Implementation and Testing Report

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Implementation

The implementation phase of the project has by far been the most challenging of the phases of this project. Many hopes and dreams were shattered. Because of the significant time constraint, many functions that initially seemed trivial to implement became very time consuming to implement. Much functionality has been left out either due to time or to manpower as many project members had other projects during the same period of time. Below is a list of functions that we intended to implement. The highlighted ones are the ones that were actually implemented as of the time of this writing.

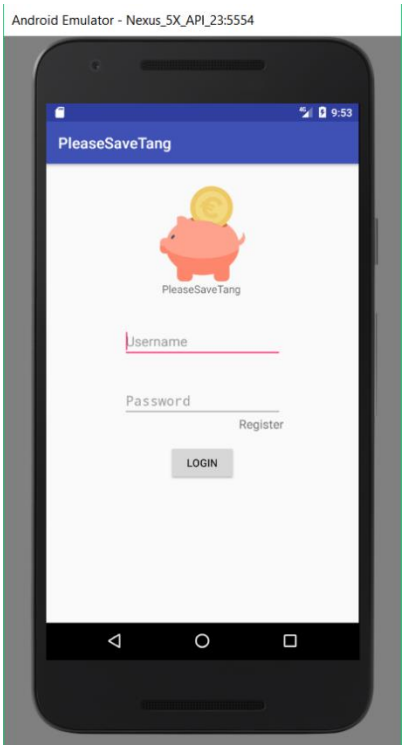
Functions Implemented(Highlighted)

1. Register- Login function
    1. register
    2. sign in
    3. sign out
2. Analysis
    1. status
    2. summary
    3. category analysis
    4. balance analysis
3. Activity
    1. deposit
    2. withdraw
4. Goal
    1. add goal
    2. delete goal
    3. goal progress
    4. complete goal
5. Friend
    1. add friend
    2. delete friend
    3. send challenge
    4. challenge progress

User Interface Design

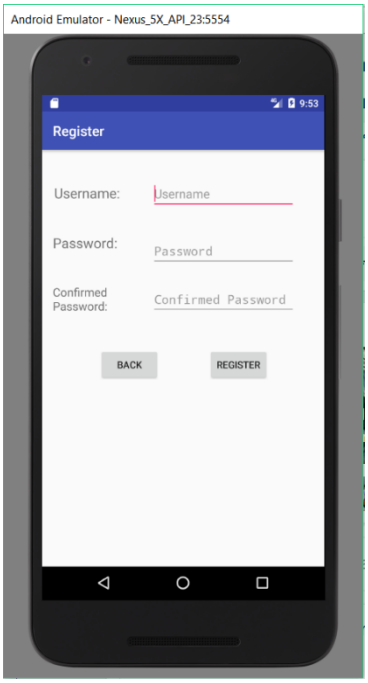
Our main interface have home page and button to go next or back to previous page. After enter the application you will found the login page you choose only log in or register. Then, you can see transaction (income, outcome, extra money, etc.), statistic of money usage, friend list, challenge, and notification.

Login Page



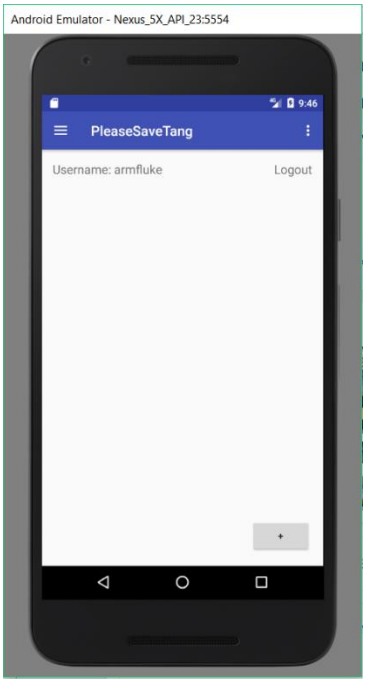
The login screen is where the user can login to PleaseSaveTang system.User can also register for the first time use.

Registration Page



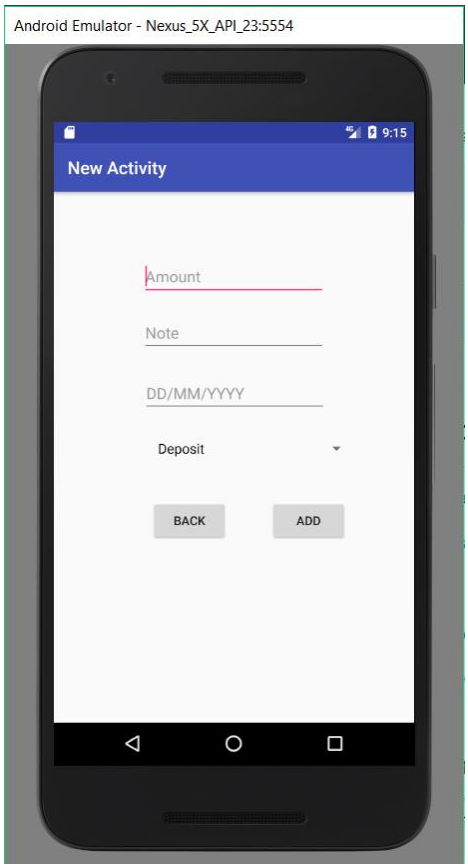
The registration will be appeared after the user click register at the login page.This page provided a few question for registration.If user click register button the information will send to database for creating new id.User can also click back button to go back to login page.

