td><td>Button</td></tr>
</table></td></tr>
<tr><td>Functional Requirement/s</td><td>1. This module is accessible only to a “Manager” User Role.
2. If the following fields are left blank, a “<Field Name> field was left blank!” error message should be displayed. These fields are mandatory and customer record will not be saved.
a. Customer Name
b. Address
c. City
d. State
e. PIN
f. Telephone Number
g. E-Mail
h. Password
3. If alphabetical characters are entered at the following fields, an error message should be displayed specifying that such characters are not allowed and customer record will not be saved.
a. PIN
b. Telephone Number
4. If numeric characters are entered at the following fields, an error message should be displayed specifying that such characters are not allowed and customer record will not be saved.
a. Customer Name
b. City
c. State
5. If special characters are entered at the following fields, an error message should be displayed specifying that such characters are not allowed and customer record will not be saved.
a. Customer Name
b. Address
c. City
d. State
e. PIN
f. Telephone Number
6. If first character of the following fields is a space, a “First Character must not be a space!” error message should be displayed and customer record will not be saved.
a. Customer Name
b. Address
c. City
d. State
e. PIN</td></tr>
</table>

<table>
<tr><th>Requirement ID</th><th>RQ-04</th></tr>
<tr><td></td><td>f. Telephone Number
g. E-Mail
h. Password
7. If “PIN” Field does not have 6 Digits, a “PIN must have 6 Digits!” error message should be displayed and customer record will not be saved.
8. If E-Mail entered already exists at the customer records, an “E-Mail already exists from records!” error message should be displayed.
9. If Password entered does not contain at least one (1) numeric and one (1) special character, an error message specifying this rule should be displayed
10. Users having Manager Role automatically associate themselves to the new customers they added and their respective accounts. They will be able to perform the following transactions to the customers they are associated with:
a. Balance Inquiry
b. Deposit
c. Withdrawal
d. Fund Transfer
e. Change Password
f. Mini Statement
g. Customized Statement
11. If no validation issues are found, system will generate a Customer ID for the customer and save all of the customer information entered.
12. Clicking the <Reset> Button would clear all fields from the New Customer Module.</td></tr>
<tr><td>Reference/s</td><td>N/A</td></tr>
</table>

<table>
<tr><th>Requirement ID</th><th>RQ-05</th></tr>
<tr><td>Title</td><td>Create an Update Customer Module</td></tr>
<tr><td>User Story</td><td>As a bank personnel, I need to have a feature in the website where I could update customer information so I could correct or modify customer information easily and conveniently from the system.</td></tr>
<tr><td>Priority</td><td>High</td></tr>
<tr><td>Severity</td><td>Significant</td></tr>
<tr><td>User/s</td><td>Bank Division</td></tr>
<tr><td>Front-end Requirement/s</td><td>The module has two (2) User Interfaces: Search Mode & Edit Mode.
Search Mode
<table>
<tr><th>#</th><th>Name</th><th>Type</th></tr>
<tr><td>1</td><td>Customer ID</td><td>Text Box</td></tr>
<tr><td>2</td><td>Submit</td><td>Button</td></tr>
<tr><td>3</td><td>Reset</td><td>Button</td></tr>
</table>
Edit Mode
<table>
<tr><th>#</th><th>Name</th><th>Type</th></tr>
<tr><td>1</td><td>Customer Name</td><td>Text Box</td></tr>
<tr><td>2</td><td>Gender</td><td>Text Box</td></tr>
<tr><td>3</td><td>Date of Birth</td><td>Date</td></tr>
<tr><td>4</td><td>Address</td><td>Text Box</td></tr>
<tr><td>5</td><td>City</td><td>Text Box</td></tr>
<tr><td>6</td><td>State</td><td>Text Box</td></tr>
<tr><td>7</td><td>PIN</td><td>Text Box</td></tr>
<tr><td>8</td><td>Telephone Number</td><td>Text Box</td></tr>
<tr><td>9</td><td>E-Mail</td><td>Text Box</td></tr>
<tr><td>10</td><td>Submit</td><td>Button</td></tr>
<tr><td>11</td><td>Reset</td><td>Button</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Requirement ID</th><th>RQ-05</th></tr>
<tr><td>Functional Requirement/s</td><td>1. This module is accessible only to a “Manager” User Role.
2. The following are the validations in Search Mode:
a. If “Customer ID” is left blank, a “Customer ID field was left blank!” error message should be displayed. This field is mandatory and customer search will not be processed.
b. If alphabetical and special characters are entered at the “Customer ID” field, an error message should be displayed specifying that such characters are not allowed and customer search will not be processed.
c. If first character of the “Customer ID” Field is a space, a “First Character must not be a space!” error message should be displayed and customer search will not be processed.
d. If no validation issues are found, system will search for the customer based on the Customer ID entered.
e. If no record of the customer was found based on the Customer ID, a “Customer not found!” error message should be displayed.
3. The following are the validations in Edit Mode:
a. The validations in Edit Mode for mandatory fields, allowed characters, first character as a space and PIN Digits are the same with RQ-05.
b. There will be a difference in E-Mail validation. If E-Mail was not changed and if E-Mail entered does not exist from customer records, the “E-Mail already exists from records!” error message will not be displayed.
c. If no validation issues are found, system will save the customer information changes.
4. If the user tries to update information of a Customer that is not associated with them, a “Customer not associated with the User!” error message should be displayed. Users can only update information on customers that are associated with them (See RQ-05).
5. Clicking the <Reset> Button would clear all fields from the Update Customer Module on either Search or Edit Mode.</td></tr>
<tr><td>Reference/s</td><td>N/A</td></tr>
</table>

<table>
<tr><th>Requirement ID</th><th>RQ-06</th></tr>
<tr><td>Title</td><td>Create a Delete Customer Module</td></tr>
<tr><td>User Story</td><td>As bank personnel, I need to have a feature in the website where I could delete customer record/s so I could remove customers easily and conveniently from the system that no longer have or have closed down their accounts.</td></tr>
<tr><td>Priority</td><td>High</td></tr>
<tr><td>Severity</td><td>Significant</td></tr>
<tr><td>User/s</td><td>Bank Division</td></tr>
<tr><td>Front-end Requirement/s</td><td>The User Interface should include the following:
<table>
<tr><th>#</th><th>Name</th><th>Type</th></tr>
<tr><td>1</td><td>Customer ID</td><td>Text Box</td></tr>
<tr><td>2</td><td>Submit</td><td>Button</td></tr>
<tr><td>3</td><td>Reset</td><td>Button</td></tr>
</table></td></tr>
</table>

<table>
<tr><th>Requirement ID</th><th>RQ-06</th></tr>
<tr><td>Functional Requirement/s</td><td>1. This module is accessible only to a “Manager” User Role.
2. If “Customer ID” is left blank, a “Customer ID field was left blank!” error message should be displayed. This field is mandatory.
3. If alphabetical and special characters are entered at the “Customer ID” field, an error message should be displayed specifying that such characters are not allowed.
4. If first character of the “Customer ID” Field is a space, a “First Character must not be a space!” error message should be displayed.
5. If no record of the customer was found based on the Customer ID, a “Customer not found!” error message should be displayed.
6. If accounts are still associated with the customer, an “Accounts are still associated with the Customer!” error message should be displayed and customer will not be deleted.
7. If no validation issues are found, system will delete the customer record based on the Customer ID entered.
8. If the user tries to delete a customer record that is not associated with them, a “Customer not associated with the User!” error message should be displayed and customer will not be deleted. Users can only delete customer records that are associated with them (See RQ-05).
9. Clicking the <Reset> Button would clear all fields from the Delete Customer Module.</td></tr>
<tr><td>Reference/s</td><td>N/A</td></tr>
</table>

<table>
<tr><th>Requirement ID</th><th>RQ-07</th></tr>
<tr><td>Title</td><td>Create a New Account Module</td></tr>
<tr><td>User Story</td><td>As bank personnel, I need to have a feature where new bank accounts can be added for a customer so I would do such task easily and conveniently.</td></tr>
<tr><td>Priority</td><td>High</td></tr>
<tr><td>Severity</td><td>Significant</td></tr>
<tr><td>User/s</td><td>Bank Division</td></tr>
<tr><td>Front-end Requirement/s</td><td>The User Interface should include the following:
<table>
<tr><th>#</th><th>Name</th><th>Type</th></tr>
<tr><td>1</td><td>Customer ID</td><td>Text Box</td></tr>
<tr><td>2</td><td>Account Type</td><td>Drop-down List</td></tr>
<tr><td>3</td><td>Initial Deposit</td><td>Text Box</td></tr>
<tr><td>4</td><td>Submit</td><td>Button</td></tr>
<tr><td>5</td><td>Reset</td><td>Button</td></tr>
</table></td></tr>
<tr><td>Functional Requirement/s</td><td>1. This module is accessible only to a “Manager” User Role.
2. The “Initial Deposit” Drop-down List will have the following options:
a. Savings
b. Current
3. If the following fields are left blank, a “<Field Name> field was left blank!” error message should be displayed. These fields are mandatory and account record will not be saved.
a. Customer ID
b. Account Type
4. If alphabetical and special characters are entered at the “Customer ID” field, an error message should be displayed specifying that such characters are not allowed and account record will not be saved.
5. If first character of the “Customer ID” Field is a space, a “First Character must not be a space!” error message should be displayed and account record will not be saved.</td></tr>
</table>

<table>
<tr><th>Requirement ID</th><th>RQ-07</th></tr>
<tr><td></td><td>
6. If initial deposit amount entered at “Initial Deposit” Field is less than 500, an “Initial Deposit is less than 500!” error message should be displayed and account record will not be saved.
7. If no record of the customer was found based on the Customer ID, a “Customer not found!” error message should be displayed.
8. Users having Manager Role automatically associate themselves to the new customers they added and their respective accounts. They will be able to perform the following transactions to the customers they are associated with:
a. Balance Inquiry
b. Deposit
c. Withdrawal
d. Fund Transfer
e. Change Password
f. Mini Statement
g. Customized Statement
9. If no validation issues are found, system will generate an Account Number for the customer’s account and save all of the account information entered. The initial deposit amount will be saved as a Deposit Transaction record (See RQ-12) for the New Account.
10. Clicking the <Reset> Button would clear all fields from the New Account Module.
</td></tr>
<tr><td>Reference/s</td><td>N/A</td></tr>
</table>

<table>
<tr><th>Requirement ID</th><th>RQ-08</th></tr>
<tr><td>Title</td><td>Create an Update Account Module</td></tr>
<tr><td>User Story</td><td>As bank personnel, I need to have a feature where I could modify existing bank account/s so I would be able to correct and update account information of customers.</td></tr>
<tr><td>Priority</td><td>High</td></tr>
<tr><td>Severity</td><td>Significant</td></tr>
<tr><td>User/s</td><td>Bank Division</td></tr>
<tr><td>Front-end Requirement/s</td><td>
The module has two (2) User Interfaces: Search Mode & Edit Mode.
Search Mode
<table>
<tr><th>#</th><th>Name</th><th>Type</th></tr>
<tr><td>1</td><td>Account Number</td><td>Text Box</td></tr>
<tr><td>2</td><td>Submit</td><td>Button</td></tr>
<tr><td>3</td><td>Reset</td><td>Button</td></tr>
</table>
Edit Mode
<table>
<tr><th>#</th><th>Name</th><th>Type</th></tr>
<tr><td>1</td><td>Customer ID</td><td>Text Box</td></tr>
<tr><td>2</td><td>Account Type</td><td>Drop-down List</td></tr>
<tr><td>3</td><td>Submit</td><td>Button</td></tr>
<tr><td>4</td><td>Reset</td><td>Button</td></tr>
</table>
</td></tr>
<tr><td>Functional Requirement/s</td><td>
1. This module is accessible only to a “Manager” User Role.
2. The following are the validations in Search Mode:
3. If “Account Number” is left blank, an “Account Number field was left blank!” error message should be displayed. This field is mandatory and account search will not be processed.
4. If alphabetical and special characters are entered at the “Account Number” field, an error message should be displayed specifying that such characters are not allowed and account search will not be processed.
</td></tr>
</table>

Requirement ID	RQ-08
	5. If no validation issues are found, system will search for the account based on the Account Number entered. 6. If no record of the account was found based on the Account Number, an “Account not found!” error message should be displayed. 7. The following are the validations in Edit Mode: 8. The validations in Edit Mode for mandatory fields, allowed characters, first character as a space and checking of the customer record are the same with RQ-08. 9. If no validation issues are found, system will save the customer information changes. 10. If the user tries to update information of an Account that is not associated with them, an “Account not associated with the User!” error message should be displayed. Users can only update information on accounts that are associated with them (See RQ-05 & RQ-08). 11. Clicking the <Reset> Button would clear all fields from the Update Account Module on either Search or Edit Mode.
Reference/s	N/A

Requirement ID	RQ-09
Title	Create an Delete Account Module
User Story	As bank personnel, I need to have a feature that deletes a customer's account so I would be able to remove account/s that was closed by customers.
Priority	High
Severity	Significant
User/s	Bank Division
Front-end Requirement/s	The User Interface should include the following: **#** | **Name** | **Type** 1 | Account Number | Text Box 2 | Submit | Button 3 | Reset | Button
Functional Requirement/s	1. This module is accessible only to a “Manager” User Role. 2. If “Account Number” is left blank, an “Account Number field was left blank!” error message should be displayed. This field is mandatory. 3. If alphabetical and special characters are entered at the “Account Number” field, an error message should be displayed specifying that such characters are not allowed. 4. If no validation issues are found, system will delete the account based on the Account Number entered. 5. If no record of the account was found based on the Account Number, an “Account not found!” error message should be displayed. 6. If the user tries to delete information of an Account that is not associated with them, an “Account not associated with the User!” error message should be displayed and account record will not be deleted. Users can only update information on accounts that are associated with them (See RQ-05 & RQ-08). 7. Clicking the <Reset> Button would clear all fields from the Delete Account Module.
Reference/s	N/A

<table>
<tr><th>Requirement ID</th><th>RQ-10</th></tr>
<tr><td>Title</td><td>Create a Balance Inquiry Module</td></tr>
<tr><td>User Story</td><td>As a bank personnel/customer, I need to have a balance inquiry feature at the website so I would be able to conveniently inquire the remaining balance of my bank account/s online.</td></tr>
<tr><td>Priority</td><td>High</td></tr>
<tr><td>Severity</td><td>Significant</td></tr>
<tr><td>User/s</td><td>Bank Division/Customer</td></tr>
<tr><td>Front-end Requirement/s</td><td>The User Interface should include the following:
<table>
<tr><th>#</th><th>Name</th><th>Type</th></tr>
<tr><td>1</td><td>Account Number</td><td>Text Box</td></tr>
<tr><td>2</td><td>Submit</td><td>Button</td></tr>
<tr><td>3</td><td>Reset</td><td>Button</td></tr>
</table></td></tr>
<tr><td>Functional Requirement/s</td><td>1. This module is accessible to all User Roles.
2. If Account Number entered is not found from the records, an “Account Number not found!” error message should be displayed.
3. If “Account Number” field is left blank, an “Account Number field was left blank!” error message should be displayed. This field is mandatory.
4. If alphabetical and special characters are entered at the “Account Number” field, an error message should be displayed specifying that such characters are not allowed.
5. If user tries to perform the transaction to an account not associated with them, an “Account not associated with the User!” error message should be displayed. Users can only perform the transaction on accounts that are associated with them (See RQ-05 & RQ-08).
6. If user has no accounts associated with them, a “No Accounts associated with the user!” error message should be displayed to the screen upon opening Balance Inquiry module.
7. If no validation issues are found, remaining balance of the Account specified will be displayed on the screen.
8. Clicking the <Reset> Button would clear all fields from the Balance Inquiry Transaction Module.</td></tr>
<tr><td>Reference/s</td><td>N/A</td></tr>
</table>

