QCITY BANK

Investment Banking

CASE STUDY – V.1.0

INTRODUCTION

Qcity Bank is one of the leading Financial Institutes in India. Qcity Bank is planning to automate all the banking operations. At first level they would like to automate key operations in the following three divisions.

1. Core Banking
2. Investment Banking
3. Loan Management

Core Banking

Key operations in core banking are operating various accounts like, savings account, current account, salary account, pension account etc.,. If customer wants to open any account first they need to register with the bank. For registration process customer need to approach customer representative of Qcity Bank. The customer representative will enter the details of the customer in the system and system should generate a unique customer id. The requested customer id will be activated only after validating the address proof and PAN card. Otherwise, the status should be inactive.

After successful registration of the customer, system must generate a unique customer id and the same is given to the customer for future reference.

To open any one of the following accounts customer must provide the customer id to the clerk. Clerk will enable the requested account based on the eligibility criteria defined against each account. The detailed description of various accounts available in the bank are given below:

Savings Account : This can be opened by any individual and bank will pay interest against the average balance maintained in the account. Detailed features of this type of account are given below:
1. A minimum deposit of Rs. 1000 (metro/urban branches), Rs. 500 (semi-urban/rural branches) is required to open an account and thereafter an average monthly balance of the same amount has to be maintained. If the balance is not maintained, a charge of Rs 25/- per month would be levied.
2. Interest on a Savings Account is paid at 4.00% p.a. on a monthly end of day balance, w.e.f the day of activation of your account.
3. Minimum age of opening an account is 18years. In case of customer is less than 18 years then bank needs the information about the guardian(the person who is already the account holder of the same bank) as well.
4. Joint account facility is also provided by the bank. The minimum age for one of them can be below 18 years.
5. No over draft facility
6. Free - 25 cheque leaves per calendar quarter. Additional cheque book of 25 leaves will be charged @ Rs 50/- per cheque book
7. Can avail additional facilities like debit and credit cards
8. Joint account facility is available.

Salary Account: It is like a regular savings account, where your employer will credit your salary/pay check every month. Detailed features of this type of account are given below:

1. No deposit is required to open this account, zero balance is allowed.
2. Interest on this account is paid at 5.00% p.a. on a monthly balance.
3. If minimum quarterly average balance is more than Rs 20,000   then 3% interest will be rewarded
4. Can avail overdraft facility, 10% of balance amount
5. Can avail additional facilities like, debit card and credit card
6. Free - 25 cheque leaves per calendar quarter. Additional cheque book of 25 leaves will be charged @ Rs 25/- per cheque book
7. If the salary is not deposited for three successive months, then salary account is automatically converted to regular savings account on the 1st day of the fourth month

Pensioner Account: A pension account can be opened by any employee.   The account can be opened six months prior to the date of retirement.

This type of account should contains the following features:-

1. Zero balance is allowed
2. Interest rate will be 4 % p.a on the principle amount
3. If Minimum Quarterly average balance is more than Rs 15,000 then 3% interest will be rewarded
4. Automatic conversion from saving to current after the last salary credited
5. No overdraft facility
6. Free - 25 cheque leaves per calendar quarter. Additional chequebook of 25 leaves will be charged @ Rs 50/- per chequebook
7. Can avail debit card, but no credit card facility.
8. Automatic closure of the account , if there are no transactions happened in the last 6 months

Current Account: Any individual/ private or public limited companies / partnership firms are eligible to open this account. Detailed features of this type of account are give below:

1. A minimum deposit of Rs. 10,000 is required to open this account and thereafter an average monthly balance of the same amount has to be maintained. If the balance is not maintained, a charge of Rs 750/- per month would be levied.
2. No interest paid against on the balance maintained in this account
3. No overdraft facility
4. Check book facility is available, Rs 2/- per leaf
5. Can avail debit and credit card facility
6. Joint account facility

Fixed Deposit: Any Residents/ Partnership firms/Limited companies/Trust accounts are eligible to have fixed deposit.

 A few things to note.

1. An initial deposit of Rs. 5,000/- is required to open a Fixed Deposit. Effective 01st April 2010, PAN is mandatory to book Fixed Deposits if the total Fixed Deposit

holding per customer id per branch exceeds 50,000/-

2. Interest is calculated on a quarterly basis for deposits of 6 months and above
3. For those deposits with a tenure of below 6 months,interest is calculated at maturity as Simple Interest. The period of Fixed Deposit is calculated in number of days.
4. Interest for re-investment is calculated every quarter, and the Principal is increased to include interest earned during the previous quarter
5. Tax at source is deducted as per the Income Tax regulations prevalent from time to time (refer any nationalized bank to calculate the tax)
6. Locker facility is given to fixed deposit holder,only if the amount is more than 1 lakh rupees
7. Credit Card facility is available
8. Interest rates are given below

Period	Interest Rate p.a	**Senior Citizen Rates p.a	Effective From
7 - 14 days	3.50%	4.00%	05/12/12
15 - 29 days	4.00%	4.50%	05/12/12

Qcity Bank offers three varieties of Debit and Credit cards. These cards can be issued only to the existing customers. Type of card can be decided based on customer business transactions with the Bank. Gold and Platinum Cards can be issued only to the most privileged customers.

Fees	Annual fee (Rs)		Renewal fee (Rs)		Withdrawal / Usage limit (Rs)		Interest against late payment (per day)		Revolving Credit (only for credit card)	
Type of Card	Debit	Credit	Debit	Credit	Debit per day	Credit per month	Debit	Credit	Min amount / bill	Charges / month
Silver	100	100	100	Nill	20000	1,00000	N/A	4.00%	5.00%	3.25%
Gold	500	Nill	500	Nill	35000	2,00000	N/A	3.00%	5.00%	3.00/%
Platinum	500	Nill	500	Nill	50000	3,00000	N/A	2.00%	5.00%	2.75%

A clerk from Qcity Bank can perform the following activities as part of core banking operations:

1. Activation of Account
2. Activation of Debit and Credit Cards
3. Deposit Money
4. Withdraw Money
5. Deactivation of Account
6. Money transfer between two Accounts
7. Generating Account Statements

8. Generating Credit Card Statements
9. Updating Customer details

Investment Banking:

A client/counter party is called a Business Partner (BP) in terms of investment banking. The business partner can be a client/counter party. Business partners will have Cash Account and Stock Account with the bank.

Manager of the bank can only have privileges to add or delete a business partner and assign the role of client/counter party/both. The clerk can have only update privileges, against business partner.

Given below are the details of business partner.

Business Partner details should have "Id"(unique), "Name", "Address", "Phone No", "Mail Id", "Role" etc. Once "BP Id" is created, should not be allowed to get updated by anyone.

BP Role can be a "Client" or "Counter party" or both(Client & Counter party).
Client - This refers to the company which is a client of Qcity Bank and does trading through this bank.
Counterpart - This refers to the company with which Qcity' s client wants to Trade.

For Example :

BP Id	BP Name	Role
BP0001	ABN AMRO	CLIENT
BP0002	MINDTREE	CLIENT
BP0003	DLF LIMITED	COUNTERPARTY
BP0004	PO PVT LTD	BOTH
BP0005	HERO MOTOCORP	BOTH

Every BP must be holding one cash account and one stock account with Qcity Bank. At the time of BP creation, system should take its cash account details such as cash account ID, amount.

Every client and counterpart existing in system might or might not have shares at any particular time. Clerk should be able to view all these details at any point of time. There should be one option "Manual Booking" using which senior clerk will be able to make entry in which BP is having how many shares and of which company. Basically, system should allow Senior clerk to do manual bookings apart from trading.
System should give option "manual booking" for all existing Business partners by entering details like Share Name, quantity of shares.

For Example:

BP Id	Role	Stock Name	Stock Quantity	Cash Account	Amount
BP0001	CLIENT	ESSAR OIL	900	CA0101	100000
BP0002	CLIENT	-	0	CA0102	0
BP0003	COUNTERPARTY	HINDUSTAN PETROLEUM	200	CA0103	2000000
BP0004	BOTH	COAL INDIA LTD	1000	CA0104	55500
BP0005	BOTH	-	0	CA0105	400000

As per this example, BP0002 client is not having shares, neither cash in its account. But it has a cash account CA0102 with the Qcity Bank. Say, Some senior clerk does "manual booking" of 100 "TATA STEEL" for BP0002 client, system should display below data (not necessarily in this format) after manual booking.

BP Id	Role	Stock Name	Stock Quantity	Cash Account	Amount
BP0001	CLIENT	ESSAR OIL	900	CA0101	100000
BP0002	CLIENT	TATA STEEL	100	CA0102	0
BP0003	COUNTERPARTY	HINDUSTAN PETROLEUM	200	CA0103	2000000
BP0004	BOTH	COAL INDIA LTD	1000	CA0104	55500
BP0005	BOTH	-	0	CA0105	400000

In this example, Trading can be done between any client and counterparty. i.e. BP0001 can trade with BP0003, BP0004 and BP0005.
But BP0001 cannot trade with BP0002 as both are clients.

Trading can be of two types , Free of payment and Versus Payment.

Free of payment (FOP) trades

Cash/Cash accounts are not involved in FOP trades. This is generally done when shares are traded in return of some other shares instead of money. This kind of trading is also done by bank when both client and counterparty want to settle money outside the system, But want to manage stock by system.

Versus payment (VP) Trades

Cash/Cash accounts are involved in VP trades. This is done when shares are traded for money. This kind of trading is done by bank when both client and counterparty want to settle money and shares by the system.

- Receive (RVP) - Client receives shares from Counterparty and gives money to Counterparty.
- Deliver (DVP) - Client deliver shares to counterparty and takes money from Counterparty.

Cash details are updated in cash account and stock details are updated in stock account.

FOP Trade can be of 2 types
- Receive (RFP) - Client receives shares from Counterparty.
- Deliver (DFP) - Client deliver shares to counterparty.

- Similar types exist in Versus Payment trades also.

VP Trade can be of 2 types
Below should be the steps for settling Trade
1. Trade creation
2. Trade settlement

Trade can be created by Clerk as well as Senior clerk. System should take required details such as Client Id, Counterparty Id, Share name, Share quantity, Settlement amount(in case of versus payment trades) Settlement date, trading date (the date when trade is being created) etc. Settlement date should always be equal to or greater than current date. Trading date should always be before settlement date. Trade creation should be allowed only if that much shares are available with client or counterparty for trading. Once all valid details are entered system should create trade. Some unique Trade id should be given to all trades by system at the time of creation. Once created Trade should be in status "Created". All clerks/Senior clerks should be able to view all trades anytime.

For Example : If BP0001 wants to buy 100 shares of COAL INDIA LTD from BP0004, Trade can be created. But if BP0001 wants to buy 5000 shares of COAL INDIA LTD from BP0004, Trade can not be created as BP0004 is not having 5000 shares to sell.
If BP0001 wants to buy 100 shares of COAL INDIA LTD from BP0004, It will be RFP trade. As client will be receiving shares from counterparty.

Trade Id	Trade Type	Client Id	Stock	Stock quantity	Counterparty
TR0001	RFP	BP0001	COAL INDIA LTD	100	BP0004

Trades cannot be settled by clerks. Only Senior clerks have the authority of settling trade. If some senior clerk has created or updated (need to check latest updation only) any trade, then that particular trade cannot be settled by same senior clerk. Some other senior clerk can settle that trade.

Trade can be settled only on the settlement date given at the time of trade creation. If RFP trade is settled, System should remove trade quanity of those particular share from counterparty and add the same to Clients shares. If DFP trade is settled, System should remove trade quanity of those particular share from client and add the same to counterparty shares. There can be a case when shares were available at the time of trade creation but not at the time of settlement due to some other trade settlement in between. Trade settlement should be allowed only if that much shares are available with client or counterparty . Once settled, Trade should be in status "Settled".

Senior Clerk / Manager of Qcity Bank should able to perform one/all the following functionalities:

1. Create Business Partner
2. Update Business Partner
3. Trade Creation
4. Trade Settlement

Loan Management

Apart from savings and trading accounts Qcity bank also offers various loans to any individual (salaried or self-Employed). The minimum age of the applicant must be 21 years and the following conditions should be met.

Employee should have had a job for at least 2 years and a minimum of 1 year with his/her current employer. Applicant must earn at least Rs. 10,000/- per month net income (Rs. 15,000/- in Mumbai, Delhi, Bangalore, Chennai and Hyderabad, Rs. 12,000 in Calcutta, Ahmedabad and Cochin). To process the loan applicant must submit the following documents for verification: proof of identity, proof of address, last three months bank statement and most recent salary slip or current dated salary certificate with the latest Form 16.

For self-Employed profession: should be 21-65 years of age ; be in the business for at least 3 years in current organization, with 5 years of total experience. Should earn at least Rs. 1,00,000 per year. To process the loan, in addition to the employee category, he/she should submit a copy of latest income tax return (ITR) along with computation of income, balance sheet (B/S) and profit and loss (P&L) a/c for the last 2 yrs. certified by a CA.

Home Loans:

Home loans for individuals to purchase (fresh / resale) or construct houses/flat. Applicant can be made individually or jointly. QCity Bank finances up to 80% of the cost of the property (including the cost of the land) based on the repayment capacity of the customer. Monthly EMI is calculated based on the rate of interest (Fixed or Floating Rate) and the repayment duration. Qcity Bank offers the wide range of Home Loan products, as defined below.

- Home Loan with Fixed Rate: Qcity offers this loan to any individual whose annual income is at least Rs.10Lakh. As per 1st April 2012, 14% is the Fixed Rate of interest.
- Home Loan with Floating Rate: Qcity offers this loan to any individual whose annual income is at least Rs.8Lakh. As per 1st April 2012, 12.5 % is the Fixed Rate of interest.

Note : There might be waivers on interest rates from the employees of listed companies, the list may vary time to time. The application should also have the provision of updating these changes in the

Fees and charges applicable:

Fee description	Amount to be paid
Loan processing charges	Up to 2.0% of the loan amount
Foreclosure charges	No prepayments allowed in first 6 months. 6 months - 5 years - 1.5% of original loan amount. 5 years -10 years - 0.75% of original loan amount. > 10 years – no closure fee
Switch from Floating to Fixed (vice-verse)	1% on balance amount (can be reduced based on the type of customer)
Charges for late payment of EMI	2% per month

Personal Loans: Qcity bank offers personal loan to any individual ranging from Rs.1,000 to Rs.1 Cr. Monthly EMI is calculated based on the rate of interest and the repayment duration.
Fees and Charges applicable:

Fee description	Amount to be paid
Interest rate	Salaried - 15.75% to 22.25% Self-employed businessman - 17.50% to 22.00% Self-employed profession - 14.50 to 15.00%
Loan processing charges	Up to 2.50% of the loan amount subject to a minimum of Rs. 1,000
Prepayment	Salaried- No pre-payment permitted until repayment of 12 EMIs Self-employed - No pre-payment permitted until repayment of 6 EMIs
Prepayment charges	Salaried - 4% of the principal outstanding after repayment of 12 EMIs. For top-up/enhancements - 2% of the principal outstanding Self-employed - 4% of the principal outstanding after repayment of 6 EMIs
Charges for late payment of EMI	24% per annum on amount outstanding from date of default

Vehicle Loan: Qcity Bank offers loans for new and used vehicles. Customers can have 80 -100% finance on new vehicles and 70 - 80 % on used vehicles. Special benefits offered for Qcity bank account holders. At present, Qcity offers vehicle loan at 14.5 % (two wheeler 13.5 %) rate of interest.

Fees and charges applicable:

Fee description	Amount to be paid
Processing fees	<u>New vehicle:</u> Up to 2.5 Lakhs: Rs. 2625/- Over Rs. 2.5 Lakhs up to 4 Lakhs: Rs. 3650/- Over Rs. 4 Lakhs to 5 Lakhs: Rs. 4100/- Over Rs. 5 Lakhs up to 10 Lakhs: Rs. 4450/- Over 10 Lakhs: Rs. 4950/- <u>Two wheeler:</u> Maximum - 4% of Loan Amount or Rs.600/- whichever is higher <u>Used vehicle:</u> 2% of loan amount or Rs. 5000/-, whichever is lower
Late Payment Penalty	2% (2.5 % for two wheeler) per month on the unpaid installment

FC charges	6% of Principal Outstanding for foreclosures within 1 year from 1st EMI
	5% of Principal Outstanding for foreclosures within 13-24 months from 1st EMI
	3% of Principal Outstanding for foreclosures post 24 months from 1st EMI
	No foreclosure allowed within 6 months from date of availing the car loan

Mortgaged Loan or property loan. Qcity Bank offers loans against Gold ornaments and mortgage of property. In order to avail this loan, in addition to other verification documents, applicant must submit copies of all property documents of the concerned property.

Rate of interests:

Fee description	Rate of Interest
Loan against Gold ornaments	Upto Rs. 1,00,000/- 14.25% Above Rs. 1,00,000/- 14.75.%
Mortgage of immovable property	Upto Rs. 1,00,000/- 15.25% Above Rs. 1,00,000/- 15.75.%

Fees and charges applicable:

Fee description	Fee description
Loan processing charges	2% of sanctioned amount
Charges for late payment of EMI	2 % per month on overdue EMI amount
Charges for CIBIL Report	Rs. 50/- per request

The loan processing module should have the following functionalities:

1. Register a new customer with the Bank as a customer subscribed to loan account.
2. Read/Update/Deactivate/Delete Customer details.
3. Create a new loan account.
4. Deactivate Loan A/C
5. Delete Loan A/C
6. Calculate EMI based on the interest rate, loan amount and other limitations, if any.
7. Pay EMI amount
8. Pay Advanced payment
9. Generate loan account statement , at any point of time.
10. Send a notice if a customer is a defaulter for 3 consecutive months

11. Generate a home loan projection statement for Income tax(report).

Clerks from the each business unit are the key users of this Application Software. The Manager of each business unit will have the right to change any of the business parameters associated with their unit. The General Manager will have the right to change any business parameter in any product/unit.

Qcity Bank also expects a robust MIS reporting functionality on various parameters available within the purview of the system. The teams are encouraged to incorporate as much reporting options as possible.

Non Functional Expectations from the system includes:-

1. Good Usability.
2. The Login Process should be robust.
3. Good User/Role Management options (Clerk/Senior Clerk/ Manager)
4. Use of Error messages to cover exception scenarios.
5. Log files to be archived for each transaction and user details. The log files have to be renamed with the current run time stamp and moved to the archive folder