Home Page



The home page is the main page after after login to the system. “+” button at the right corner is use for creating new user’s activity.We didn’t implement any navigator bar.

Transaction Page



The User's activity will be appeared after the user click "+" button at the Home page.This page use for adding new user's activity. If user click add button the information will send to database for creating new user's activity.User can also click back button to go back to home page.

Test Plan

Please Save Tang application can be sum up in 2 main major: usability and security. First is usability. We need user or customer use application easily (easy to remember how to use, not complicated, easy to understand). Next one is security, The program must provide the correct functionality to the employee authorized to execute those functions.

Usability and security can be tested by observing test cases whether the actual results are to be expected or not. Test cases created are based on 3 functions: registration, logging in/out, and adding new deposit activity. Registration test cases test the system's correctness in adding a new account to database and also validate inputs. Logging in/out test cases test the system's correctness in comparing inputs to existing entries in database and also validate inputs. Adding new deposit activity test cases test the system's correctness in add a new deposition into database in the right username, and also validate inputs.

The following table shows a list of test cases which test the three aspects mentioned before. It shows the intended result and the actual result by test

Test Case#	Description	Intended Result	Actual Result	Completed by
1	register a new account Username: sexybom Password: yesiam Confirm password: yesiam	new entry added In database, ID(sexybom, yesiam)	Username=sexybom Password=yesiam Added new entry to database	Thanakit
2	register a new account (incorrect input) Username: sexybom Password: yesiam Confirm password: yesiam007	Error	Warning alert Incorrect comfirm password	Thanakit
3	login using registered id Username: sexybom Password: yesiam	Directed to home page	Direct to home page	Thanakit

4	login using unregistered id Username: uglyom Password: omg	Error	Warning alert no username:uglyom	Thanakit
5	click logout	directed to login page	Clear all session move back to login page	Thanakit
6	add a deposit activity (login as sexybom) amount: 10000 note: for glory Date 6/6/2016 Type: cash	a new entry added in database: transaction(sexybom, 10000, for glory, 6/6/2016, cash)	New activity added to database	Thanakit
7	add a deposit (incorrect input) amount: up to u note: this is wrong Date: 191 Type: Fire	Error	New row(up to u, this is wrong,191,Fire) was added to database	Thanakit

Implementation and Testing Phase Responsibilities

All work was done in Android Studio; each application feature was implemented in different computer and controlled by using github. We decided to gather up at CPE floor since it was a familiar place and also convenient in various ways including power source and provision. Implementation and testing started in the middle of May and finished on May 23rd. The following table indicates tasks and the members responsible for each of them.

Task	Shotitouch	Piyapon	Thanakit	Poraset	Suttiwat
UI					
Design			x		x
Coding			x		
Database					
Table Design				x	
Program					
Register System		x			
Login/Logout System			x		
Add deposit System	x	x			
Input Validation					x
Testing					
Testing Approach				x	
Test Cases		x		x	
Presentation					
Report	x	x	x	x	x

Implementation and Testing- Major Problems

The main problem encountered was the lack of knowledge in Android Studio, we lacked the very basic since nobody in our group has past experience of writing android application before. The part where we learned how to use Android Studio, especially connecting to SQLite Database took a lot of time. Another problem was one of member's laptop had an unsolved issue being not able to render objects in Android Studio resulted in a lack of coding manpower. There was also a critical problem because of a member intense illness causing him to be in a medical care, unable to work.

Tools

Tool	Description
Computer	MS Windows 10, 8 GB RAM
Andriod Studio	IDE for android application development
Google Docs	Word processor
DB Browser for SQLite	Management tool for SQLite

Data Dictionary

User

User is anyone who interact with application (in case that user have ID attribute: firstName, lastName, username, friendList, totalIncome, totalExpense)

Activity

Activity is any action user can do with application

Challenge

Challenge is some activity to challenge. User can challenge him/herself or challenge friend. After you won or achieve the challenge user will get reward

Deposit/withdraw Activity

Deposit/withdraw Activity is an activity for managing money

Sign in/out

To receive the functionality and data from user login/out for each user.

Registration

To create ID for keep tracking data, challenge, friendlist.

Category Analysis

Analysis which separate income/outcome into each category and show statistic which category user expense the most or get income most.

Balance Analysis

Analysis how much money you keeping

Status

Status told each user status of challenge (on going, fail, success)

Overview

Overview is an analysis for all activity