Transformation Systems at ABC Bank

Project Specifications

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Project Objectives

o   Relate aspects and contents of Banking & Technology overview and trends with the real needs and scenarios

o   Emphasize how technology has transformed banking, emphasize it is important for institutions to stay in line with technology and automation trends

o   Relate it is not one measure for all, its not one solution for all. Organizations need to choose solutions that are best suited for their business

o   Projects in seven different areas address some of the key aspects of consumer banking

o   Though there are different projects, there is a level of interdependency – indicating that the need of the hour is "integrated solutions"

o   Aspects of seven projects/ systems are chosen in such a manner that despite different business objectives there are certain common "components"; how can this be addressed in more contemporary approaches – object/component based development / SOA and so on

o   With the successful completion of these projects, individuals are expected to apply their technical capabilities for the financial services solutions. Execution of these projects around defined SDLC lifecycle will get them exposed to near reality of workplace discipline.

Project work - snapshot

Nature of project – Development

Development environment

    J2EE – Java Servlets, Java Server Pages, STRUTS, EJB

    Eclipse

    Tomcat

    JBOSS

    Oracle Database Server

Life cycle for each team of 4 people

    Understanding the requirements for the entire project

    Analysis, Design and development of a specific module (will be assigned)

    Testing of the assigned module

    Integration testing for the entire project

Evaluation

    Presentation after every stage of life cycle

    Presentation at end of the project work
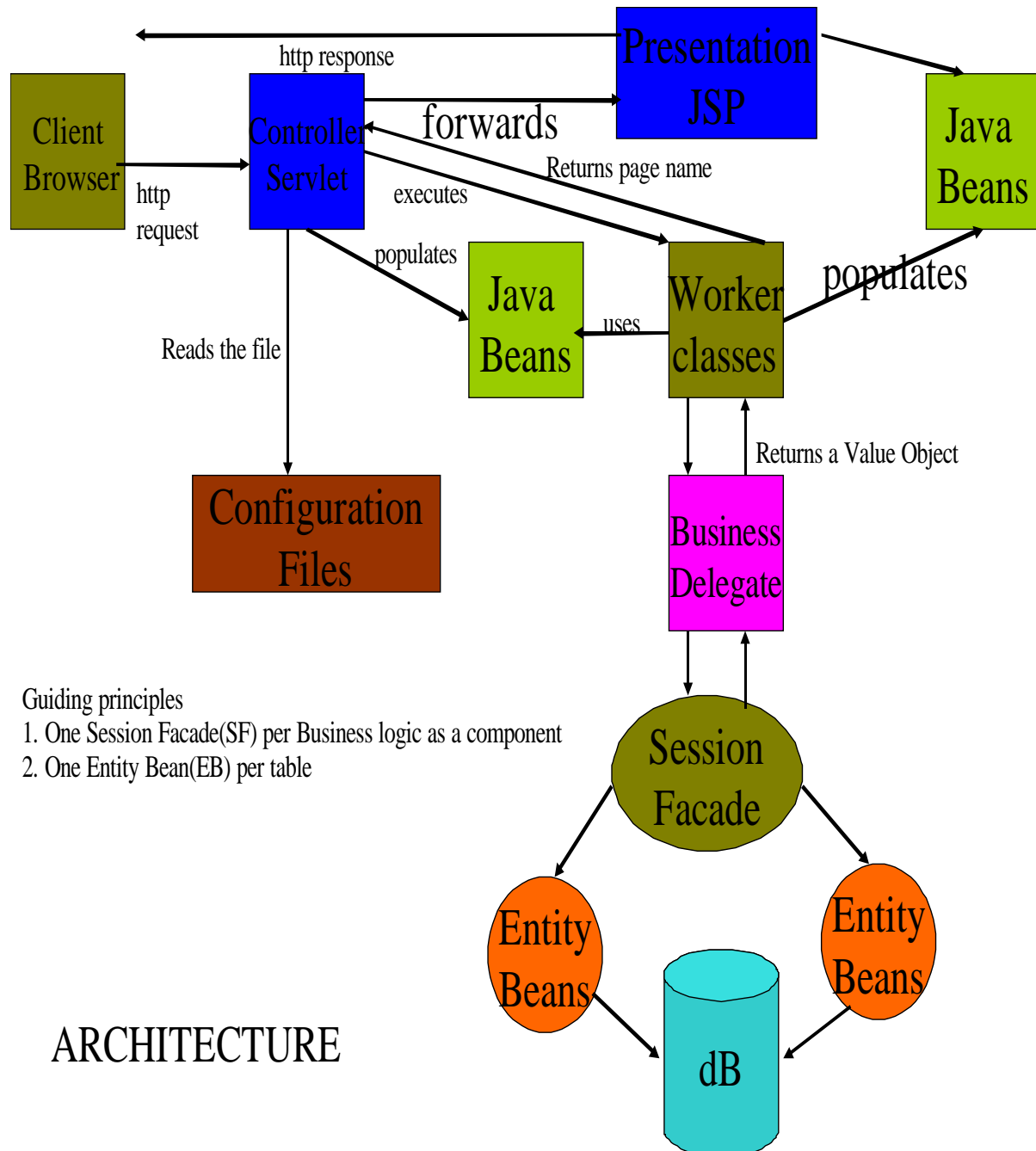
Schedule

No.	Activity	Timeline	Inputs	Outputs
1	Project introduction	Trainer will introduce the project and provide clarifications before the commencement of the project		
2	Understanding the requirements, E-R diagram and DB design		Project Specifications, E-R Diagram	
3	Screen design	1 day	Requirements and E-R diagram	Screen layouts
4	Development	3 days	Requirements, Architecture, Screen layouts, DFD and E-R diagram	Program code, Unit test plans, Unit test results
5	Integration testing	1 day		Integration test results
6	Presentation	1 day		

Project Evaluation Criteria

Area	Description of what is measured
Requirement understanding & Elaboration	How well the team has understood the requirements and articulated it.
Adherence to Overall Architecture / Technical Solution	Whether the architecture has been complied with and all the components are coded as per the architecture laid out
Detailed Design	Quality of detailed design artifacts like screen design
Quality of code	Clarity, level of documentation, exception handling, logging, memory management etc
Testing	Quality/Comprehensiveness of test cases, actual test planning - unit testing approach, cases, functional testing, integration testing
Final Product Quality	Based on demo - assessment of the product quality from a user perspective - UI, ease of use, number of defects, performance, conformance to requirements
Teamwork / Coordination with other teams	How well the team worked together as a unit, leadership, cooperation with other teams etc
Adherence to standards	Adherence to basic standards established upfront like naming conventions etc
Adherence to timelines	Self explanatory
Presentation Quality	Checks communication and presentation skills, ability to field questions etc

Architecture to be followed

Guiding principles
1. One Session Facade(SF) per Business logic as a component
2. One Entity Bean(EB) per table

ARCHITECTURE

Project Overview

Transformation systems at ABC Bank

Banking and financial industry is changing rapidly. Technology adoption has enabled various financial institutions to transform banking into an experience more than depositing and withdrawing money. Technology trends and automation in financial institutions has also enabled efficiency, productivity and distribution of services to provide better, faster and cheaper services to its customers. Equipped with the state of art systems, several large financial institutions are now expanding to capture the regional markets.

ABC bank (Bank) is a regional bank and has been in existence in southern states of India since 1965. So far Bank has been providing standard banking services to its almost captive customers who have been with the bank for several decades. Bank has been able to retain these customers primarily because of their personalized and timely services. For all these years, ABC bank made minimal investments in its technology platform and various systems. As a result, ABC bank has not been able to offer value added financial services and responsiveness to its customers. Because of the changing banking environment and competition from larger financial institutions, ABC bank has started losing its customers and its profitability is continuously decreasing. In the last board meeting, directors assessed the situation. Board felt that bank has a critical mass of the loyal customers and should the bank be able to provide contemporary services combined with its passion for customer services, it will not only be able to retain its customers, but it will also be able to grow profitably. Board resolved that Bank must undertake an initiative to transform its technology as well as systems, launch new products and services. Board also mandated that Bank must build its new systems based on latest technology platform that matches its profile. Board recommended adoption of technology and standards that allow bank to manage the future changes quickly and efficiently to stay ahead of the competition.

As part of this initiative, Bank has decided to deploy the following systems:

1. Customer-one System

2. Customer Services System

3. Value-Plus Deposits Mobilization System

4. Bill payments System

5. Credit card Self-service System

6. Back-Office Services to process customer requests

7. Customer messaging and notification (AlertNow) System

Terminology

Customer : Each individual or entity with whom the Bank has a business relationship.

On-the-floor request : Requests that are accepted for later processing by the bank.