<table>
<tr><th>Requirement ID</th><th>RQ-11</th></tr>
<tr><td>Title</td><td>Create a Deposit Module</td></tr>
<tr><td>User Story</td><td>As a bank personnel, I need to have the website to have a Deposit Module so I would be able to perform Deposit Transactions to customer account/s.</td></tr>
<tr><td>Priority</td><td>High</td></tr>
<tr><td>Severity</td><td>Significant</td></tr>
<tr><td>User/s</td><td>Bank Division</td></tr>
<tr><td>Front-end Requirement/s</td><td>The User Interface should include the following:
<table>
<tr><th>#</th><th>Name</th><th>Type</th></tr>
<tr><td>1</td><td>Account Number</td><td>Text Box</td></tr>
<tr><td>2</td><td>Amount</td><td>Text Box</td></tr>
<tr><td>3</td><td>Description</td><td>Text Box</td></tr>
<tr><td>4</td><td>Submit</td><td>Button</td></tr>
<tr><td>5</td><td>Reset</td><td>Button</td></tr>
</table></td></tr>
<tr><td>Functional Requirement/s</td><td>1. This module is accessible only to a “Manager” User Role.
2. If Account Number entered is not found from the records, an “Account Number not found!” error message should be displayed.</td></tr>
</table>

<table>
<tr><th>Requirement ID</th><th>RQ-11</th></tr>
<tr><td></td><td>3. If the following fields are left blank, a “<Field Name> field was left blank!” error message should be displayed. These fields are mandatory.
a. Account Number
b. Amount
c. Description
4. If alphabetical and special characters are entered at the following fields, an error message should be displayed specifying that such characters are not allowed.
a. Account Number
b. Amount
5. If user tries to perform the transaction to an account not associated with them, an “Account not associated with the User!” error message should be displayed and deposit transaction will not be processed. Users can only perform the transaction on accounts that are associated with them (See RQ-05 & RQ-08).
6. If user has no accounts associated with them, a “No Accounts associated with the user!” error message should be displayed to the screen upon opening Deposit module.
7. If no validation issues are found, amount specified will be deposited to the Account specified.
8. Clicking the <Reset> Button would clear all fields from the Deposit Module.</td></tr>
<tr><td>Reference/s</td><td>N/A</td></tr>
</table>

<table>
<tr><th>Requirement ID</th><th>RQ-12</th></tr>
<tr><td>Title</td><td>Create a Withdraw Module</td></tr>
<tr><td>User Story</td><td>As a bank personnel, I need to have the website to have a Withdraw Module so I would be able to perform Withdraw Transactions to customer account/s.</td></tr>
<tr><td>Priority</td><td>High</td></tr>
<tr><td>Severity</td><td>Significant</td></tr>
<tr><td>User/s</td><td>Bank Division</td></tr>
<tr><td>Front-end Requirement/s</td><td>The User Interface should include the following:
<table>
<tr><th>#</th><th>Name</th><th>Type</th></tr>
<tr><td>1</td><td>Account Number</td><td>Text Box</td></tr>
<tr><td>2</td><td>Amount</td><td>Text Box</td></tr>
<tr><td>3</td><td>Description</td><td>Text Box</td></tr>
<tr><td>4</td><td>Submit</td><td>Button</td></tr>
<tr><td>5</td><td>Reset</td><td>Button</td></tr>
</table></td></tr>
<tr><td>Functional Requirement/s</td><td>1. This module is accessible only to a “Manager” User Role.
2. If Account Number entered is not found from the records, an “Account Number not found!” error message should be displayed.
3. If the following fields are left blank, a “<Field Name> field was left blank!” error message should be displayed. These fields are mandatory.
a. Account Number
b. Amount
c. Description
4. If alphabetical and special characters are entered at the following fields, an error message should be displayed specifying that such characters are not allowed.
a. Account Number
b. Amount
5. If Account has insufficient balance to perform the transaction, an “Insufficient Funds” error message should be displayed and transaction should not be processed.
6. If user tries to perform the transaction to an account not associated with them, an “Account not associated with the User!” error message should be displayed. Users</td></tr>
</table>

<table>
<tr><th>Requirement ID</th><th>RQ-12</th></tr>
<tr><td></td><td>can only perform the transaction on accounts that are associated with them (See RQ-05 & RQ-08).
7. If user has no accounts associated with them, a “No Accounts associated with the user!” error message should be displayed to the screen upon opening Deposit module.
8. If no validation issues are found, amount specified will be deposit/added to the Account specified.
9. Clicking the <Reset> Button would clear all fields from the Withdraw Module.</td></tr>
<tr><td>Reference/s</td><td>N/A</td></tr>
</table>

<table>
<tr><th>Requirement ID</th><th>RQ-13</th></tr>
<tr><td>Title</td><td>Create a Fund Transfer Module</td></tr>
<tr><td>User Story</td><td>As a bank personnel/customer, I need to have a fund transfer feature at the website so I would be able to conveniently transfer funds from my bank account/s to another online.</td></tr>
<tr><td>Priority</td><td>High</td></tr>
<tr><td>Severity</td><td>Significant</td></tr>
<tr><td>User/s</td><td>Bank Division/Customer</td></tr>
<tr><td>Front-end Requirement/s</td><td>The User Interface should include the following:
<table>
<tr><th>#</th><th>Name</th><th>Type</th></tr>
<tr><td>1</td><td>Payer’s Account Number</td><td>Text Box</td></tr>
<tr><td>2</td><td>Payee’s Account Number</td><td>Text Box</td></tr>
<tr><td>3</td><td>Amount</td><td>Text Box</td></tr>
<tr><td>4</td><td>Description</td><td>Text Box</td></tr>
<tr><td>5</td><td>Submit</td><td>Button</td></tr>
<tr><td>6</td><td>Reset</td><td>Button</td></tr>
</table></td></tr>
<tr><td>Functional Requirement/s</td><td>1. This module is accessible to all User Roles.
2. If Source or Destination Account Numbers entered are not found from the records, an “Account Number not found!” error message should be displayed and transaction should not be processed.
3. If Source or Destination Account Numbers entered are the same, a “Source and Destination Account Numbers are the same!” error message should be displayed and transaction should not be processed.
4. If Source Account has insufficient balance to perform the transaction, an “Insufficient Funds” error message should be displayed and transaction should not be processed.
5. If the following fields are left blank, a “<Field Name> field was left blank!” error message should be displayed. These fields are mandatory.
a. Payer’s Account Number
b. Payee’s Account Number
c. Amount
d. Description
6. If alphabetical and special characters are entered at the following fields, an error message should be displayed specifying that such characters are not allowed.
a. Payer’s Account Number
b. Payee’s Account Number
c. Amount
7. If user tries to set an account that is not associated with them as a Source Account for the transaction, an “Account not associated with the User” error message should be displayed. Users can only perform the transaction on accounts that are associated with them (See RQ-05 & RQ-08).</td></tr>
</table>

Requirement ID	RQ-13
	8. If user has no accounts associated with them, a “No Accounts associated with the user!” error message should be displayed to the screen upon opening Fund Transfer module. 9. If no validation issues are found, system will deduct the Amount specified from the Source Account and add the Amount to the Destination Account. 10. Clicking the <Reset> Button would clear all fields from the Fund Transfer Transaction Module.
Reference/s	N/A

2.2 Non – functional Requirements

Only functionality of the system is required to be established at this point. No non-functional requirements such as concurrent users, specific response times, etc. are prioritized to be verified during this phase of the project.

