E-Banking System Portal

OOSE Exp 8

November 2019

1 Introduction

1.1 Design Overview

E- banking system software is designed so that the user can access his/her bank account from anywhere. It will be more efficient and easier way to have a record on systems through which everyone can easily access it according to his rights as compared to the traditional banking system.

1.2 Requirements Traceability Matrix

	Valid-User	Pay Bills	View Account	LogIn
Extra Bank features	X			X
Authentication	X	X		X
Transaction History				X
Registration	X	X	X	

2 SYSTEM ARCHITECTURAL DESIGN

2.1 Chosen System Architecture

The system model would be developed using RAD process model. The system can be generated in very small period of time. The overall development task is divided based on the requirements which are developed by the members of the group. The task is divided into 4 functionalities and later the work done is integrated and summoned.

2.2 Discussion of Alternative Designs

An alternative approach to build the portal would be by using incremental process model. The design of the portal is done in increments. A basic design is created and delivered and later on modifications as per requirements are done accordingly.

2.3 System Interface Description

2.3.1 Hardware Interfaces :

As this system is an online Web-based application so a web camera will be required for the most suitable Organizational style for this system. 1) Web camera

2.3.2 Software Interfaces:

Client Side: HTML, Web Browser, Flash Player, MS angular-js,react , JavaScriptOffice .

Web Server: HTML, Mongodb , firebase ,node.js , express , route handler , firebase cloud function.

3 DETAILED DESCRIPTION OF COMPONENTS

3.1 n Component-n

A user requires device like mobile or computer to be connected to the internet in order to perform online banking. The user needs to register first in order to access it. Already registered user needs to Login to the system. Login credentials of the user are verified with the database. Authentication is required while performing operations like Pay Bills, perform transactions, view account

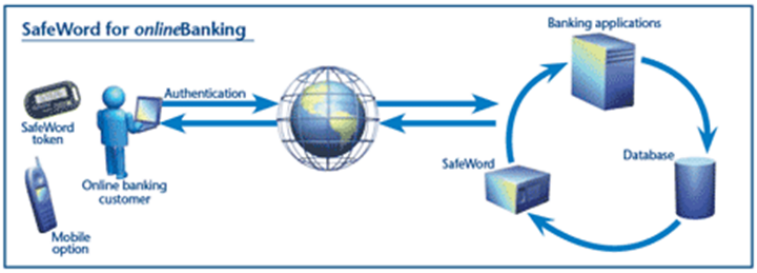

Figure 1: Flow diagram

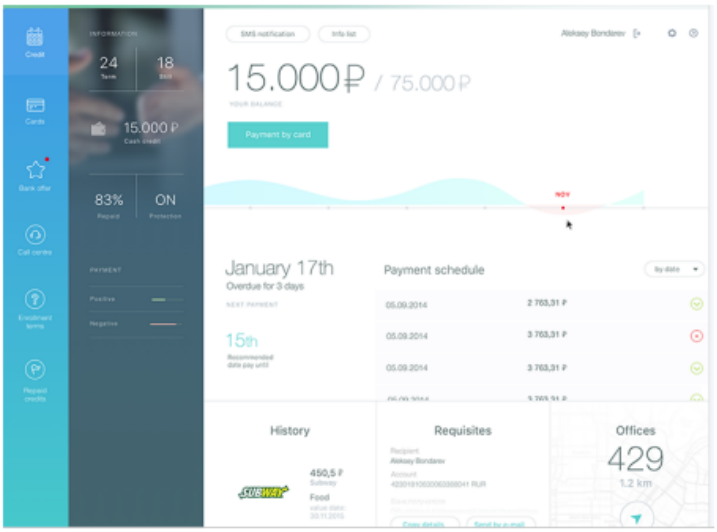

Figure 2: Screen img1

Figure 3: Screen img2

4 USER INTERFACE DESIGN

4.1 Description of the User Interface

4.1.1 Screen Images

4.2 Objects and Actions

The actions performed by various actions on the screen are : • Login : A customer to be able to use this system, he/she has to enter username and password which he/she has created before and been saved in the database in the Login page. The input in this function most be valid username and valid password and the output if the user is valid user then he/she will get into a page which can makes has/her transaction, but if the user made wrong in username or password then he/she will be invalid user and will see a message "Alert Invalid Username and Password" and to login again.
• View Account : View Account allows to a customer to view today's up-to the minute balance information on deposit (saving/current), credit card, etc. But the customer most be logged in the internet banking.
• Pay Bills : The customer most be logged into Banking System. With internet banking, customers can make payments to corporations that include utilities, assessments, Insurance, telecommunications, and other services. The customers can use Online Pay Bill service to pay bills by debiting their account. The customer needs to key in his/her bill account number each time you make a payment.

• Authentication : When logging in, users commonly enter usernames and passwords for authentication purposes. This login combination, which must be assigned to each user, authenticates access. However, this type of authentication can be circumvented by hackers. So in order to avoid this verification of user presence is performed by sending OTP to the registered phone number/mail account etc. This makes it more difficult for hackers to break into systems.
• Transaction History : After the user has logged in , he/she can view the transaction history. the system will show the View Account page and display a message" Please click on the respective account/card types for more details. Customer can choose current account or saving account for more details.

