Software Design Specification

AUTOMATION OF WITHDRAWAL BOOKLET CHARGES

Software Design Specification
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Document Control

This document is maintained under change control. All changes must be formally documented and agreed by the project team before they are put into effect.

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System Overview

I. Introduction

In todays' competitive market, it is important the bank keeps coming up with solutions that are timely and friendly to customers which in turn increase the banks income.

Feedback shows that the bank is losing money through income leakages regards savings withdrawal booklet charges issued to customers. A solution has been envisioned to automate the taking of charges immediately the booklet is issued, thereby reducing the possibility of the aforementioned leakages.

Process Objective

The purpose of this solution is to streamline the process of issuing savings withdrawal booklets to customers

Benefit to Customer

- Reduce fraudulent activities on savings account
- Give customer controlled access to his/her account.

Benefit to the Bank

- Reduce risk of income leakage
- Increase earnings and channel profit for the bank.

II. Functional Requirement

The user requirements and functional requirement are outlined in the table below, as indicated on the BRS. Some requirements will be added base on systems exigencies, but will not alter or conflict with the core requirements and functionalities.

ID	Requirements Reviewed	Comment
R01	Sign On with AD credentials	OK
R02	Input customers account number on the input field provided in the home page and submit	OK
R03	Display customers account information and provide an input field to enter booklet serial number and submit to HSSA.	OK
R04	Send notification of request to HSSA	OK
R05	HSSA review request and approve or decline request	OK
R06	Solution debit customers account on request approval	OK
R07	On request decline, insert reason for decline in a comment field	OK
R08	On completion send a notification to SSA.	OK
R09	Generate a report of total issued booklet in date range	OK

III. System Process Flow

The figure below show a process workflow of the application. The flowchart captures the three stakeholders of the application, namely: SSA; HSSA and the activity there perform.

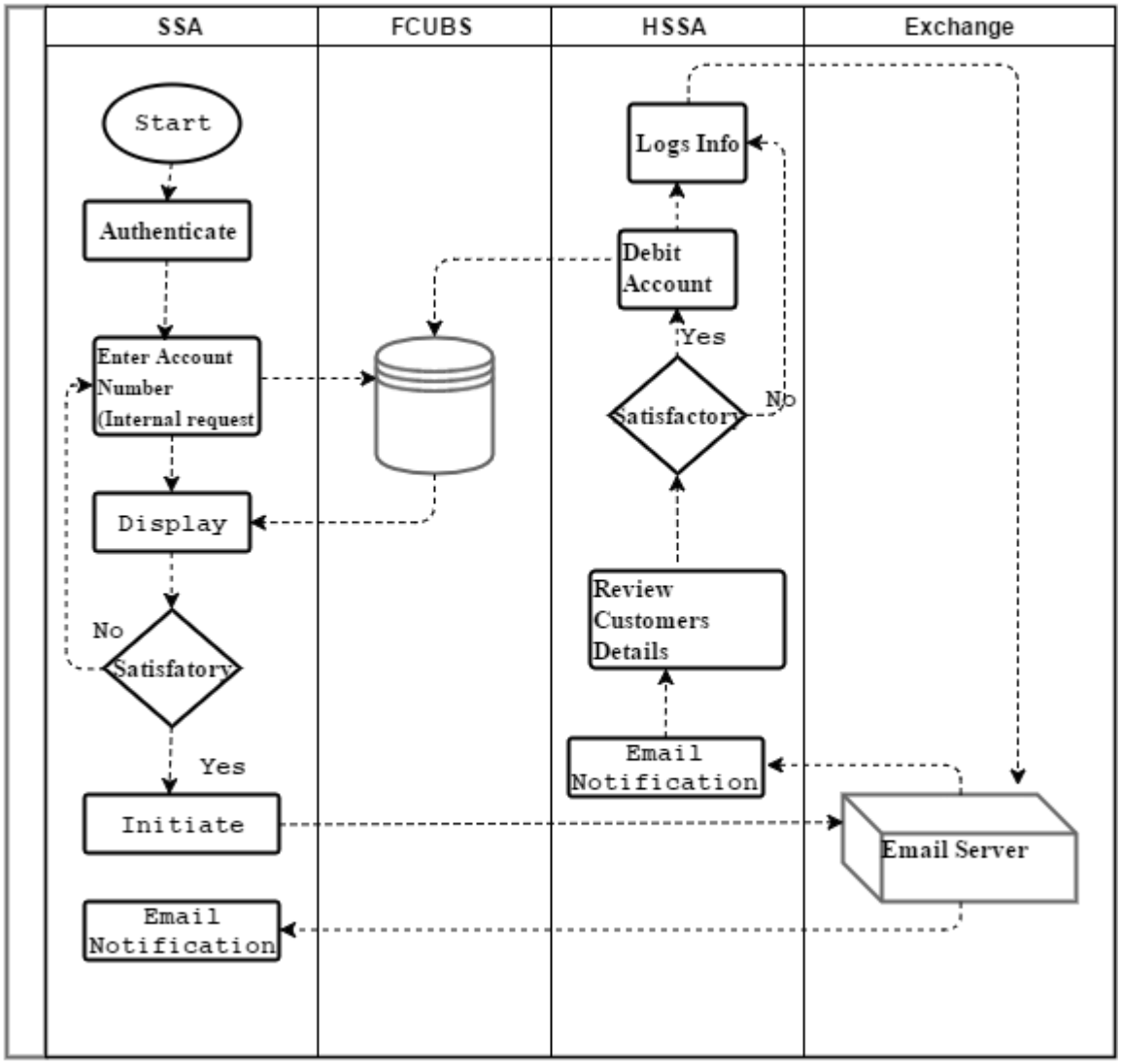

Figure 1. System Process Flow.

Figure one above is an overview of the interaction that takes place between the user and the system, how the system process the request made by the user and how the response retrieved from the database.

When the SSA enters the customer's account number on the input field, the customers details is retrieved from FCUBS and displayed to the screen, with an input field to enter the booklet range and a submit button. On submission the details get stored in the Booklet manager database and the solution sends an email to the HSSA along with a link to that particular request.

Upon authentication of the HSSA, the customer's information is retrieved and displayed for review, the HSSA can Approve or Decline the request. On Decline the

status of the transaction gets updated on the Booklet manager database as 'Unapproved' then send a notification to the SSA, why on approve the transaction status also get updated on the Booklet manager database as 'Approved' and the solution debits the customer's account on FCUBS the send a notification to the SSA.

IV. System User

Apart for the SSA and HSSA who are the key users of the solution, the system will also provide access for an Administrator and a Super Administrator. The role of the super administrator and administrator is limited, the super administrators can solely create an admin user for each branch. The admin user on the order hand creates profile for users (SSA and HSSA) in their branch. This is to enable ease of communication and notification between the SSA's and HSSA's in each branch.

V. Database Design

The diagram below describes the database tables of the application.

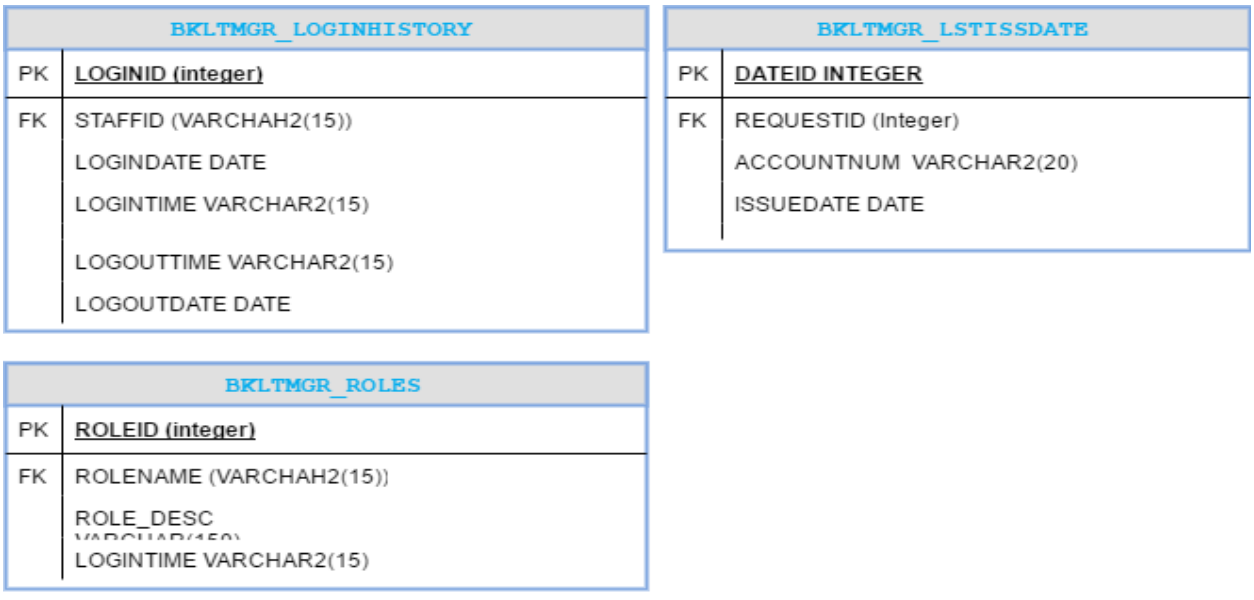

Figure 2. Roles, Login History and Last Issue Date Tables.

BKLTMGR_REQUEST	
PK	REQUESTID (integer)
	ACCOUNTNAME (VARCHAH2(100))
	ACCOUNTNUMBER VARCHAR2(15)
	ACCOUNTBALANCE INTEGER
	SERIALNUMBERSTART VARCHAR2(20)
	SERIALNUMBEREND VARCHAR2(20)
FK	SSAID VARCHAR2(15)
FK	SSALOGINID INTEGER
FK	HSSAID VARCHAR2(15)
FK	HSSALOGINID INTEGER
	STATUS VARCHAR2(11)
	HSSACOMMENT VARCHAR2(255)
	REQUESTCREATIONDATE DATE
	REQUESTCREATIONTIME VARCHAR2(20)
	REQUESTAUTHORIZATIONTIME VARCHAR(20)
	REQUESTAUTHORIZATIONDATE DATE
	BRANCHCODE VARCHAR2(6)
	PHONENO VARCHAR2(16)

BKLTMGR_USERS	
PK	STAFFID VARCHAR2(15)
FK	ROLEID (Integer)
	STAFFNAME VARCHAR2(100)
	USERNAME VARCHAR2(20)
	EMAIL
	BRANCHCODE VARCHAR2(4)
	BRANCHNAME VARCHAR2(200)
	STATUS VARCHAR(10)

Figure 3. Booklet Request and User's Table

BKLTMGR_LOG_CREDIT	
PK	LOGGID (integer)
	REQUESTID (Integer)
	PAYMENTREF VARCHAR2(50)
	BATCHID VARCHAR2(50)
	INITIATINGBRANCH VARCHAR2(5)
	ACCOUNTNUMBER VARCHAR2(15)
	CREDIT INTEGER
	CURRENCY VARCHAR2(3)
	NARRATION VARCHAR2(255)
	TRANSACTIONSTARTDATE DATE
	TRANSACTIONENDDATE DATE
	STATUS VARCHAR2(20)
	GLCASAINDICATOR VARCHAR2(10)
	RESPONSECODE VARCHAR2(5)
	RESPONSEMSG VARCHAR2(255)

BKLTMGR_LOG_DEBIT	
PK	LOGGID (integer)
	REQUESTID (Integer)
	PAYMENTREF VARCHAR2(50)
	BATCHID VARCHAR2(50)
	INITIATINGBRANCH VARCHAR2(5)
	ACCOUNTNUMBER VARCHAR2(15)
	DEBIT INTEGER
	CURRENCY VARCHAR2(3)
	NARRATION VARCHAR2(255)
	TRANSACTIONSTARTDATE DATE
	TRANSACTIONENDDATE DATE
	STATUS VARCHAR2(20)
	GLCASAINDICATOR VARCHAR2(10)
	RESPONSECODE VARCHAR2(5)
	RESPONSEMSG VARCHAR2(255)

Figure 3. Debit and Credit Log Table

VI. System Implementation

S/No	Task	Duration (Days)	Start Date	End Date	Responsible Team/officer
Design (3 days)					
1	Review requirement	2			Samuel/Debo
2	System Design and Documentation	1			
Development (20 days)					
1	**Automation of Withdrawal Booklet Charges system**	16			Samuel
Integration/Review (4 days)					
1	Test application	3			Samuel
2	Application Review	1			

VII. Software

1. **Development Tool**: .NET Framework 4.5, C# programming language, Oracle Database
2. **Web Application:** Yes

VIII. Hardware

Existing server for hosting .Net Applications Interactions