Functional Requirements

Customer-one System

Key objectives of this system are

a) Enable comprehensive profiling of the customer for proper due diligence (Know-Your-Customer)

b) Minimize request for customer information whenever a customer wants to avail of a new account or a product

c) Provide ability to bank employees as well as customers to have a consolidated view of customers' relationship with the bank

d) Create an infrastructure to enable efficient and comprehensive Customer Services

System Requirements

<u>One time requirement</u>

Current system should produce a list of customers and their accounts in the name order along with relevant customer details (address, mobile number, date of birth) to uniquely identify the customer. Based on the list, bank-officers should be able to identify multiple accounts held by same customers.

<u>On going requirement</u>

o System should allow capturing of Customer Data and assign a unique customer id to each customer. Based on customer details, system should perform de-duplication and display possible look –alikes so that bank official can verify unique customer identity

o System should allow linking of account(s) with the customer(s).

o System should provide flexible and efficient facility to view customer summary and account details

o Pull up customer information by alpha search

- o Pull up customer information against a customer id
- o Pull up customer information against any of the accounts held by a customer
  - a) Customer Summary details should provide
    - a) customer basic data
    - b) accounts held by him/her in order
    - c) account details must provide current balance
  - b) From customer summary, it should be possible to
    - a) Pick-up details of any of the accounts
- o Main accounting systems produce periodic statements and provide an extract on a regular basis. The extract will include the following information – Account number, Transaction timestamp, transaction type, transaction amount, opening and closing balances. This data is stored in chronological order and is used to print consolidated statements and summary on a regular or as needed basis.

Customer Self-Service System

Key objectives of this system are

- Allow self service to the customers so that
    - they don't need to rush to the branch for routine queries, or accounts related support services
    - they are not constrained to plan and schedule such needs to synchronize with the branch working hours
- Allow customer service officers to record customer request and track their completion
- Allow customer service officers to reflect the required changes there and then
- Allow customer service officers to respond to customer queries related to their accounts efficiently
- System to make use of Customer-One frame-work and uses common "components" for both customer self service as well as customer service officer usage to ensure integrity, consistency and above all minimize effort to implement new services or changes in system

System Requirement

- System should provide secured access over the internet to its customers to the self service system
- Self service System should allow a customer to
    - Change his/her password
    - View last statement on line
    - Change his/her contact information (address, e-mail id, phone number etc.)
    - Request for a Check book
    - On-the floor requests
    - Post a query
    - See response to queries / on the floor requests (status)

- All changes must be recorded only after displaying old and new information and secondary confirmation
- View a summary of all of his/her accounts along with the balances

- Customer Service System will be used by Bank Customer Service Officers. System should
    - o Provide ability to pull up customer information as in Customer-One system
    - o Each customer session must be tagged and timed along with transaction stamps
    - o Based on customer instruction, it should allow Customer Service Officer to carry out all activities as in self service (with the exception of password change)

Value-Plus Deposits Mobilization System

Key objectives of the system

1. Identify customers who have had strong and consistent relationship with the bank so that bank can make an exclusive offer for new service
2. Allow bank officers to
   a. capture customer's interest for deposit set-up
   b. analyze customer response, effectiveness of campaign
   c. carry out effective follow up for deposit mobilization

System Requirements

1. System should allow bank officers to define a criteria /campaign (age, average monthly balance, profession) and based on this criteria, system should
   a. flag the selected customers with the campaign code
   b. Should produce a report of the campaign wise customers
   c. Bank officers should be able to query any time
2. System should allow bank officer(s) to
   a. assign customers to named officers
   b. re-assign customers across named officers
3. System should allow
   a. Officers to capture details of customer contact and response
   b. Officers to capture deposit commitment details (duration, amount, mode of payment etc.)

c. Generation of a daily report as well as query on details of deposit commitment from customers

d. Officers to query list of customers who have made a commitment for a response on a specific date

Bill Payments System

Key objectives of the System

- o Allow customers to set up and pay bills in a simple and fast manner
- o Ability to set up payments in advance
- o Ability to receive bills electronically from a growing list of vendors (future enhancement)
- o Attract new customers by offering the service free of cost
- o Allow categorization of bills and provide query and reporting capability to customer for tracking category-wise spend

System Requirements

- o Customers can sign up for Bill Payer by filling up the online application form. Once the application is submitted, customer can start using Bill Payer right away.
- o Customers can add billers to the service by entering information from their current billing statement sent by the biller. Bill Payer allows set up of payments in advance.
- o The payment can be set up using the Pay Bills function. The customer enters the amount and selects the biller to be paid. The system shows the earliest date the payment is expected to reach the biller. The payment can be scheduled to arrive any time later by entering a due date up to 12 months in the future by manually typing in a date or choosing a pay date from the dynamic calendar.
- o Categories will be automatically assigned to each biller based on common industry categories, such as "Mortgage", " Utilities", or "Telephone". Customer can create new, personalized payee categories that will be integrated into the Bill History and Bill Payment functions.
- o Members who have more than one account set up in their Bill Payer account will be prompted to select their "Preferred Account". Members will be prompted to select their "Preferred Account" while signing up and when selecting a funding account during payment set up.

- o Customer can make changes to the payment amount, payment date, and withdrawal account of payments which are in pending status
- o On the payment date, a check is generated and mailed to the biller's address.

Credit Card Self-service

Key Objectives of this system are to –

o Allow self service to credit card customers so that most of the routine requests can be addressed online

o Provide flexibility to customers to schedule their payments in line with their cash flow

o Promote and reward loyal customers in proportion to their spending

System Requirements

o System should provide secured access over the internet to credit card customers to the self service system

o System should allow a customer to

   a) View a consolidated picture of all cards online

   b) Request add-on card

   c) Request for increase of credit limit

   d) Report lost or stolen cards

   e) Set payment due date to suit cash flow. The statement will be generated and mailed to customer 3 weeks prior to the due date

   f) Report disputed transactions

o The bank plans to institute a rewards program that allows the customers to earn points every time they use the Card. The reward points can be redeemed against the products and services in the rewards catalog.

   a) The credit card processing system would update the rewards account of the customer based on the spending and payments.

   b) Customers can view their reward point balance and request for redemption of points against products in the catalog. The account should have a minimum balance of 100 points for redeeming a reward.

   c) Each product in the catalog will state the number of points required for redemption.

   d) The redemption requests are stored and the point balance is updated online. Once a request is received, it can not be cancelled. Unless specified otherwise, the product

will be dispatched to the customer's billing address. Customer can also specify if the product is to be gift-wrapped and the message to be printed on the gift card.

e) The redemption requests are processed by the marketing department at end of each day.

Back-Office Services to process customer requests

Key objectives of the system are to

- o Allow bank employees to view and process requests received from customers
- o prioritize requests based on the relationship with the bank
- o ensure customers receive personalized service, eg: insufficient balance alert

System Requirements

- o Search requests based on the customer id or the customer name.
- o Process following types of requests
    - a) address change (on production of documentation)
    - b) respond to queries
    - c) check book requests
    - d) add-on card
    - e) notification for increase of credit limit
    - f) lost or stolen cards
    - g) reward point redemption requests
- o Based on the progress of the request, the status should be updated and comments should be entered.
- o All updates should be logged with employee name and timestamp.
- o Bill payment review and process
    - a) Each day, the bank officer will review the payments due for payment as set up in the bill payments system. In case the account balance for any instruction is not sufficient to cover the bill amount, an exception will be shown (in red color). The bank officer will select the instructions to be processed. The balances are updated and the instruction status is set to "Processed".

Customer messaging and notification (AlertNow) System

Key objectives of the system are to

- Allow customers to manage their accounts without being online
- automatically trigger alerts to customers in case of occurrence of certain events selected by the customer
- generate notifications to customer through SMS messages, email or tele-call.
- Enable customer to choose any number of events from a comprehensive list covering various types of transactions.

The is to be completely integrated with banking and credit card modules.

System Requirements

- Choice of different modes for alerts for different times in a day
- Choice of events on which to be alerted
    - Deposits
    - Withdrawals
    - Cheque clearing
    - Credit card payment due
    - Payment received
    - Credit limit utilization
- Customer can be alerted when specific transactions take place of an amount exceeding the amount specified by the customer (eg. withdrawals above Rs.5000, credit limit utilisation at 70% etc)
- Alerts can be marked as one-time or to remain in effect for a specified period
- Re-alerts can be sent at specified frequency
- Option to charge the customer on a differential basis for the service
- For critical events, a joint account holder can be alerted

- Bank initiated alerts like birthday greetings, product promotion messages, loan repayment messages

- Option to use another communication channel in case of failure of one channel

- Customers can modify and delete alerts, change e-mail and mobile addresses online without requiring a bank officer's intervention