2.3 Interface Requirements

Guru99 Banking Website is a standalone system. No interface requirements are needed.

2.4 Report Requirements

<table>
<tr><th>Requirement ID</th><th>RQ-14</th></tr>
<tr><td>Title</td><td>Create a Report Module Where Users Can View a Mini Statement of their Bank Transactions</td></tr>
<tr><td>User Story</td><td>As bank personnel/customer, I need to have a report that presents recent transactions of an account so I could quickly inquire about the latest transactions performed on my account.</td></tr>
<tr><td>Priority</td><td>Medium</td></tr>
<tr><td>Severity</td><td>Moderate</td></tr>
<tr><td>User/s</td><td>Bank Division/Customers</td></tr>
<tr><td>Front-end Requirement/s</td><td>The User Interface should include the following:
<table>
<tr><th>#</th><th>Name</th><th>Type</th></tr>
<tr><td>1</td><td>Account Number</td><td>Text Box</td></tr>
<tr><td>2</td><td>Submit</td><td>Button</td></tr>
<tr><td>3</td><td>Reset</td><td>Button</td></tr>
</table></td></tr>
<tr><td>Report Detail/s</td><td>1. This module is accessible to all User Roles.
2. If Account Number entered is not found from the records, an “Account Number not found!” error message should be displayed.
3. If “Account Number” field is left blank, an “Account Number field was left blank!” error message should be displayed. This field is mandatory.
4. If alphabetical and special characters are entered at the “Account Number” field, an error message should be displayed specifying that such characters are not allowed.
5. If user tries to process the report using an account not associated with them, an “Account not associated with the User!” error message should be displayed. Users can only perform the transaction on accounts that are associated with them (See RQ-05 & RQ-08).
6. If user has no accounts associated with them, a “No Accounts associated with the user!” error message should be displayed to the screen upon opening Mini Statement module.
7. If no validation issues are found, a report of the last five (5) transactions of the account would be displayed on the screen.</td></tr>
</table>

<table>
<tr><th>Requirement ID</th><th>RQ-14</th></tr>
<tr><td></td><td>8. Clicking the <Reset> Button would clear all fields from the Mini Statement Report Module.</td></tr>
<tr><td>Reference/s</td><td>N/A</td></tr>
</table>

<table>
<tr><th>Requirement ID</th><th>RQ-15</th></tr>
<tr><td>Title</td><td>Create a Report Module Where Users Can View a Customized Statement of their Bank Transactions</td></tr>
<tr><td>User Story</td><td>As a bank personnel/customer, I need a customizable report so that I can define what will be the resulting transaction records that I desire from report.</td></tr>
<tr><td>Priority</td><td>Medium</td></tr>
<tr><td>Severity</td><td>Moderate</td></tr>
<tr><td>User/s</td><td>Bank Division/Customer</td></tr>
<tr><td>Front-end Requirement/s</td><td>The User Interface should include the following:
<table>
<tr><th>#</th><th>Name</th><th>Type</th></tr>
<tr><td>1</td><td>Account Number</td><td>Text Box</td></tr>
<tr><td>2</td><td>From Date</td><td>Date</td></tr>
<tr><td>3</td><td>To Date</td><td>Date</td></tr>
<tr><td>4</td><td>Amount Lower Limit</td><td>Text Box</td></tr>
<tr><td>5</td><td>Number of Transaction</td><td>Text Box</td></tr>
<tr><td>6</td><td>Submit</td><td>Button</td></tr>
<tr><td>7</td><td>Reset</td><td>Button</td></tr>
</table></td></tr>
<tr><td>Report Detail/s</td><td>1. This module is accessible to all User Roles.
2. If Account Number entered is not found from the records, an “Account Number not found!” error message should be displayed.
3. If the following fields are left blank, a “<Field Name> field was left blank!” error message should be displayed. These fields are mandatory.
a. Account Number
b. Amount Lower Limit
c. Number of Transaction
4. If alphabetical and special characters are entered at the following fields, an error message should be displayed specifying that such characters are not allowed.
a. Account Number
b. Amount Lower Limit
c. Number of Transaction
5. If user tries to process the report using an account not associated with them, an “Account not associated with the User!” error message should be displayed. Users can only perform the transaction on accounts that are associated with them (See RQ-05 & RQ-08).
6. If user has no accounts associated with them, a “No Accounts associated with the user!” error message should be displayed to the screen upon opening Customized Statement module.
7. If date set at the “From Date” Field is later than the date at “To Date”, a “Date Range is invalid!” error message should be displayed.
8. If the "From Date" is not set, filter will start at the very first transaction performed by the account.
9. If the "To Date" is not set, filter will end at the very last transaction performed by the account.
10. If no validation issues are found, a report of the last five (5) transactions of the account would be displayed on the screen.
11. Clicking the <Reset> Button would clear all fields from the Mini Statement Report Module.</td></tr>
<tr><td>Reference/s</td><td>N/A</td></tr>
</table>

2.5 Other Requirements

Requirement ID	RQ-16
Title	Website should have Compatibility with Google Chrome Web Browser
User Story	N/A
Priority	High
Severity	Severe
User/s	Bank Division/Customers
Requirement/s	1. The Guru99 Banking Website should work properly if accessed via the Google Chrome Web Browser. 2. Web Element's Horizontal and Vertical alignments should be precise. 3. Fonts should be readable.
Reference/s	N/A

2.6 Use Cases

A. RQ-01: Create a Login Module

1. Main Scenario

Step	Description
1	A: Opens website from a Web Browser.
2	S: Loads Login Screen.
3	A: Enters a valid User ID at "User ID" Field
4	A: Enters the correct User Password at "Password" Field.
5	A: Clicks <Login> Button.
6	S: Allows access to website.

2. Alternate Scenario (Extensions)

Step	Description
3A	A: Enters an invalid User ID at "User ID" Field. S: Displays "Invalid User ID!" error message
4A	A: Enters incorrect User Password at "Password" Field. S: Displays "Incorrect Password!" error message.
3B	A: Leaves "User ID" Field blank. S: Displays "User ID field is mandatory!" error message.
4B	A: Leaves "Password "Field blank. S: Displays "Password field is mandatory!" error message.
5A	A: Clicks <Reset> Button. S: Clears values from all Login Screen fields.

B. RQ-02: Create a New User Module

1. Main Scenario

Step	Description
1	A: Opens website from a Web Browser.
2	A: Clicks <Register> Button.
3	S: Displays Registration Page.
4	A: Enters E-Mail at "E-Mail" Field.
5	A: Clicks <Submit> Button.
6	S: Saves user record.
7	S: Generate User ID and Password.
8	S: Displays User ID and Password.

2. Alternate Scenario (Extensions)

Step	Description
4A	A: Leaves "E-Mail" Field blank. S: Displays "E-Mail field is mandatory!" error message.
4B	A: Enters E-Mail with no “@” Symbol at “E-Mail” Field. S: Displays "E-Mail is invalid!" error message.
4C	A: Enters E-Mail with no “.com” at “E-Mail” Field. S: Displays "E-Mail is invalid!" error message.

C. RQ-03: Create a Change Password Module

1. Main Scenario

Step	Description
1	A: Opens website from a Web Browser.
2	A: Logs in.
3	A: Opens Change Password.
4	A: Enters current password at the “Old Password” Field.
5	A: Enters new password at the “New Password” Field.
6	A: Re-enters new password at the “Confirm Password” Field.
7	A: Clicks <Submit> Button.
	S: Sets the new password as the password of the user.

2. Alternate Scenario (Extensions)

Step	Description
4A	A: Enters incorrect password at “Old Password” Field. S: Displays “Incorrect Password!” error message.
4B/5A/6A	A: Enters the same passwords on “Old Password”, “New Password” and “Confirm Password” Fields. S: Displays “Old and New Passwords entered are the same!” error message.
5B/6B	A: Enters different passwords on “New Password” and “Confirm Password” Fields. S: Displays “Password does not match!” error message.
5C/6C	A: Enters a password on “New Password” and “Confirm Password” Fields without at least one (1) numeric character. S: Displays “Password does not have at least one (1) numeric character!” error message.
5D/6D	A: Enters a password on “New Password” and “Confirm Password” Fields without at least one (1) special character. S: Displays “Password does not have at least one (1) special character!” error message.
4C	A: Leaves “Old Password” Field blank. S: Displays “Old Password field is left blank!” error message.
5E	A: Leaves “New Password” Field blank. S: Displays “New Password field is left blank!” error message.
6E	A: Leaves “Confirm Password” Field blank. S: Displays “Confirm Password field is left blank!” error message.
7A	A: Clicks <Reset> Button. S: Clears all fields of the Change Password Module.

D. RQ-04: Create a New Customer Module

1. Main Scenario

Step	Description
1	A: Opens website from a Web Browser.
2	A: Logs in.
3	A: Opens New Customer.
4	A: Enters Customer Name at “Customer Name” Field.

5	A: A: Enters Gender at “Gender” Field.
6	A: Enters Birth Date at “Date of Birth” Field.
7	A: Enters Address at “Address” Field.
8	A: Enters City at “City” Field.
9	A: Enters State at “State” Field.
10	A: Enters PIN at “PIN” Field.
11	A: Enters Telephone Number at “Telephone Number” Field.
12	A: Enters E-Mail at “E-Mail” Field.
13	A: Enters Password at “Password” Field.
14	A: Clicks <Submit> Button.
15	S: Saves Customer Information.
16	S: Generates Customer ID.
17	S: Displays Customer Information.

2. Alternate Scenario (Extensions)

Step	Description
4A	A: Leaves “Customer Name” Field blank. S: Displays “Customer Name field is left blank!” error message.
7A	A: Leaves “Address” Field blank. S: Displays “Address field is left blank!” error message.
8A	A: Leaves “City” Field blank. S: Displays “City field is left blank!” error message.
9A	A: Leaves “State” Field blank. S: Displays “State field is left blank!” error message.
10A	A: Leaves “PIN” Field blank. S: Displays “PIN field is left blank!” error message.
11A	A: Leaves “Telephone Number” Field blank. S: Displays “Telephone Number field is left blank!” error message.
12A	A: Leaves “E-Mail” Field blank. S: Displays “E-Mail field is left blank!” error message.
13A	A: Leaves “Password” Field blank. S: Displays “Password field is left blank!” error message.
5A	A: Leaves “Gender” Field blank. S: Displays no error messages since entering a value at “Gender” Field is optional.
6A	A: Leaves “Date of Birth” Field blank. S: Displays no error messages since entering a value at “Date of Birth” Field is optional.
10B	A: Enters alphabetical characters at “PIN” Field. S: Displays “Alphabetical characters not allowed at PIN field!” error message.
11B	A: Enters alphabetical characters at “Telephone Number” Field. S: Displays “Alphabetical characters not allowed at Telephone Number field!” error message.
4B	A: Enters numeric characters at “Customer Name” Field. S: Displays “Numeric characters not allowed at Customer Name field!” error message.
8B	A: Enters numeric characters at “City” Field. S: Displays “Numeric characters not allowed at City field!” error message.
9B	A: Enters numeric characters at “State” Field. S: Displays “Numeric characters not allowed at State field!” error message.
4C	A: Enters special characters at “Customer Name” Field. S: Displays “Special characters not allowed at Customer Name field!” error message.
7B	A: Enters special characters at “Address” Field. S: Displays “Special characters not allowed at Address field!” error message.
8C	A: Enters special characters at “City” Field. S: Displays “Special characters not allowed at City field!” error message.
9C	A: Enters special characters at “State” Field. S: Displays “Special characters not allowed at State field!” error message.

10C	A: Enters special characters at “PIN” Field. S: Displays “Special characters not allowed at PIN field!” error message.
11C	A: Enters special characters at “Telephone Number” Field. S: Displays “Special characters not allowed at Telephone Number field!” error message.
4D	A: Enters space as first character at “Customer Name” Field. S: Displays “First Character at Customer Name field must not be a space!” error message.
7C	A: Enters space as first character at “Address” Field. S: Displays “First Character at Address field must not be a space!” error message.
8D	A: Enters space as first character at “City” Field. S: Displays “First Character at City field must not be a space!” error message.
9D	A: Enters space as first character at “State” Field. S: Displays “First Character at State field must not be a space!” error message.
10D	A: Enters space as first character at “PIN” Field. S: Displays “First Character at PIN field must not be a space!” error message.
11D	A: Enters space as first character at “Telephone Number” Field. S: Displays “First Character at Telephone Number field must not be a space!” error message.
12B	A: Enters space as first character at “E-Mail” Field. S: Displays “First Character at E-Mail field must not be a space!” error message.
13B	A: Enters space as first character at “Password” Field. S: Displays “First Character at Password field must not be a space!” error message.
10E	A: Enters a number less than 6 Digits at “PIN” Field. S: Displays “PIN must have 6 Digits!” error message.
10F	A: Enters a number greater than 6 Digits at “PIN” Field. S: Displays “PIN must have 6 Digits!” error message.
12C	A: Enters an E-Mail at “E-Mail” Field that already exists from customer records. S: Displays “E-Mail already exists from records!” error message.
13C	A: Enters a password on “Password” Field without at least one (1) numeric character. S: Displays “Password does not have at least one (1) numeric character!” error message.
13D	A: Enters a password on “Password” Field without at least one (1) special character. S: Displays “Password does not have at least one (1) special character!” error message.
14A	A: Clicks <Reset> Button. S: Clears values at all New Customer Module fields.

E. RQ-05: Create an Update Customer Module

1. Main Scenario

Step	Description
1	A: Opens website from a Web Browser.
2	A: Logs in.
3	A: Opens Update Customer.
4	A: Enters Customer ID of customer for editing at “Customer ID” Field.
5	A: Clicks <Submit> Button.
6	S: Searches for the Customer Information based on Customer ID entered.
7	S: Loads edit mode interface, retrieves and displays Customer Information.
8	A: Updates Customer Name at “Customer Name” Field.
9	A: Updates Gender at “Gender” Field.
10	A: Updates Birth Date at “Date of Birth” Field.
11	A: Updates Address at “Address” Field.
12	A: Updates City at “City” Field.
13	A: Updates State at “State” Field.
14	A: Updates PIN at “PIN” Field.
15	A: Updates Telephone Number at “Telephone Number” Field.
16	A: Updates E-Mail at “E-Mail” Field.
17	A: Clicks <Submit> Button.
18	S: Saves changes made to the Customer Information.

2. Alternate Scenario (Extensions)

Step	Description
4A	A: Leaves “Customer ID” Field blank. S: Displays “Customer ID field is left blank!” error message.
4B	A: Enters alphabetical characters at “Customer ID” Field. S: Displays “Alphabetical characters not allowed at Customer ID field!” error message.
4C	A: Enters special characters at “Customer ID” Field. S: Displays “Special characters not allowed at Customer ID field!” error message.
4D	A: Enters space as first character at “Customer ID” Field. S: Displays “First Character at Customer ID field must not be a space!” error message.
4E	A: Enters an invalid Customer ID at “Customer ID” Field. S: Displays “Customer ID not found!” error message.
8A	A: Leaves “Customer Name” Field blank. S: Displays “Customer Name field is left blank!” error message.
11A	A: Leaves “Address” Field blank. S: Displays “Address field is left blank!” error message.
12A	A: Leaves “City” Field blank. S: Displays “City field is left blank!” error message.
13A	A: Leaves “State” Field blank. S: Displays “State field is left blank!” error message.
14A	A: Leaves “PIN” Field blank. S: Displays “PIN field is left blank!” error message.
15A	A: Leaves “Telephone Number” Field blank. S: Displays “Telephone Number field is left blank!” error message.
16A	A: Leaves “E-Mail” Field blank. S: Displays “E-Mail field is left blank!” error message.
9A	A: Leaves “Gender” Field blank. S: Displays no error messages since entering a value at “Gender” Field is optional.
10A	A: Leaves “Date of Birth” Field blank. S: Displays no error messages since entering a value at “Date of Birth” Field is optional.
14B	A: Enters alphabetical characters at “PIN” Field. S: Displays “Alphabetical characters not allowed at PIN field!” error message.
15B	A: Enters alphabetical characters at “Telephone Number” Field. S: Displays “Alphabetical characters not allowed at Telephone Number field!” error message.
8B	A: Enters numeric characters at “Customer Name” Field. S: Displays “Numeric characters not allowed at Customer Name field!” error message.
12B	A: Enters numeric characters at “City” Field. S: Displays “Numeric characters not allowed at City field!” error message.
13B	A: Enters numeric characters at “State” Field. S: Displays “Numeric characters not allowed at State field!” error message.
8C	A: Enters special characters at “Customer Name” Field. S: Displays “Special characters not allowed at Customer Name field!” error message.
11B	A: Enters special characters at “Address” Field. S: Displays “Special characters not allowed at Address field!” error message.
12C	A: Enters special characters at “City” Field. S: Displays “Special characters not allowed at City field!” error message.
13C	A: Enters special characters at “State” Field. S: Displays “Special characters not allowed at State field!” error message.
14C	A: Enters special characters at “PIN” Field. S: Displays “Special characters not allowed at PIN field!” error message.
15C	A: Enters special characters at “Telephone Number” Field. S: Displays “Special characters not allowed at Telephone Number field!” error message.
8D	A: Enters space as first character at “Customer Name” Field. S: Displays “First Character at Customer Name field must not be a space!” error message.

11C	A: Enters space as first character at “Address” Field. S: Displays “First Character at Address field must not be a space!” error message.
12D	A: Enters space as first character at “City” Field. S: Displays “First Character at City field must not be a space!” error message.
13D	A: Enters space as first character at “State” Field. S: Displays “First Character at State field must not be a space!” error message.
14D	A: Enters space as first character at “PIN” Field. S: Displays “First Character at PIN field must not be a space!” error message.
15D	A: Enters space as first character at “Telephone Number” Field. S: Displays “First Character at Telephone Number field must not be a space!” error message.
16B	A: Enters space as first character at “E-Mail” Field. S: Displays “First Character at E-Mail field must not be a space!” error message.
14E	A: Enters a number less than 6 Digits at “PIN” Field. S: Displays “PIN must have 6 Digits!” error message.
14F	A: Enters a number greater than 6 Digits at “PIN” Field. S: Displays “PIN must have 6 Digits!” error message.
16C	A: Enters an E-Mail at “E-Mail” Field that already exists from customer records and is not the current E-Mail value. S: Displays “E-Mail already exists from records!” error message.
17A	A: Clicks <Reset> Button. S: Clears values at all Update Customer Module fields.

F. RQ-06: Create a Delete Customer Module

1. Main Scenario

Step	Description
1	A: Opens website from a Web Browser.
2	A: Logs in.
3	A: Opens Delete Customer.
4	A: Enters Customer ID of customer for deletion at “Customer ID” Field.
5	A: Clicks <Submit> Button.
6	S: Deletes customer record specified.

2. Alternate Scenario (Extensions)

Step	Description
4A	A: Leaves “Customer ID” Field blank. S: Displays “Customer ID field is left blank!” error message.
4B	A: Enters alphabetical characters at “Customer ID” Field. S: Displays “Alphabetical characters not allowed at Customer ID field!” error message.
4C	A: Enters special characters at “Customer ID” Field. S: Displays “Special characters not allowed at Customer ID field!” error message.
4D	A: Enters space as first character at “Customer ID” Field. S: Displays “First Character at Customer ID field must not be a space!” error message.
4E	A: Enters an invalid Customer ID at “Customer ID” Field. S: Displays “Customer ID not found!” error message.
4F	A: Enters a Customer ID at “Customer ID” Field with Account/s still associated. S: Displays “Account/s still associated with the Customer!” error message.
4G	A: Enters a Customer ID at “Customer ID” Field that is not associated with the user. S: Displays “Customer not associated with the User!” error message.
5A	A: Clicks <Reset> Button. S: Clears values from all Delete Customer Module Fields.

G. RQ-07: Create a New Account Module

1. Main Scenario

Step	Description
1	A: Opens website from a Web Browser.
2	A: Logs in.
3	A: Opens New Account.
4	A: Enters Customer ID at “Customer ID” Field.
5	A: Selects Account Type at “Account Type” Field.
6	A: Enters Initial Deposit Amount at “Initial Deposit” Field.
7	A: Clicks <Submit> Button.
8	S: Saves Account Information.

2. Alternate Scenario (Extensions)

Step	Description
4A	A: Leaves “Customer ID” Field blank. S: Displays “Customer ID field is left blank!” error message.
5A	A: Leaves “Account Type” Field blank. S: Displays “Account Type field is left blank!” error message.
4B	A: Enters alphabetical characters at “Customer ID” Field. S: Displays “Alphabetical characters not allowed at Customer ID field!” error message.
4C	A: Enters special characters at “Customer ID” Field. S: Displays “Special characters not allowed at Customer ID field!” error message.
4D	A: Enters space as first character at “Customer ID” Field. S: Displays “First Character at Customer ID field must not be a space!” error message.
4E	A: Enters an invalid Customer ID at “Customer ID” Field. S: Displays “Customer ID not found!” error message.
6A	A: Enters initial deposit amount less than 500 at “Initial Deposit” Field. S: Displays “Initial Deposit is less than 500!” error message.
7A	A: Clicks <Reset> Button. S: Clears values from all New Account Module fields.

H. RQ-08: Create an Update Account Module

1. Main Scenario

Step	Description
1	A: Opens website from a Web Browser.
2	A: Logs in.
3	A: Opens Update Account.
4	A: Enters Account Number of account for editing at “Account Number” Field.
5	A: Clicks <Submit> Button.
6	S: Searches for the Account Information based on Account Number entered.
7	S: Retrieves and displays Account Information.
8	A: Updates Customer ID at “Customer ID” Field.
9	A: Updates Account Type at “Account Type” Field.
10	A: Updates Initial Deposit Amount at “Initial Deposit” Field.
11	A: Clicks <Submit> Button.
12	S: Saves changes made to the Account Information.

2. Alternate Scenario (Extensions)

Step	Description
4A	A: Enters an invalid Account Number at “Account Number” Field. S: Displays “Account Number not found!” error message.