5 System Architecture

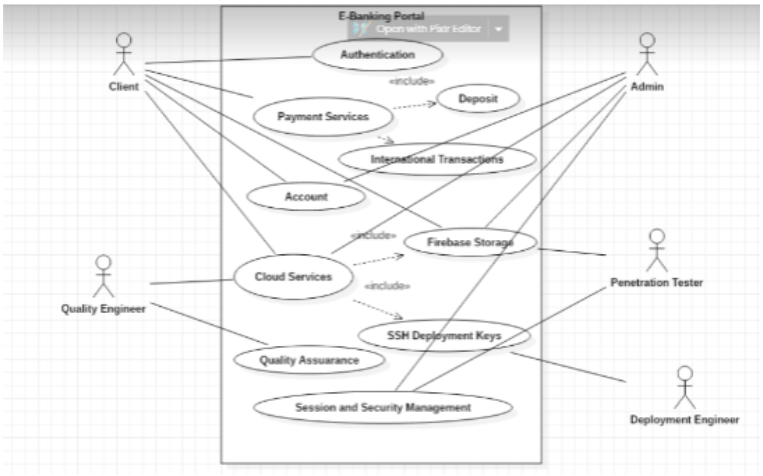

Figure 4: Screen img2

Use Case specification using template:

Use-Case ID:	1		
Use Case Name:	Authentication		
Created By:	Admin	Last Updated By:	Riddhisha and Niket
Date Created:	4/11/2019	Date Last Updated:	9/11/2019

Primary Actors:	Client, Admin
Secondary Actors:	Quality Engineer, Penetration Tester, Deployment Engineer
Description:	Every time while performing any transaction, authentication for identification of correct user is required. For registration purposes three level of authorization is required.
Trigger:	Login, Payment Services
Preconditions:	Registered valid or non-valid user.
Postconditions:	Successful login.
Normal Flow:	Login -> Authenticate -> View Account -> Perform Transaction -> View Passbook -> Logout
Alternative Flows:	First time user-> Registration -> Create Account -> Successfully Created.
Exceptions:	Failed Authentication
Includes:	Validation(Authentication)
Priority:	Valid user
Frequency of Use:	Daily
Business Rules:	Availability of the system 24/7
Special Requirements:	Web camera while registration and performing transactions
Open Issues	Internet availability
Assumptions:	Valid user operating the system.
Notes and Issues:	None

Figure 5:

6 Data flow specifications

DFD is created from the SRS document provided.

6.1 Level 0 DFD

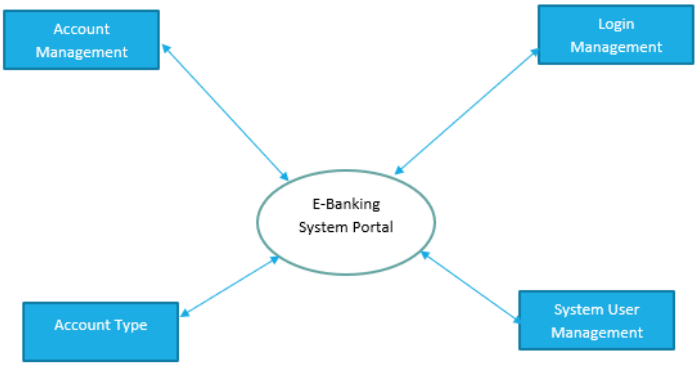

Figure 6:

6.2 Level 1 DFD

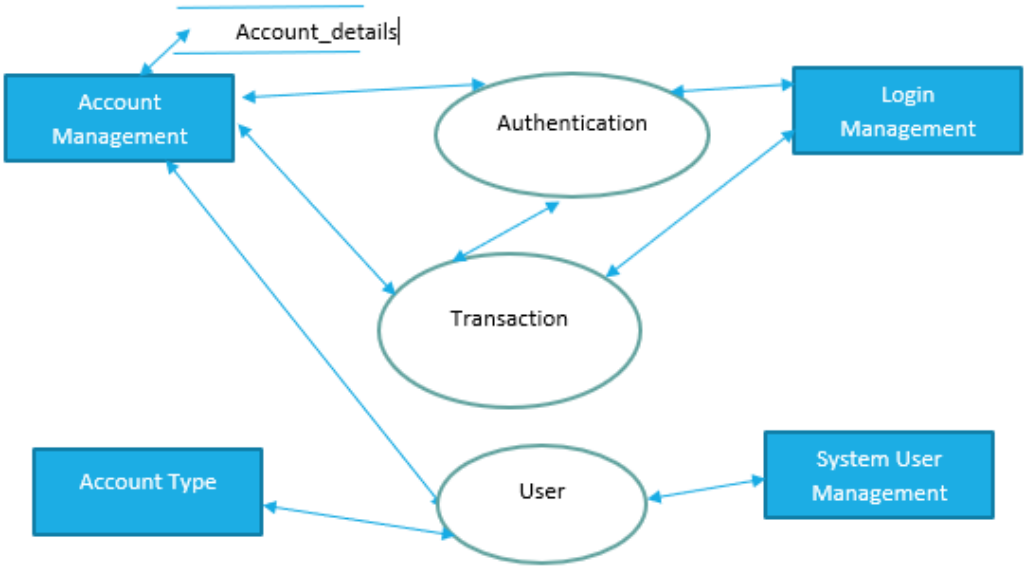
Account_details
Account Management
Authentication
Login Management
Transaction
Account Type
User
System User Management

Figure 7: