**Use Case Specification**

**And System Architecture**

**For Online Banking System**

**Part 01: General Information**

This document contains the requirements and specification for Online Banking System (OBS) web site. The OBS will provide an online ATM card services such as account balance inquiry, fund transfer, view of transaction history, donation and bills payment.

**Part 02: Use Case**

This section contains the use case specification for the OBS web site.

**02.01 Customer Registration**

Customer

System

1. **Brief Description**

This use case describes how the customer registers an existing ATM account in the OBS web site.

1. **Actor**
   1. Customer – an existing bank customer with ATM account.
   2. System – online banking system web site.
2. **Precondition**

3.1 The customer must have an internet connection and browser to visit the OBS web site.

1. **Basic Flow of Events**
2. Customer visits the web site.
3. In ‘Home’ page, customer clicks the ‘Online Banking’ link.
4. The ‘Log-in’ page will show.
5. The customer clicks the ‘Register’ link below the ‘Log-in’ area.
6. The page will redirect to ‘Register’ page.
7. The customer provides the following information:
   1. Account number
   2. Joint Account Indicator – JAI (A two digit number that can be found at the back of the ATM card)
   3. Full name
   4. Birthday
8. The customer clicks the ‘Register’ button.
9. The system will validate the information. Please refer to ‘Registration Validation’ section.
10. The system will generate and display a unique random verification code.
11. The system will ask the customer to proceed to the nearest ATM machine to complete the registration.
12. The use case ends successfully.
13. **Alternative Flows**

5.1 Validation Fail

If the validation fails in step 8, the system will display: “Fail! Please double check your credentials.” The use case resumes at step 6.

1. **Key Scenarios**

The OBS web site is not available due to production issues or maintenance.

1. **Successful Completion**

The customer will receive a unique verification code for ATM verification. The verification code will expire after 24 hours from the time customer receive the code.

1. **Failure Condition**

The customer ~~should not allow to use~~ is not allowed to access the online service of OBS.

1. **Special Requirements**

The customer must be an existing bank customer with ATM account.

**02.02 Customer Verification**

Customer

System

1. **Brief Description**

This use case describes how the customer continues the registration process using the valid verification code from the ATM.

1. **Actor**
   1. Customer – an existing bank customer with ATM account.

2.2 System – online banking system web site.

1. **Precondition**

3.1 The customer must have an internet connection and browser to visit the OBS web site.

3.2 The customer must already validate the unique verification code from OBS web site using the ATM machine.

3.3 The customer must have the random verification code from the ATM machine.

1. **Basic Flow of Events**
2. The customer will visit the website.
3. In ‘Home’ page, customer clicks the ‘Online Banking’ link.
4. The ‘Log-in’ page will show.
5. Customer clicks the ‘Verify Registration’ link below the ‘Register’ link.
6. The page will redirect to ‘Verification’ page.
7. Customer provides the following information:
   1. Preferred Name for this account
   2. Account number
   3. Joint Account Indicator – JAI (A two digit number that can be found at the back of the ATM card)
   4. Full name
   5. Birthday
   6. New verification code from ATM
8. The customer clicks the ‘Verify’ button.
9. The system validates the information. Please refer to ‘Verification Code Validation’ section.
10. Display the message: “Registration successful!” Then redirect the page to ‘Create User Name and Password’ page after 10 seconds.
11. In ‘Create User Name and Password’ page, customer must supply the following information:
    1. User name
    2. Password
    3. Repeat Password
12. Customer clicks the ‘Create’ button.
13. The system validates the information. Please refer to ‘User name and Password Validation’.
14. Display the message: “Congratulations! Welcome to online banking!” Then redirect the page to ‘Log-in’ page after 10 seconds.
15. The use case ends successfully.
16. **Alternative Flows**

5.1 Verification Code Validation Fail

If the validation fails in step 8, the system will display: “Fail! Please double check your credentials.” The use case resumes at step 6.

5.2 User name and Password Validation Fail

If the validation fails in step 12, the system will display: “Fail! Please double check your credentials.” The use case resumes at step 10.

1. **Key Scenarios**

The OBS web site is not available due to production issues or maintenance.

