Team 2 CSC 4350:

Software Engineering

Dr. Rao Casturi

12/10/20

Team Members:

1. Shilp Patel
2. Divy Patel
3. Jay Patel
4. Smit Patel
5. Radhika Dhingra
6. Nish Patel

GitHub : https://github.com/spatel255/SWEproject

Problem Statement

Introduction

Input and storage of data was the standard method of keeping customer data in a database.Any time a person has to make such operations, he or she has to go to the bank and take the required steps, which we think should be done in a different way; a much faster and easier way. Right now, it is a difficult challenge for customers as well as for bankers to perform simple tasks. The project provides a real-life overview of the online banking environment and the operations carried out in the supply chain with different functions. Here, we provide the ease of Internet automation for the banking industry. The Online Banking Platform project will provide operations carried out by various roles in real-life banking, offering improved strategies to keep the details needed up-to-date, resulting in excellent performance.

This venture offers an analysis of the online banking environment and operations carried out by different positions in the production chain. The key purpose of the design and development of this Internet banking system is to offer safe and effective net banking services to banking clients over the Internet. Apache Server Pages, the MYSQL database used to build this bank framework where all banking clients can log in via a protected web page using their user ID and password. Project will offer the ease of changing address, name or any other personal info within minutes.

In addition, The system is mainly for users who want to add a beneficiary, require budgeting, require investment tips and send or receive cash online with different financial calculators. There are two sections of the system, namely admin and users. System users are the regular people to log in to the system in order to make any transactions. The recent transaction with date and time, as well as Transaction Id, can be examined. The SQL server is used for later retrieval in the back end of the system.

In addition, funds may also be transferred where the beneficiary details have to be filled out to add, delete or send the money. You can also check your profile

and log out from your system again. In addition , the system has an admin where customers with customer data can be added to the system. You can also manage and view customers by using their names. An admin must nevertheless login to the system. They also manage the site and can add posting news with the news headlines and post details. All of these activities are stored in our database.

Technologies

We are incorporating a client-side(front-end) development into this project, which will help the banks to update, delete as well as maintain their customers as efficiently as possible. It will be a very user-friendly experience with manageable implementations to follow upon. We will use these front-end technological components, including HTML(Hypertext Markup Language), which can be used to maintain web pages, CSS(Cascading Style Sheets) to add different elements into individual web pages such as layouts, and JS(JavaScript) which will allow us to add additional complex features into the web pages such as interactivity with the page. PHP and MySQL, and local servers such as Wamp, XAMPP.

Team Bio-Data

Shilp Patel: Is a senior computer science student at Georgia State University, has four years of programming experience. Has worked with several programming languages such as PYTHON, SQL, HTML5, CSS, C++, C, JAVA, JAVASCRIPT, PHP, SCALA. Additionally, he had gained skills like data mining, data visualization, database systems, web programming, and machine learning through various projects.

Divy Patel: A senior at Georgia State University, focusing on Computer Science; understanding and applying programming skills such as Python, Java, Javascript, Html, Linux, CSS, and php. Also taken classes such as Data Mining, Machine Learning, Design Analysis, and Web Programming. Been a part of several group projects, which prepared him for much more substantial projects.

Jay Patel: Is a senior computer science student at Georgia State University, moderately proficient in programming languages such as C++, JAVA, HTML, CSS, PHP, and SQL. Jay has worked on various projects such as data mining he has worked on this project using python libraries, preprocessing data, and data visualization, moreover he has experience in web development, worked on projects such as creating his very own 15-piece puzzle game.

Smit Patel: Currently, a senior computer science student at Georgia State University, with almost three years of programming experience, moderate

programming skills in python, java, linux, html, css, javascript, php. His previous classes include data mining, machine learning and web programming classes where he contributed into several projects.
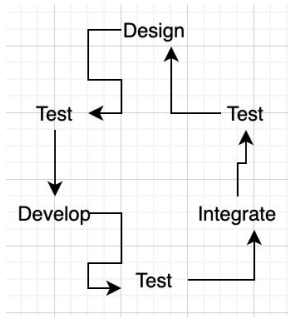
Radhika Dhingra: Enthusiastic undergraduate student pursuing Bachelors in Computer Science. Currently a senior and intermediately experienced in Java, Unix, C, C++ and Machine Language. Major Coursework: Computer Science I/II, Computer Organization and Programming, Data Structures, System Level Programming, Math Modeling in Computer Science, Database Systems, Programming Language Concepts,Fundamentals of Data Science and Applied Combinatorics.

Nish Patel: Currently attending GSU and I'm a senior in computer science, got one years of experience in both linux and python. Also got a few months experience in computer architecture, assembly and machine language. I have also worked with a team to encoding, and write, assemble, link, run, and debug assembly language programs using Microsoft Visual Studio Integrated Development.

Why did we pick this project?

We chose this venture because we want to maximize the banking systems with new features which would be highly beneficial for both the administrators and their clients. For the clients, it will ease the hassle of a normal daily balance check, change of address etc without going to their banks or calling and waiting on the line. Our platform will offer special features in order to help clients invest.

Scrum Methodology

SPRINT PLANNING	SPRINT (2 Week Sprint)	SPRINT REVIEW	SPRINT RETROSPECTIVE
Saturday Evening(1st week)	Saturday Evening → Wednesday Evening 	SA	S	M	T	W	 2nd week: 	SA	S	M	T	W		Wednesday Evening(2nd week)	Wednesday Evening(2nd week)

Scrum Methodology User Stories

User Story ID	AS A<type of user>	I want to <perform some task>	Progress
Sprint Cycle 3: 1	Admin	Add new customer/account	Completed
Sprint Cycle 2:2	User	View account summary	Completed
Sprint Cycle 3: 3	User	View transaction history	Completed
Sprint Cycle 3: 4	User	Submit complaints	Completed
Sprint Cycle 3: 5	Admin	Manage/Resolve complaints	Completed
Sprint Cycle 4: 6	Admin	Post News	Completed
Sprint Cycle 2:7	User	View News	Completed
Sprint Cycle 2:8	User	Access to Budgeting Tool	Completed
Sprint Cycle 3 9	User	Register payee so that customer can transfer funds	Completed
Sprint Cycle 3 10	User	Transfer funds to the registered payee	Completed

Sprint Cycle 4: 11	Admin	Change User Status to Active, Inactive, or Locked	Completed
Sprint Cycle 4: 12	Admin	Deposit and deduct amount from Customer Account	Completed
Sprint Cycle 4: 13	Admin & User	Change account password	Completed
Sprint Cycle 3 14	Admin & User	Update Profile details	Completed
Sprint Cycle 4: 15	Admin & User	Request new password by clicking on forgot password	Completed
Sprint Cycle 4: 16	Admin & User	Log In	Completed
Sprint Cycle 4: 17	Admin & User	Log Out	Completed
Sprint Cycle 2:18	User	View Contact Info & About Institution	Completed
Sprint Cycle 1:19	User	Access Homepage:Consists all of the major services provided on the banking webpage.	Completed

Sprint Cycle 3: 20	Admin	Access Database:Created Database for the Project using MYSQL	Completed
Sprint Cycle 2:21	User	User Friendly Website	Completed

Sprint Cycles/Backlogs:

Date - September 30, 2020 to October 13, 2020

Sprint Cycle No.	User Story ID	Story Name	Story Detail	Progress	Resource Working	Working Time
1	8	Budgeting Tool	Budgeting tool available on Website Homepage	Started implementing HTML and CSS	Shilp	2 days into the Development
1	19	Homepage	Index page for Banking Management System	Started Layout Design/ Coding in progress	Radhika	4 days into the development
1	7	View News	Read ongoing news related to the bank & also view past news on the webpage	Started Layout Design	Smit	1 day into the development
1	16	Login	Login System on homepage	Started Layout Coding	Jay	1 days into development
1	2	View account summary	This page will be index page after logging in	Started creating layout for summary page	Divy	3 days into development.
1	18	View Contact Info & About Institution	About Us and Contact Us tab/page on homepage	Started Layout	Nish	2 days into development

Date - October 14, 2020 to October 28, 2020

Sprint Cycle No.	User Story ID	Story Name	Story Detail	Progress	Resource Working	Working Time
2	8	Budgeting Tool	Budgeting tool available on Website Homepage	Completed assured the calculations	Shilp	2 weeks into the Development

Sprint Cycle No.	User Story ID	Story Name	Story Detail	Progress	Resource Working	Working Time
				were working properly		
2	14	Customer and Admin Homepage	Customer Homepage (Account Overview page) and Admin Homepage.	After the customer and admin logs in, they can view the account overview page	Radhika	8 days into the development
2	19	Homepage	Consists all of the major services provided on the banking webpage.	Completed Testing on both Admin and User side.	Smit	4 days into the development.
2	20	Database	Created Database for the Project using MYSQL	Completed and integrated with web site.	Jay	8 days into development
2	8, 21	Budgeting tool, Visualization of overall website	An advisory tool for monthly budgets. And overall look of the website	Budgeting tool completed and visualization is an ongoing process	Divy	11 days into development.
2	16	Login	Admin and User have the ability of login to their account.	Completed Testing	Nish	4 days into the development.

Date - October 29, 2020 to November 11, 2020

Sprint Cycle No.	User Story ID	Story Name	Story Detail	Progress	Resource Working	Working Time
3	1	Add New Account	Both Admin and Customer have the	Finished, database set	Nish	10 days into the development.

			ability to add a new account and register as a new user.	up and connect		
3	3	View transactions history	created a way for the users to view their previous transactions in their account.	Completed	Divy	8 days into development.
3	4,5	Submit Complaints Manage /Resolve Complaints	Customers can post complaints through their portal and Admin has the ability to resolve and respond back to customer's complaints	Layout created, coding has been completed, database set up and connect	Smit	15 days into the development
3	9, 20	Add Register payee, Database	Implemented the database connection of the transactions by the customers, to add payee to send money	Database is ready and integrated. Created functionality to add payees to transfer funds.	Radhika	13 days into the development.
3	10, 20	Transfer funds to the registered payee, Database	create database implantation for registered payees to have their funds transfer.	Database is ready and integrated. Funds are being transferred successfully.	Jay	13 days into development
3	14	Update Profile details	Created a way that users and admin can update profile details from the application.	All the functions are working and connected with the database successfully.	Shilp	2 weeks into the Development

Date - November 25, 2020 to December 2, 2020

Sprint Cycle No.	User Story ID	Story Name	Story Detail	Progress	Resource Working	Working Time
4	12	Deposit and deduct amount from Customer Account	Admin is now able to edit customers' balances and update it on the database.	All the functions are working and connected with the database successfully.	Nish	10 days into the development.
4	13	Change account password	Customers can change their password and pin(required for security questions).	All functions seem to be working.	Divy	8 days into development.
4	16,17	Log In,Log Out	Admin & User are able to secure by successfully logging in and logging out, created a timeout and expired to secure the system, which automatically logs out a person if they are inactive for more than 10 to 15 mins.(validated username and password with database)	All the functions are working and connected with the database successfully.	Smit	15 days into the development
4	15	Request new password by clicking on forgot password	Linked a tidio, through there customer can reach admin and request change of password, for security we require customer to be verified by employee.	All the functions are working and connected with the database successfully.	Radhika	13 days into the development.
4	6	Post News	Admins are now able to post news successfully.	All the functions are working and connected	Jay	13 days into development

				with the database successfully.		
4	11	Add current status to customer profile	Created a way that admin can Change User Status to Active, Inactive, or Locked	All the functions are working and connected with the database successfully.	Shilp	2 weeks into the Development

ID #1

User Story: As an admin I want to create a new customer account(s).

a. A customer applies for a new bank account

b. The employee fills in the information taken from the online application.

c. A new customer account is created automatically for the registered customer.

d. Admin will provide a user ID for each new customer.

ID #2

User Story: As a Customer, I want to view my account summary.

a. After logging-in customers can view their account summary on the home page.

b. The home tab will be specified to the account summary, so when a customer is lost they can click on that to go back to the home page.

ID #3

User Story: As an User I want to view my transaction history so that I can know all debits and credits for a particular day.

a.Verify the complete transaction information returned (date, transaction summary, transaction amount).

b. For a better viewing experience there will be a 'Sort by' option available. So customers can easily find desired transactions.

ID #4

User Story: As a user, I would like to have a complaints option if the website doesn't work correctly.
a. There will be a contact-us area on the bottom of the page, where a user can contact the admin to let them know about any errors.

ID #5
User Story: As an admin, I want to view any available complaints they users give.
a. On the admin account there will be a complaint's tab where they can view/reply to the complaints.

ID #6
User Story: As an admin, I want to post the latest news so that customers can view news.
a. Admin can type an article in the text box provided.
b. Admin can specify the topic of the article by giving news headlines.

ID #7
User Story: As a user, I would like to view the latest ongoing news related to the bank and the website.
a. The user can view/read current ongoing news on the homepage.
b. The user can also access past news if they missed some important information.

ID #8
User Story: As a user, I want to have an ability to view and use the budgeting tool for the financial purposes.
a. The customer can input their monthly bill amounts to get the final result if they have money left or they went over their monthly income.
b. The customer can input amounts regarding their expenses such as rent, food, insurance, and utility.
c. The tool will automatically suggest customers to save at least 20 percent of their income.

ID #9
User Story: As a user, I want to have a register payee to initiate transferring funds.

a. The customer can add payee account information.

b. The payee is included into the customer payee list after the successful fund transfer for future operations.

c. The customer has options of having multiple payees.

ID #10

User Story: As a User, I want to transfer funds to registered payees.

A. The Customer from the approved payee list picks a payee.

b. The customer selects the fund transfer account.

c. System displays specifics of the transaction when choosing a customer account.

d. The money transferred shall be withdrawn from the accounts paid by the payer and credited to the effective transfer payee account.

ID #11

User Story: As Admin, I want to change user status to active, inactive or locked.

a.The user reports irregular account behaviour and calls customer service. The user scans for and locks all user operations with the help from bank employees.

b. Users sometimes forget passwords and modify the password procedure and demand extra support from clients. Before transferring user account status to Inactive, the bank employee conducts a phone check.

ID #12

User Story: As an Employee, I want the ability to deposit and deduct an amount from that customer account when needed.

a. Customers visit the bank for cash deposit/withdrawal.

b. The employee finds the customer account based on their details.

c. Employee then selects either depositing or withdrawing options.

d. Amount changes in respect to the transaction.

ID #13

User Story:As an Admin & User, I want to change account password

a. Through updating the password periodically, users must preserve account protection.

b. Using the tab list, the user decides to change password.

c. New password is changed in the system after authentication based on the existing password.

d. User is forwarded for re login to the login page.

ID #14

User Story: As a User (Customer or Employee) I want to update my profile details when needed.

a. Users log into their account.

b. Users are able to edit a few of their details (email, phone number(s), occupation and a few more things).

c. For a change of name and address they need a permission from the Admin.

ID #15

User Story: As an Admin & a User, I want to be able to ask for a password change by clicking the forgot password link.

a. Both customer and employee can click on the forgot password link on the login web page.

b. Both customer and employee needs to provide ID# with a mobile number registered to the account, and further authentication process will require a correct email address.

c. Customer care numbers will be provided when a user gets stuck in the password changing process with additional instructions given on the webpage.

d. Employees will change the account status of a customer to inactive and a temporary password will be delivered.

ID #16

User Story: As an Admin & a User, I want to have the ability to login into my account.

a. Both customer and employee can fill out the login information such as Id and password on the login web page.

b. The customer can view the homepage once the login process is successful.

c. The employee can view their customer management layout homepage upon every successful login.

d. Both customer and employee will receive an alert message when they enter wrong login information.

ID #17

User Story: As an Admin & a User, I want to have the ability to safely log out of my account.

a. The customer and employee can click on the logout button when they are done using the website.

ID #18

User Story: As a User, I want to view information regarding the customer service. Also, as a user I want to know/view information about the Bank where my account is being created.

a. The customer can access the customer service phone number as well as email address provided on the page.

b. The customer can view information about the bank, and also get customer support when needed.

c. There will be 2 options available to contact the bank (Phone and email).

ID #19

User Story: As a User/Admin to the site I would like to instantly see what services are offered or easily accessed so that I can easily select a service.

a. User and Admin can login thru this page

b. User can navigate to customer service page through this page

c. Admin can update bank operating hours on this page

d. Admin can update any important information on this page

ID #20

User Story: As an Admin, I would like a database that conveys all the required information of my employees and customers which I can use for managing my application.

As a User, I want to be able to store all customer information.

As a User, I want to be able to access all the information of the customer.

As a User, information can be updated with limitation of access to the account.

ID #21

User Story: As a user, I would like to navigate websites freely and without any confusion. I would like the website to be simple and easy to use.

All pages will be in simple format, and tested by other users first.

All pages will be designed beautifully and in matching to each other.

Customers will be able navigate the website easily and without any help from professionals.

DataBase Relational Schema: