SIT305 – ANDROID AND IOS PROGRAMING My Future Me

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Overview

My Future Me is the goal tracker application that would help you to manage your goal and the current progress towards the goal.

My Future Me provide an easy tool for you to create your goals and the followed tasks in order to finish the goal. It allows you to update the status of the current tasks by adding related activities and contributed time towards the task. The goal is attached with tags to show its purpose and the user are allowed to customize the colour and the name of the tag

In addition, the app could generate a summary of the progress using graphs. There are three main graphs used to show the statistic about the user's achievements, includes:

- Pie chart shows the time distribution between goals
- Bar chart shows the time distribution between tags
- Line chart shows the difference of contributed time per day over a period of time to keep track of the working time towards the goals

Product Purpose

Target audience

The primary target audience for the app is people who are struggling with manage and balance the time work towards their goals/ tasks.

As we all have many different dreams and goals during our life. However, it is difficult to balance the time towards the goals without forgetting others achievements.

User cases

Tom is an IT student and currently in his final year. He has 3 big assignments would be due in 4 weeks. He is afraid that if he spends too much time in 1 assignment could lead to the delay for others. He would like an app the could show how many hours he has worked towards each assignment and also show whether his progress is aligned with the time he has left

Alice is an accountant and she works fulltime. She wants to improve herself to achieve a better job. Besides, she also wants to balance her work life and social life so she does exercise, mediation and learns new languages in order to travelling. She wants an application which could help her to keep track of all her goals and show whether she balances with her work-life or no

Why choose My Future Me

My Future Me allows users to divide their goals into small tasks and keep track of each task in term of the update about what they had done and how much they have contributed towards the tasks. In addition, the app also allows users to add tags for each goal as we understand one goal could have multiple purposes such as (learning new languages is for travelling, find a better job opportunity, interest,..).

In the end, the user could generate the summary to keep track of the statistic about the progress towards the task and whether their work is balance. The summary report is created using graphs in order to visualize effectiveness all the data in a form that is attractive and easy-to-pick-up the work distribution and progress

The app is designed with simple and attractiveness user interface in order to provide a friendly and engaging user experience. The tabs are collapsible to give a clear and simple interface.

Besides, we understand that we all have different purposes and dreams, the app allows users to defines name and colour for tags towards each goal themselves so they could customize freely the purposes for each of their goals

To increase the motivation towards achieving goals and surprise factor, My Future Me has a feature to display one randomly quote every single time the user approach the main page. By this functionality, we hope to charge "push-up energy" for the user in the journey of obtaining their achievements

Feature

A list of included features are listed below:

Register

- User is able to create new account by filling username, email, password
- There are simple validation has been implemented for the register in order to ensure the listed rules:
 - Username is required
 - o Email is required and must follow email pattern
 - o Password is required and at least 5 characters
- User is able to see suitable error messages return in order to guide them to fill the registration form correctly

Login

- User is able to login using their username and password
- There are simple validation has been implemented for the login in order to ensure the listed rules:
 - Email is required and must follow email pattern
 - Password is required and at least 5 characters
- User is able to see suitable error messages return in order to guide them to fill the login form correctly
- If user is already signed in, the application will direct the user to the main page without the need to re-login again

Goal

- See the list of all goals: User is able to see the list of created goal in the main activities and could expand the tab to see goals detail such as name, description, date, tasks, tags. In addition, the nested progress bar allows user to see the comparison between passed time and workload so that user could have an overview of their progress and whether they need to put more effort into the goal

- Create a new goal: User is able to create new goal by filling name, description, due date, and adding a list of tasks, list of tags
- Edit existed goal: User is able the editing goal by editing name, description, due date, and editing list of tasks, list of tags
- Delete existed goal: User is able to delete the goal

For each goal, user is able to execute features with tasks

- See tasks: user is able to see the task with name, progress and the total of minutes they have worked towards the task.
- Add new task: User is able to add new task for goal by filling name. A new task is assigned with the progress 0
- Delete existed task: User is able to delete the task of the goal
- Update existed task: User is able to update tasks by updating the progress, name and the list of sub-tasks (activities) have been done

For each goal, user is able to execute features with tags

- See all created tags: user is able to see all the tags they have created before
- Attach tag to a goal: user is able to attach specific tags to goal
- Remove tag from goal: user is able to remove specific tags from goal
- Create a new tag: User is able to create a new tag by defining the name and the background colour
- Filter/Search tag: User is able to search or filter the tag by its name

For each task, user is able to execute features with **subtasks** (activities)

