\documentclass[a4paper,12pt]{article}

\usepackage[utf8]{inputenc}

\usepackage{graphicx}

\title{E-Banking System Portal}

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\date{November 2019}

\begin{document}

\maketitle

\section{Introduction}

\subsection{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.

\subsection{Requirements Traceability Matrix}

\begin{center}

\begin{tabular}{||c c c c c||}

\hline

& Valid-User & Pay Bills & View Account & LogIn \\ [0.5ex]

\hline\hline

Extra Bank features & X & & & X \\

\hline

Authentication & X & X & & X \\

\hline

Transaction History & & & & X \\

\hline

Registration & X & X & X & \\

[1ex]

\hline

\end{tabular}

\end{center}

\section{SYSTEM ARCHITECTURAL DESIGN}

\subsection{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.

\subsection{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.

\subsection{System Interface Description}

\subsubsection{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

\subsubsection{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.

\section{DETAILED DESCRIPTION OF COMPONENTS}

\subsection{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

\begin{figure}[htp]

\centering

\includegraphics[width=10cm]{flowdig.png}

\caption{Flow diagram}

\label{fig:flowdig}

\end{figure}

\\

\section{USER INTERFACE DESIGN}

\subsection{Description of the User Interface}

\subsubsection{ Screen Images}

\begin{figure}[htp]

\centering

\includegraphics[width=10cm]{img1.png}

\caption{Screen img1}

\label{}

\end{figure}

\begin{figure}[htp]

\centering

\includegraphics[width=10cm]{img2.png}

\caption{Screen img2}

\label{}

\end{figure}

\\

\subsection{ 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.\\

\section{ System Architecture }

\begin{figure}[htp]

\centering

\includegraphics[width=10cm]{usecase.png}

\caption{Screen img2}

\label{fig:flowdig}

\end{figure}

Use Case specification using template:

\begin{center}

\begin{tabular}{||c c c c ||}

\hline

Use-Case ID: & 1 & & \\ [0.5ex]

\hline\hline

Use Case Name: & Authentication & & \\

\hline

Created By: & Admin & Last Updated By: & Riddhisha and Niket \\

\hline

Date Created: & 4/11/2019 & Date Last Updated: & 9/11/2019 \\

\hline

\end{tabular}

\end{center}

\begin{figure}[htp]

\centering

\includegraphics[width=15cm]{table1.JPG}

\caption{}

\label{}

\end{figure}

\section{ Data flow specifications }

DFD is created from the SRS document provided.

\subsection{Level 0 DFD }

\begin{figure}[htp]

\centering

\includegraphics[width=10cm]{level0.png}

\caption{}

\label{Level-0 DFD}

\end{figure}

\subsection{Level 1 DFD}

\begin{figure}[htp]

\centering

\includegraphics[width=15cm]{level1.png}

\caption{}

\label{Level-1 DFD}

\end{figure}

\end{document}