1. **Successful Completion**

The customer must be able to login and use the online services of OBS web site. The verification code will expire after 24 hours from the time customer receive the code.

1. **Failure Condition**

The customer is not allowed to avail the online services of OBS.

1. **Special Requirements**

The customer must be an existing bank customer with ATM account.

**02.03 Customer Login**

Customer

System

1. **Brief Description**

This use case describes how the customer logs in in OBS web site using the valid credentials.

1. **Actor**
   1. Customer – an existing bank customer with ATM account.

2.2 System – online banking system web site.

1. **Precondition**

3.1 The customer must have an internet connection and browser to visit the OBS web site.

3.2 The customer must have a valid login credentials.

1. **Basic Flow of Events**
2. The customer visits the web site.
3. The ‘Home’ page will show.
4. The customer clicks the ‘Online Banking’ link.
5. The ‘Log-in’ page will show.
6. The customer provides the following:
   1. User name
   2. Password
   3. Simple captcha
7. The customer clicks ‘Log-in’ button.
8. The system will validate the credentials. Please refer to ‘Log-in Validation’ section.
9. Redirect the page to ‘My Page’.
10. The use case ends successfully.
11. **Alternative Flows**

5.1 Login Validation Fail

If the validation fails in step 7, the system will display: “Fail! Please double check your credentials.” The use case resumes at step 5.

1. **Key Scenarios**

The OBS web site is not available due to production issues or maintenance.

1. **Successful Completion**

The customer must be able to use all the online services of OBS web site.

1. **Failure Condition**

The customer is not allowed to use the online services of OBS.

1. **Special Requirements**

The customer must be an existing bank customer with ATM account.

**02.04 Fund Transfer**

Customer

System

1. **Brief Description**

This use case describes how the customer transfer funds from one account to another existing account.

1. **Actor**
   1. Customer – an existing bank customer with ATM account.

2.2 System – online banking system web site.

1. **Precondition**

3.1 The customer must have an internet connection and browser to visit the OBS web site.

3.2 The customer must have a valid login credentials.

1. **Basic Flow of Events**
2. In ‘My Page’ page, customer clicks ‘Fund Transfer’ link.
3. In ‘Fund Transfer’ page, the customer provides the following information:
   1. Customer’s enrolled account number
   2. Account number of the receiver (enrolled account number by the customer or other customer)
   3. Amount to transfer
4. The customer clicks ~~‘Transfer’~~ ‘~~Send Reference Number~~’ ‘Send TAC’ button.
5. The system will send a unique reference number – transaction authorization code (TAC) through SMS.
6. The customer provides the TAC.
7. The customer clicks ‘Transfer’ button.
8. The system validates the reference number (TAC), account number and amount. Please refer to ‘Transfer Validation’ section.
9. Show message that it is successfully transfer.
10. Update the account balance of the sender account and receiver account.
11. Update the account balance report with ‘Fund Transfer’ as a transaction type.
12. The use case ends successfully.
13. **Alternative Flows**

5.1 Transfer Validation Fail

If the validation fails in step 6, the system will display: “Transfer fail!” and the reason of failure. The use case resumes at step 2.

1. **Key Scenarios**

The OBS web site is not available due to production issues or maintenance.

1. **Successful Completion**

The customer must be able to transfer from one account to another existing account.

1. **Failure Condition**

The customer is not allowed to use the online fund transfer service of OBS web site.

1. **Special Requirements**

The customer must be an existing bank customer with ATM account.

**02.05 Account Balance Inquiry and Report**

Customer

1. **Brief Description**

This use case describes how the customer can view the account balance and report.

1. **Actor**
   1. Customer – an existing bank customer with ATM account.
2. **Precondition**

3.1 The customer must have an internet connection and browser to visit the OBS web site.

3.2 The customer must have a valid login credentials.

1. **Basic Flow of Events**
2. In ‘My Page’ page, customer clicks ‘Balance Inquiry’ link.
3. In ‘Balance Inquiry’ page, show the following information.
   * 1. Current date
     2. List of account number (must have link to account report) and their current balance.
     3. Last transaction date (If there is no last transaction, display ‘None’)
4. The customer clicks an account number.
5. The ‘Transaction Report’ page will show for this account number. Show the following information (Please refer to ‘Search Criteria for Transaction Report’ section.):
   1. Transaction Date
   2. Transaction Type (~~Fund Transfer~~ Fund Transfer – R, Fund Transfer – S , Withdrawal, Debit, Payroll, Payment, Donation)
   3. Amount before transaction
   4. Amount after transaction
   5. Receiver Account Number (Only applicable for fund transfer transaction, display ‘NA’ instead)
   6. Sender Account Number (Only applicable for fund transfer transaction, display ‘NA’ instead)
   7. Shop Name (Only applicable for debit transaction, display ‘NA’ instead)
   8. ATM Reference Id (Only applicable for withdrawal, display ‘NA’ instead)
6. The use case ends successfully.
7. **Alternative Flows**

None.

1. **Key Scenarios**

The OBS web site is not available due to production issues or maintenance.

1. **Successful Completion**

The customer must be able to view account balance and transaction report.

1. **Failure Condition**

None.

1. **Special Requirements**

The customer must be an existing bank customer with ATM account.

**02.06 Account Enrollment**

Customer

System

1. **Brief Description**

This use case describes how the customer can enroll another ATM account.

1. **Actor**
   1. Customer – an existing bank customer with ATM account.

2.2 System – online banking system web site.

1. **Precondition**

3.1 The customer must have an internet connection and browser to visit the OBS web site.

3.2 The customer must have a valid login credentials.

3.3 The customer must have a validation code from ATM.

1. **Basic Flow of Events**
2. In ‘My Page’ page, customer clicks ‘Enroll Account’ link.
3. Show the ‘Enroll Account’ page.
4. The customer provides the following:
   1. Preferred Name for this account
   2. Account number
   3. Joint Account Indicator – JAI (A two digit number that can be found at the back of the ATM card)
   4. Validation Code from ATM machine
5. The customer clicks the ‘Enroll’ button.
6. The system validates the information. Please refer to ‘Enrollment Validation’ section.
7. Show message that is successfully enroll.
8. The use case ends successfully.
9. **Alternative Flows**

5.1 Enrollment Validation Fail

If the validation fails in step 5, the system will display: “Fail! Please double check your credentials.” The use case resumes at step 3.

1. **Key Scenarios**

The OBS web site is not available due to production issues or maintenance.

1. **Successful Completion**

The customer must be able to view account balance and transaction report.

1. **Failure Condition**

The customer will not able to enroll new account.

1. **Special Requirements**

The customer must be an existing bank customer with ATM account.

**02.07 View/Update Profile**

Customer

System

1. **Brief Description**

This use case describes how the customer can view and update their profile.

1. **Actor**
   1. Customer – an existing bank customer with ATM account.

2.2 System – online banking system web site.

1. **Precondition**

3.1 The customer must have an internet connection and browser to visit the OBS web site.

3.2 The customer must have a valid login credentials.

1. **Basic Flow of Events**
2. In ‘My Page’ page, customer clicks ‘View/Update Profile’ link.
3. Show the ‘My Profile' page.
4. Show all the information that can be view by the customer. Please refer to ‘Required Customer Field’ section.
5. All fields that are not allowed for modification must disable for edit. Please refer to ‘Required Customer Field’ section.
6. The customer updates the information and clicks the ‘Update’ button.
7. The system validates the new profile information. Please refer to ‘Required Customer Field’ section.
8. Show message that is successfully update.
9. The use case ends successfully.
10. **Alternative Flows**

5.1 Required Customer Field Validation Fail

If the validation fails in step 6, the system should display error message and highlight the invalid field on the screen. The use case resumes at step 3.

1. **Key Scenarios**

The OBS web site is not available due to production issues or maintenance.

1. **Successful Completion**

The customer must be able to view account balance and transaction report.

1. **Failure Condition**

The customer will not able to enroll new account.

1. **Special Requirements**

The customer must be an existing bank customer with ATM account.

**02.08 Enrollment of Bills**

Customer

System

1. **Brief Description**

This use case describes how the customer can enroll bills for online bills payment.

1. **Actor**
   1. Customer – an existing bank customer with ATM account.

2.2 System – online banking system web site.

1. **Precondition**

3.1 The customer must have an internet connection and browser to visit the OBS web site.

3.2 The customer must have a valid login credentials.

1. **Basic Flow of Events**
2. In ‘My Page’ page, customer clicks ‘Enrollment of Bills’ link.
3. Show the ‘Enrollment of Bills' page.
4. The customer provides the following :
   1. ATM account number ( a drop down list that contains enrolled account number for this customer)
   2. Joint Account Indicator (JAI for this account number)
   3. Company Name (a drop down list that contains recognized bills payment merchant, please refer to ‘Bills Payment Merchant’ section )
   4. Reference number of the company
5. The customer clicks ‘Enroll’ button.
6. The system validates the information. Please refer to ‘Enrollment of Bills Validation’.
7. Show message that is successfully enrolled.
8. The page will redirect to ‘List of Enrolled Bills’ page.
9. The use case ends successfully.
10. **Alternative Flows**

5.1 Enrollment of Bills Validation Fail

If the validation fails in step 6, the system should display error message: “Enrollment Fail!” and the reason of failure. The use case resumes at step 3.

1. **Key Scenarios**

The OBS web site is not available due to production issues or maintenance.

1. **Successful Completion**

The customer must be able to view the new enrolled bills payment merchant and able to use the online payment for this company.

1. **Failure Condition**

The customer will not able to enroll new account.

1. **Special Requirements**

The customer must be an existing bank customer with ATM account.

**02.09 Bills Payment**

Customer

System

1. **Brief Description**

This use case describes how the customer can pay bills online.

1. **Actor**
   1. Customer – an existing bank customer with ATM account.

2.2 System – online banking system web site.

1. **Precondition**

3.1 The customer must have an internet connection and browser to visit the OBS web site.

3.2 The customer must have a valid login credentials.

3.3 The customer must have at least one enrolled bills payment merchant.

1. **Basic Flow of Events**
2. In ‘My Page’ page, customer clicks ‘List of Enrolled Bills’ link.
3. Show the ‘List of Enrolled Bills’ page.
4. The customer clicks the ‘Payment’ button on the left side of the company name.
5. Show the ‘Payment’ page.
6. Show the company name and reference number.
7. The customer provides the following :
   1. Service reference number
   2. Amount to be paid
8. The customer clicks ‘Pay’ button.
9. The system validates the information. Please refer to ‘Payment of Bills Validation’.
10. Show message that is successfully pay.
11. Update the transaction report with ‘Payment’ as transaction type.
12. The use case ends successfully.
13. **Alternative Flows**

5.1 Payment of Bills Validation Fail

If the validation fails in step 8, the system should display error message: “Payment Fail!” and the reason of failure. The use case resumes at step 6.

1. **Key Scenarios**

The OBS web site is not available due to production issues or maintenance.

1. **Successful Completion**

The customer must be able to pay bills online.

1. **Failure Condition**

The customer will not able to enroll new account.

1. **Special Requirements**

The customer must be an existing bank customer with ATM account.

**02.10 Donation**

Customer

System

1. **Brief Description**

This use case describes how the customer can donate to recognized charitable company.

1. **Actor**
   1. Customer – an existing bank customer with ATM account.

2.2 System – online banking system web site.

1. **Precondition**

3.1 The customer must have an internet connection and browser to visit the OBS web site.

3.2 The customer must have a valid login credentials.

1. **Basic Flow of Events**
2. In ‘My Page’ page, customer clicks ‘Donation’ link.
3. Show the ‘Donation’ page.
4. The customer provides the following information:
   1. Donation Beneficiary (recognized charitable institution, please refer to ‘Bills Payment Merchant’ section)
   2. Amount to donate
   3. ~~Beneficiary reference number~~ Customer’s enrolled account number
   4. Remarks
5. The customer clicks ‘Donate’ button.
6. The system validates the information. Please refer to ‘Donation Validation’.
7. Show message that is successfully donate.
8. Update the transaction report with ‘Donation’ as transaction type.
9. The use case ends successfully.
10. **Alternative Flows**

5.1 Donation Validation Fail

If the validation fails in step 4, the system should display error message: “Donation Fail!” and the reason of failure. The use case resumes at step 3.

1. **Key Scenarios**

The OBS web site is not available due to production issues or maintenance.

1. **Successful Completion**

The customer must be able to donate to recognized charitable institution.

1. **Failure Condition**

The customer will not able to enroll new account.

1. **Special Requirements**

The customer must be an existing bank customer with ATM account.

**Part 03: Input Validation**

**a. Log-in Validation**

1. The following information must fully match to the database information:
   1. User name
   2. Password
2. The captcha value input by the customer must match to the session captcha value.
3. If any information fail to match then validation fail else success.

**b. Registration Validation**

1. The following information must fully match to the database information:
   1. Account number
   2. Joint Account Indicator - JAI
   3. Full name
   4. Birthday
2. If any information fail to match then validation fail else success.

**c. Verification Code Validation**

1. The following information must fully match to the database information:
   1. Account number
   2. Joint Account Indicator - JAI
   3. Full name
   4. Birthday
   5. New verification code from ATM
2. Preferred name for this account should not be empty.
3. If any information fail to match then validation fail else success.

**d. User name and Password Validation**

1. User name must be unique per customer. Composed of 8 alphanumeric characters. Must start with capital U followed by 7 digits or alphabets.
2. ‘Password’ and ‘Repeat Password’ must match.
3. ‘Password’ and ‘Repeat Password’ must contain:
   1. Upper case letter.
   2. Lower case letter.
   3. Only two special characters except for single quote and double quote.
   4. Digits.
4. If any information fail to match then validation fail else success.

**e. Transfer Validation**

1. Customer balance must be equal or greater than P500.00.
2. The account number of the receiver must be valid and existing. The receiver account number can be customers own enrolled account number or other customer’s enrolled account number.
3. Customer’s enrolled account number (sender) must not be the same as the receiver account number.
4. Customer balance must be equal or greater than P500.00 after the deduction of amount.
5. The reference number – transaction authorization code must match on the database.
6. If any information fail to match then validation fail else success.

**f. Enrollment Validation**

1. The following information must fully match to the database information:
   1. Account number
   2. Joint Account Indicator - JAI
   3. Verification code from ATM
2. Preferred name for this account should not be empty.
3. If any information fail to match then validation fail else success.

**g. Enrollment of Bills Validation**

1. The following information must fully match to the database information:
   1. Account number
   2. Joint Account Indicator – JAI
   3. Company Name
   4. Reference Number
2. If any information fail to match then validation fail else success.

**h. Payment of Bills Validation**

1. Customer balance must be equal or greater than P500.00.
2. The account number of the receiver must be valid and existing.
3. Customer balance must be equal or greater than P500.00 after the deduction of amount.
4. If any information fail to match then validation fail else success.

**i. Donation Validation**

1. Customer balance must be equal or greater than P500.00.
2. The account number of the sender (enrolled)/receiver must be valid and existing.
3. Customer balance must be equal or greater than P500.00 after the deduction of amount.
4. If any information fail to match then validation fail else success.

**Part 04: Required Customer Fields**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Name | Values | Input Type | Remarks | Show | Editable | Required |
| Salutation | Mr  Miss  Madam  Others | Option | If customer select ‘Others’, customer must provide/specify the salutation on the input box. | Y | N | Y |
| Full Name | Alphabet  Minimum of 2, maximum of 150 | Input box |  | Y | Y | Y |
| National ID | Must follow the following:   1. First 8 characters must be the date of birth of the customer with the following format DD/MM/YYYY. 2. Next 4 characters must be the post code of the place of birth of the customer (ex. 1000). 3. The next 2 must be the gender of the customer. 01 for Male and 02 for Female. 4. The next 15 characters must be a random alphanumeric charcters. | Input box | The National ID is unique per person and must be validate before saving. | Y | N | Y |
| Date of Birth | Follow the format:  DD/MM/YYYY | Input box with calendar. | Must match with National ID | Y | N | Y |
| Marital Status | Married  Single  Widowed  Divorced | Drop down list |  | Y | N | Y |
| Gender | Male  Female | Drop down list |  | Y | Y | Y |
| E-mail Address | Must follow the standard E-mail format. | Input box |  | Y | Y | N |
| Race | Malay  Chinese  Indian  Filipino  Others | Drop down list | Should indicate if customer selects ‘Others’. | Y | Y | Y |
| Permanent Address | Alphanumeric characters. Minimum of 5, maximum of 250 alphanumeric characters. | Large input box |  | Y | Y | Y |
| Permanent Address Postcode | Numeric. Must be 4 characters. | Input box | Must be a valid postcode. | Y | Y | Y |
| Telephone | Must follow the format:  (00)000-000-00 | Input box |  | Y | Y | Y |
| Mobile Number | Must follow the format:  (000)00-00-000 | Input box |  | Y | Y | N |
| Receive Promotional Materials | Yes  No | Option |  | Y | Y | Y |
| Disclosure Of Information | Yes  No | Option |  | Y | Y | Y |
| Customer ID | Must be unique per customer.  Composed of 8 characters.  Must start with capital C followed by 7 digits. | ~~Input box~~  Label |  | Y | N | Y |
| Account Number | Must be unique per customer.  Composed of 12 digits. | Input box – for enrollment/registration  Label – after enrollment/registration |  | Y | N | Y |
| Verification Code | Must be unique per transaction.  Composed of 10 digits. | ~~Input box~~  Label |  | N | N | Y |
| Password | Must contain:   * Upper case letter. * Lower case letter. * Only two special characters except for single quote and double quote. * Digits. | Secret input box |  | N | N | Y |
| Username | Must be unique per customer id.  Composed of 8 alphanumeric characters.  Must start with capital U followed by 7 digits or alphabets. | Input box – for enrollment/registration  Label – after enrollment/registration |  | Y | Y | Y |
| Transaction Authorization Code | Must be unique per transaction.  Composed of 10 digits. | None |  | N | N | Y |
| Company Reference Number | Must be unique per company/merchant.  Composed of 10 alphabets. | Drop down – for enrollment/registration  Label – after enrollment/registration |  | Y | N | Y |
| Transaction Date | Must be in timestamp format (time in military format):  YYYY-DD-MM HH:MM:SS | Date/Time Picker – for search  Label - for display |  | Y | N | Y |

**Part 05: Search Function in Transaction Report**

5.1 The customer must be able to view details of transaction report by:

* 1. Transaction for today
  2. Transaction for the last 60 days
  3. Transaction for the specific period
  4. Filter by receiver account number ( a drop down list and should contain only receiver account number that are existing on a particular account)
  5. Filter by sender account number ( a drop down list and should contain only sender account number that are existing on a particular account)
  6. Filter by transaction type ( a drop down list and should contain only transaction types that are existing on a particular account)
  7. Filter by shop name ( a drop down list and should contain only shop names that are existing on a particular account)
  8. Filter by ATM reference id ( a drop down list and should contain only reference ids that are existing on a particular account)

5.2 The above search criteria can be mix and match by the customer.

5.3 Customer can choose if the search criteria must fully satisfy (must match all the criteria) or not (at least one match on search criteria).

5.4 Only show 10 search results per page. The system should provide pagination for search result more than 10.

**Part 06: Bills Payment Merchant**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Company Name** | **Account Number** | **Company Reference Number** | **Payment** | **Donation** |
| Abrio Homeowners Association Inc | 123564251584 | AHAIJKLSSS | Y | N |
| Ayala Alabang Village Association |  |  | Y | N |
| Bonifacio Global City Estate |  |  | Y | N |
| Rotary International |  |  | N | Y |
| Marquee Place Homeowners Assn |  |  | Y | N |
| Angeles City Cable Television |  |  | Y | N |
| Parasat Cable TV |  |  | Y | N |
| Pilipino Cable Corporation |  |  | Y | N |
| Sykcable Corporation (Home Cable) |  |  | Y | N |
| Telmarc Corporation |  |  | Y | N |
| Club Filipino |  |  | Y | N |
| Iloilo Golf & Country Club Inc. |  |  | Y | N |
| Riviera Sports & Country Club, Inc. |  |  | Y | N |
| The Orchard Golf & Country Club |  |  | Y | N |
| Bankard |  |  | Y | Y |
| BPI Globe BanKo |  |  | Y | Y |
| BPI Express Cash |  |  | Y | Y |
| BPI Express Credit Card |  |  | Y | Y |
| The Hongkong & Shanghai Banking Corp. |  |  | Y | Y |
| ABS-CBN Foundation Inc Sagip Kapamilya |  |  | N | Y |
| Ayala Foundation, Inc. |  |  | N | Y |
| BPI Foundation Assistance Fund |  |  | N | Y |
| Childrens Hour Philippines Inc. |  |  | N | Y |
| The Rotary Foundation |  |  | N | Y |
| World Vision Development Foundation |  |  | N | Y |
| AIG PHILIPPINES INSURANCE INC |  |  | Y | Y |
| Ayala Plans - Dollar Policy |  |  | Y | N |
| Blue Cross Insurance |  |  | Y | N |
| BPI/MS Insurance Corporation |  |  | Y | N |
| Great Life Financial Assurance |  |  | Y | N |
| Philam Life General |  |  | Y | N |
| AEON CREDIT SERVICE PHILS.INC. |  |  | Y | N |
| BPI Family Bank (AUTO LOANS) |  |  | Y | N |
| 4Life Research Phils. Inc. |  |  | Y | N |
| Avon Cosmetics Inc. |  |  | Y | N |
| Kia Pampanga |  |  | Y | N |
| Max Health & Living Intl Inc |  |  | Y | N |
| Right Goods Phils., Inc. |  |  | Y | N |
| Astrazeneca Pharmaceuticals |  |  | Y | N |
| Via Viente Ltd - Eurocare |  |  | Y | N |
| AVIDA – ROME |  |  | Y | N |
| Philam Properties Corp. |  |  | Y | N |
| ATENEO JUNIOR HIGH SCHOOL |  |  | Y | N |
| Ateneo de Manila - Loyola School |  |  | Y | N |
| Besavilla Engineering Review Center |  |  | Y | N |
| De La Salle Lipa, Inc. |  |  | Y | N |
| FEATI Schools Inc |  |  | Y | N |
| Infant Jesus Academy |  |  | Y | N |
| Institucion Teresiana de Educacion Y Cultura Inc. |  |  | Y | N |
| Lyceum of the Philippines University Inc – CAVITE |  |  | Y | N |
| Manila Waldorf School |  |  | Y | N |
| Southwestern University |  |  | Y | N |
| Bayan Telecommunications |  |  | Y | N |
| Digital Telecommunications |  |  | Y | N |
| Extelcom Corporation |  |  | Y | N |
| Infocom Technologies Inc. |  |  | Y | N |
| Philippine Long Distance Telephone Co. |  |  | Y | N |
| CEBU PACIFIC AIR (CASH ONLY) |  |  | Y | N |
| BONIFACIO GAS CORP. |  |  | Y | N |
| ALI ANVAYA UTILITIES |  |  | Y | N |
| Maynilad Water Services |  |  | Y | N |
| WEEPAY |  |  | Y | N |

**Part 07: Internationalization**

7.1 The system must support the following languages:

a. English

b. China

c. Taiwan

d. Japan

e. Thailand

7.2 The system must also support the display format of date/time for each supported languages. This should affect the display format on the web page only, follow the prescribed format of date/time for database transaction (please refer to *Required Customer Fields* section).

**Part 08 System Architecture**

This section presents the prescribed system architecture for Online Banking System.

**08.01 System Overview**

Transaction

Data Access

Data Access

Request and Response

Verification and Creation of *Transaction Authorization Code (TAC)* and *Verification Code and data validation*

**Customer**

**Database Server**

**Internet**

Request and Response

**Browser**

**08.02 Layering**

**CUSTOMER**

**BROWSER**

**Online Banking System**

**VIEW**

**FILTERS**

**CONTROLLER**

**SERVICE**

**DATA ACCESS**

**Database Server**

**AUTHORIZATION AND VALIDATION SERVICE**

**Part 09 Authorization and Validation Service**

The Authorization Service is a separate enterprise system that will provide verification and creation of transaction authorization code (TAC) and registration verification code. It will also provide all data validation presented in *Part 03: Input validation* section.

The service should use a secure randomize code for both TAC and verification code. These codes should be unique per transaction.