- Add activity: User is able to add new activity towards the task by adding information about date, contributed minute, description. The typed minute of activity will be calculated towards the contributed time of the task
- Remove activity: user is able to delete the activity

Motivation

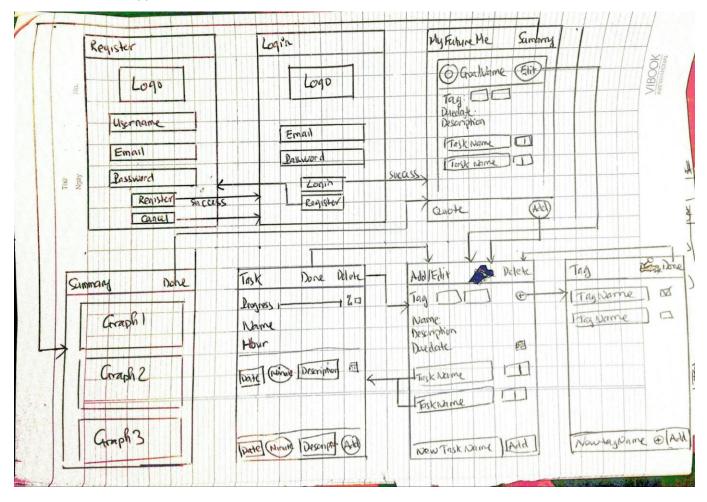
User is able to see random motivation quote in the footer whenever they direct to the main page

Summary report

- User is able to generate a summary report for the graph visualization about their contributed time and progress towards their goal. Three main charts are used, includes:
 - Pie chart shows the time distribution between goals
 - Bar chart shows the time distribution between tags
 - Line chart shows the difference of contributed time per day over a period of time to keep track of the working time towards the goals

Design

Wireframe of the application



The background colour for the application is #FFFEEB in order to match with the logo of the application

The background of the goal card is purple with gradient



Some common actions:

From Main Page to Add New Goal: Click Add button in the main page (1 tap)

From Main Page to Edit Goal: Click Edit button associated with the goal needed to edit (1 tap)

From Main Page to Update Task: Click Edit Task button associated with the task needed to edit (1 tap)

From Main Page to Summary: Click Summary Button in Menu bar of Main Page (1 tap)

From Main Page to add new tag: Click edit button of goal -> click add button of tag (2 taps)

From Login to Main Page: fill all information then click login button (1 tap)

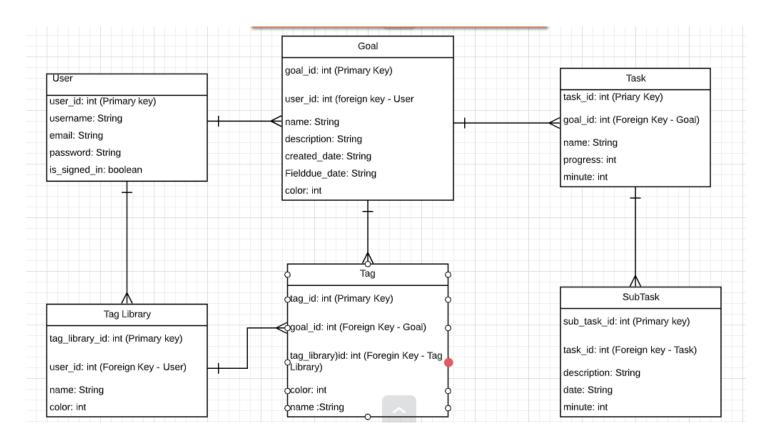
- If the user is not registered yet: click on register button- > fill all information -> click register button to register -> fill the login page -> click login button (3 taps)

Data

The application uses Room Database in order to store all information of the application

There are 5 main tables of the database includes User, Goal, Tag Library, Task, Tag, SubTask

The database structure and relationship could be shown through the diagram:



Each table is associated with Dao file to address the actions related to the tables, details:

User

addUser (User user): add User to the user table

getUser (String email): get user by email

getUserSignedIn(): get current logged in user

updateLoginStatus(int userId, Boolean isLogin): update Login status of user (true is logged in, false is logged out)

Tag Library

addTagLibrary(TagLibrary tagLibrary): add tag to the tag library table

loadTags(int userId): load all tags with userId

deleteTagLibrary(int tagLibraryId): delete tag

Goal

addGoal(Goal goal): add goal to goal database

loadGoals(int userId): load all goal with userId

loadGoal(int goalId): load goal with goalId

updateName(String name, int goalld): update name of goal with goalld

updateDescription(String description, int goalId): update description of goal with goalId

updateDueDate(String description, int goalId): update due date of goal with goalId