4B	A: Leaves “Account Number” Field blank. S: Displays “Account Number field is left blank!” error message.
4C	A: Enters alphabetical characters at “Account Number” Field. S: Displays “Alphabetical characters not allowed at Account Number field!” error message.
4D	A: Enters special characters at “Account Number” Field. S: Displays “Special characters not allowed at Account Number field!” error message.
4E	A: Enters an Account Number at “Account Number” Field that is not associated with the user/customer. S: Displays “Account not associated with the user/customer!” error message.
8A	A: Leaves “Customer ID” Field blank. S: Displays “Customer ID field is left blank!” error message.
9A	A: Leaves “Account Type” Field blank. S: Displays “Account Type field is left blank!” error message.
8B	A: Enters alphabetical characters at “Customer ID” Field. S: Displays “Alphabetical characters not allowed at Customer ID field!” error message.
8C	A: Enters special characters at “Customer ID” Field. S: Displays “Special characters not allowed at Customer ID field!” error message.
8D	A: Enters space as first character at “Customer ID” Field. S: Displays “First Character at Customer ID field must not be a space!” error message.
8E	A: Enters an invalid Customer ID at “Customer ID” Field. S: Displays “Customer ID not found!” error message.
10A	A: Enters initial deposit amount less than 500 at “Initial Deposit” Field. S: Displays “Initial Deposit is less than 500!” error message.
11A	A: Clicks <Reset> Button. S: Clears all fields of the Update Account Module.

I. RQ-09: Create a Delete Account Module

1. Main Scenario

Step	Description
1	A: Opens website from a Web Browser.
2	A: Logs in.
3	A: Opens Delete Account.
4	A: Enters Account Number of account for deletion at “Account Number” Field.
5	A: Clicks <Submit> Button.
6	S: Deletes Account Information based on Account Number specified.

2. Alternate Scenario (Extensions)

Step	Description
4A	A: Enters an invalid Account Number at “Account Number” Field. S: Displays “Account Number not found!” error message.
4B	A: Leaves “Account Number” Field blank. S: Displays “Account Number field is left blank!” error message.
4C	A: Enters alphabetical characters at “Account Number” Field. S: Displays “Alphabetical characters not allowed at Account Number field!” error message.
4D	A: Enters special characters at “Account Number” Field. S: Displays “Special characters not allowed at Account Number field!” error message.
4E	A: Enters an Account Number at “Account Number” Field that is not associated with the user/customer. S: Displays “Account not associated with the user/customer!” error message.
5A	A: Clicks <Reset> Button. S: Clears all fields of the Delete Account Module.

J. RQ-10: Create a Balance Inquiry Module

1. Main Scenario

Step	Description
1	A: Opens website from a Web Browser.
2	A: Logs in.
3	A: Opens Balance Inquiry.
4	A: Enters valid Account Number at “Account Number” Field.
5	A: Clicks <Submit> Button.
6	S: Searches for the Account Number within records and returns remaining balance.

2. Alternate Scenario (Extensions)

Step	Description
4A	A: Enters an invalid Account Number at “Account Number” Field. S: Displays “Account Number not found!” error message.
4B	A: Leaves “Account Number” Field blank. S: Displays “Account Number field is left blank!” error message.
4C	A: Enters alphabetical characters at “Account Number” Field. S: Displays “Alphabetical characters not allowed at Account Number field!” error message.
4D	A: Enters special characters at “Account Number” Field. S: Displays “Special characters not allowed at Account Number field!” error message.
4E	A: Enters an Account Number at “Account Number” Field that is not associated with the user/customer. S: Displays “Account not associated with the user/customer!” error message.
5A	A: Clicks <Reset> Button. S: Clears all fields of the Balance Inquiry Module.

K. RQ-11: Create a Deposit Module

1. Main Scenario

Step	Description
1	A: Opens website from a Web Browser.
2	A: Logs in.
3	A: Opens Deposit.
4	A: Enters Account Number at “Account Number” Field.
5	A: Enters amount to be deposited at “Amount” Field.
6	A: Enters transaction description at “Description” Field.
7	A: Clicks <Submit> Button.
8	S: Deposits the amount to the Account specified.

2. Alternate Scenario (Extensions)

Step	Description
4A	A: Enters an invalid Account Number at “Account Number” Field. S: Displays “Account Number not found!” error message.
4B	A: Leaves “Account Number” Field blank. S: Displays “Account Number field is left blank!” error message.
5A	A: Leaves “Amount” Field blank. S: Displays “Amount field is left blank!” error message.
6A	A: Leaves “Description” Field blank. S: Displays “Description field is left blank!” error message.
4C	A: Enters alphabetical characters at “Account Number” Field. S: Displays “Alphabetical characters not allowed at Account Number field!” error message.
5B	A: Enters alphabetical characters at “Amount” Field. S: Displays “Alphabetical characters not allowed at Amount field!” error message.

4D	A: Enters special characters at “Account Number” Field. S: Displays “Special characters not allowed at Account Number field!” error message.
5C	A: Enters special characters at “Amount” Field. S: Displays “Special characters not allowed at Amount field!” error message.
5D	A: Enters zero value at "Amount" Field. S: Displays "Zero value not allowed at Amount field!" error message.
5E	A: Enters negative value at "Amount" Field. S: Displays "Negative value not allowed at Amount field!" error message.
4E	A: Enters an Account Number at “Account Number” Field that is not associated with the user/customer. S: Displays “Account not associated with the user/customer!” error message.
7A	A: Clicks <Reset> Button. S: Clears all fields of the Deposit Module.

L. RQ-12: Create a Withdraw Module

1. Main Scenario

Step	Description
1	A: Opens website from a Web Browser.
2	A: Logs in.
3	A: Opens Withdraw.
4	A: Enters Account Number at “Account Number” Field.
5	A: Enters amount to be withdrawn at “Amount” Field.
6	A: Enters transaction description at “Description” Field.
7	A: Clicks <Submit> Button.
8	S: Withdraws the amount from the Account specified.

2. Alternate Scenario (Extensions)

Step	Description
4A	A: Enters an invalid Account Number at “Account Number” Field. S: Displays “Account Number not found!” error message.
4B	A: Leaves “Account Number” Field blank. S: Displays “Account Number field is left blank!” error message.
5A	A: Leaves “Amount” Field blank. S: Displays “Amount field is left blank!” error message.
6A	A: Leaves “Description” Field blank. S: Displays “Description field is left blank!” error message.
4C	A: Enters alphabetical characters at “Account Number” Field. S: Displays “Alphabetical characters not allowed at Account Number field!” error message.
5B	A: Enters alphabetical characters at “Amount” Field. S: Displays “Alphabetical characters not allowed at Amount field!” error message.
4D	A: Enters special characters at “Account Number” Field. S: Displays “Special characters not allowed at Account Number field!” error message.
5C	A: Enters special characters at “Amount” Field. S: Displays “Special characters not allowed at Amount field!” error message.
5D	A: Enters zero value at "Amount" Field. S: Displays "Zero value not allowed at Amount field!" error message.
5E	A: Enters negative value at "Amount" Field. S: Displays "Negative value not allowed at Amount field!" error message.
4E	A: Enters an Account Number at “Account Number” Field that is not associated with the user/customer. S: Displays “Account not associated with the user/customer!” error message.
4F	A: Enters an Account Number with insufficient balance to perform transaction. S: Displays “Insufficient funds!” error message.
7A	A: Clicks <Reset> Button. S: Clears all fields of the Withdraw Module.

M. RQ-13: Create a Fund Transfer Module

1. Main Scenario

Step	Description
1	A: Opens website from a Web Browser.
2	A: Logs in.
3	A: Opens Fund Transfer.
4	A: Enters Source Account Number at “Payer’s Account Number” Field.
5	A: Enters Destination Account Number at “Payee’s Account Number” Field.
6	A: Enters Amount to transfer at “Amount” Field.
7	A: Enters transaction Description at “Description” Field.
8	A: Clicks <Submit> Button.
9	S: Transfers the funds specified from the Source Account to the Destination Account.

2. Alternate Scenario (Extensions)

Step	Description
4A	A: Enters an invalid Account Number at “Payer’s Account Number” Field. S: Displays “Source Account Number not found!” error message.
5A	A: Enters an invalid Account Number at “Payee’s Account Number” Field. S: Displays “Destination Account Number not found!” error message.
4B/5B	A: Enters the same Account Number at “Payer’s Account Number” and “Payee’s Account Number” Fields. S: Displays “Source and Destination Account Numbers are the same!” error message.
4C	A: Enters a Source Account Number with insufficient balance to perform transaction. S: Displays “Insufficient funds!” error message.
4D	A: Leaves “Payer’s Account Number” Field blank. S: Displays “Payer’s Account Number field is left blank!” error message.
5C	A: Leaves “Payee’s Account Number” Field blank. S: Displays “Payee’s Account Number field is left blank!” error message.
6A	A: Leaves “Amount” Field blank. S: Displays “Amount field is left blank!” error message.
7A	A: Leaves “Description” Field blank. S: Displays “Description field is left blank!” error message.
4E	A: Enters alphabetical characters at “Payer’s Account Number” Field. S: Displays “Alphabetical characters not allowed at Payer’s Account Number field!” error message.
5D	A: Enters alphabetical characters at “Payee’s Account Number” Field. S: Displays “Alphabetical characters not allowed at Payee’s Account Number field!” error message.
6B	A: Enters alphabetical characters at “Amount” Field. S: Displays “Alphabetical characters not allowed at Amount field!” error message.
4F	A: Enters special characters at “Payer’s Account Number” Field. S: Displays “Special characters not allowed at Payer’s Account Number field!” error message.
5E	A: Enters special characters at “Payee’s Account Number” Field. S: Displays “Special characters not allowed at Payee’s Account Number field!” error message.
6C	A: Enters special characters at “Amount” Field. S: Displays “Special characters not allowed at Amount field!” error message.
6D	A: Enters zero value at “Amount" Field. S: Displays “Zero amount value not allowed!” error message.
6E	A: Enters negative value at “Amount" Field. S: Displays “Negative amount value not allowed!” error message.
4G	A: Enters an Account Number at “Payer’s Account Number” Field that is not associated with the user/customer. S: Displays “Source Account not associated with the user/customer!” error message.

8A	A: Clicks <Reset> Button. S: Clears all fields of the Fund Transfer Module.

N. RQ-14: Create a Mini Statement Module

1. Main Scenario

Step	Description
1	A: Opens website from a Web Browser.
2	A: Logs in.
3	A: Opens Mini Statement.
4	A: Enters Account Number at “Account Number” Field.
5	A: Clicks <Submit> Button.
6	S: Displays last five (5) transactions of the account.

2. Alternate Scenario (Extensions)

Step	Description
4A	A: Enters an invalid Account Number at “Account Number” Field. S: Displays “Account Number not found!” error message.
4B	A: Leaves “Account Number” Field blank. S: Displays “Account Number field is left blank!” error message.
4C	A: Enters alphabetical characters at “Account Number” Field. S: Displays “Alphabetical characters not allowed at Account Number field!” error message.
4D	A: Enters special characters at “Account Number” Field. S: Displays “Special characters not allowed at Account Number field!” error message.
4E	A: Enters an Account Number at “Account Number” Field that is not associated with the user/customer. S: Displays “Account not associated with the user/customer!” error message.
5A	A: Clicks <Reset> Button. S: Clears all fields of the Mini Statement Module.

O. RQ-15: Create a Custom Statement Module

1. Main Scenario

Step	Description
1	A: Opens website from a Web Browser.
2	A: Logs in.
3	A: Opens Customized Statement.
4	A: Enters Account Number at “Account Number” Field.
5	A: Sets date at “From Date” Field.
6	A: Sets date at “To Date” Field.
7	A: Enters amount at “Amount Lower Limit” Field.
8	A: Enters number of transactions at “Number of Transactions” Field.
9	A: Clicks <Submit> Button.
10	S: Displays transactions of the Account based on filters set.

2. Alternate Scenario (Extensions)

Step	Description
4A	A: Enters an invalid Account Number at “Account Number” Field. S: Displays “Account Number not found!” error message.
4B	A: Leaves “Account Number” Field blank. S: Displays “Account Number field is left blank!” error message.
7A	A: Leaves “Account Lower Limit” Field blank. S: Displays “Account Lower Limit field is left blank!” error message.

8A	A: Leaves “Number of Transaction” Field blank. S: Displays “Number of Transaction field is left blank!” error message.
4C	A: Enters alphabetical characters at “Account Number” Field. S: Displays “Alphabetical characters not allowed at Account Number field!” error message.
5A	A: Leaves “From Date” Field blank. S: Starts report process records from earliest transaction performed in the account.
6A	A: Leaves “To Date” Field blank. S: Ends report process at the latest transaction performed in the account.
5B/6B	A: Leaves both “From Date” and “To Date” blank. S: Processes all records regardless of record date.
7B	A: Enters alphabetical characters at “Account Lower Limit” Field. S: Displays “Alphabetical characters not allowed at Account Lower Limit field!” error message.
8B	A: Enters alphabetical characters at “Number of Transaction” Field. S: Displays “Alphabetical characters not allowed at Number of Transaction field!” error message.
4D	A: Enters special characters at “Account Number” Field. S: Displays “Special characters not allowed at Account Number field!” error message.
7C	A: Enters special characters at “Account Lower Limit” Field. S: Displays “Special characters not allowed at Account Lower Limit field!” error message.
8C	A: Enters special characters at “Number of Transaction” Field. S: Displays “Special characters not allowed at Number of Transaction field!” error message.
4E	A: Enters an Account Number at “Account Number” Field that is not associated with the user/customer. S: Displays “Account not associated with the user/customer!” error message.
7D	A: Enters Zero value at “Amount Lower Limit” Field. S: Displays “Zero amount value not allowed at Amount Lower Limit field!” error message.
7E	A: Enters negative value at “Amount Lower Limit” Field. S: Displays “Negative amount value not allowed at Amount Lower Limit field!” error message.
8D	A: Enters Zero value at “Number of Transaction” Field. S: Displays “Zero amount value not allowed at Number of Transaction field!” error message.
8E	A: Enters negative value at “Number of Transaction” Field. S: Displays “Negative amount value not allowed at Number of Transaction field!” error message.
9A	A: Clicks <Reset> Button. S: Clears values at all Customized Statement Report Module fields.

3 Appendices

3.1 Peer Review Issue Logs

Date Raised	Issue	Raised By	Responsible	Remarks	Status
8/16/2018	User Maintenance / Registration for Managers and Customers	ABAGABAGON	KRUNGTA	There is no clear process as to how users can register users at the system. It was assumed that the system will have another separate module where users with Manager or Customer Role can be registered. [Update] A Registration Module will be available for users with Manager Role where their User ID and Password will be system-generated. New Customers Module will have an additional Password Field where users they could define their password while their User ID will be system-generated.	Closed
8/16/2018	Manager and Customer Accounts Access	ABAGABAGON	KRUNGTA	Just need to confirm the following: • Manager Users can only maintain the Customers and Accounts associated with them. The Manager – Customer – Account Association is achieved if said user is one that added the Customer / Account to the system • Customer Users can only maintain Accounts associated with them. Customer – Account Association is achieved if Account is added to the Customer. [Update] As stated above, this will be the process.	Closed
8/16/2018	Orphaned Transactions if Deleted Customers and Accounts	ABAGABAGON	KRUNGTA	There is an option to delete Customer and Account records but it is unclear what will happen to the transactions. It is assumed then that the transactions will be retained from the records and will be orphaned. This not recommended and should just disable the Customer or Account so tracking of records won't be an issue. [Update] The system will not have a feature where Customer and Account Records can be disabled or set as inactive.	Closed