Tag

addTag(Tag tag): add tag to tag library

deleteTag(int tagId): delete tag

loadTags(int goalld): load all tags with goalld

loadTags(List<int) goalIdList): load all tags with goalId inside the list of goalIdList

Task

addTask(Task task): ad task to task library

deleteTask(int taskId): delete task

loadTasks(int goalId): load all tasks with goalId

loadTasks(List<int> goalIdList): load all tasks with goalId indie the list of goalIdList

loadTask(int taskId): load task with task id

updateName(String name, int taskId)

updateProgress(int progress, int taskId)

updateMinute(int minute, int taskId)

SubTask

addSubTask(SubTask subtask)

loadSubTasks(int taskId)

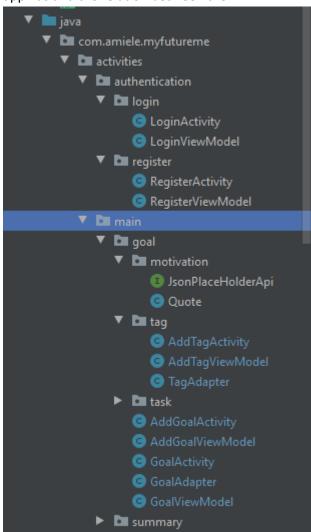
loadDubTasks(List<int> taskIdList)

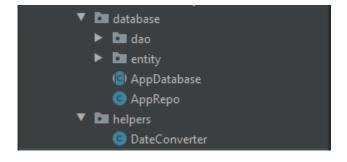
deleteSubTask(int subTaskId)

API/Class Structure

The structure of class are included below:

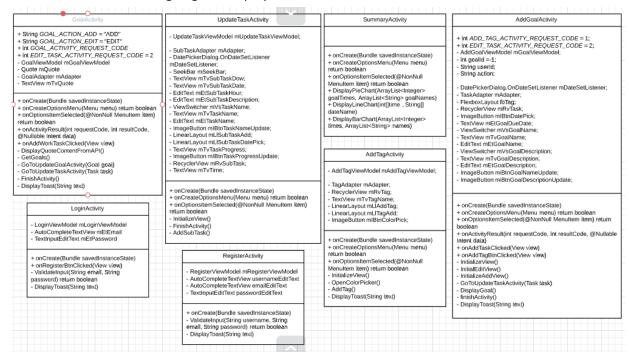
The class is organized follow featured. By structuring the classes by this one, it is easy to obtain how many features the app has and the relation between them



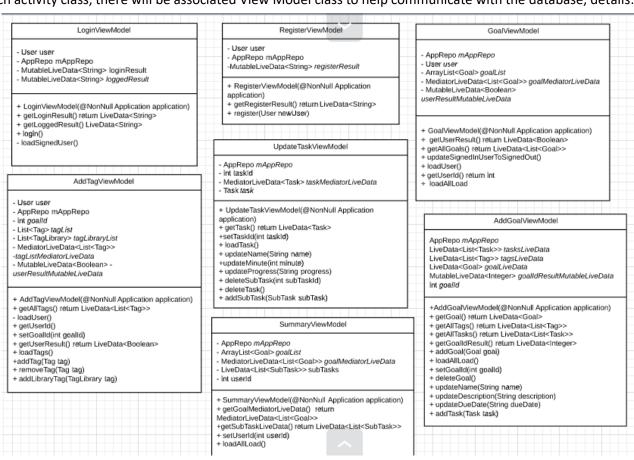


Please refer to the Database table class for the class details of Object User, Goal, Task, SubTask, tag, Tag Library

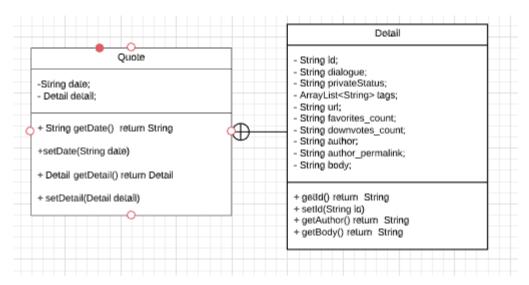
Activities classes is used for assigning and display the view to the UI



For each activity class, there will be associated View Model class to help communicate with the database, details:



Quote class is help for retriving Quote from API



Resources Required (optional)

Add_button.png, PNGTREE, retrieved 4/6/2020, < https://pngtree.com/so/add
Goal_edit_button.png, PNGTREE, retrieved 4/6/2020, < https://pngtree.com/so/edit-icon >
Color_picker_button.png, PNGTREE, retrieved 4/6/2020, < https://pngtree.com/so/color-pallete >

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