# SCHOOL OF COMPUTING, ENGINEERING AND DIGITAL TECHNOLOGIES

# MSc Computing

# MOBILE APPLICATION DEVELOPMENT

# ViewNews App

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Module Code: CIS4034-N

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# Catalogue

# Report of ViewNews App

## General purpose of the app

With the development of 'New Media', the paper-based media suffered a major hit and become less popular than ever. People now can get more and more information through many sources because of the development of Internet. In order to satisfy people's thirst for information, various types of news apps are developed one after another. News apps rely on their rich information resources, real-time information delivery and easy social interaction are increasingly accepted by users. They have many advantages that newspapers do not have. The news information they provide breaks the linear time and space pattern needed to read newspapers, and slowly changes the readers' habit of understanding the world. So, I decided to develop a news App.

'ViewNews' App is an android-based news App that allows users to learn about current affairs, news, entertainment headlines, economic development, sports and more. It can let the user understand the social dynamics, increase and broaden knowledge, while entertaining and relaxing themselves.
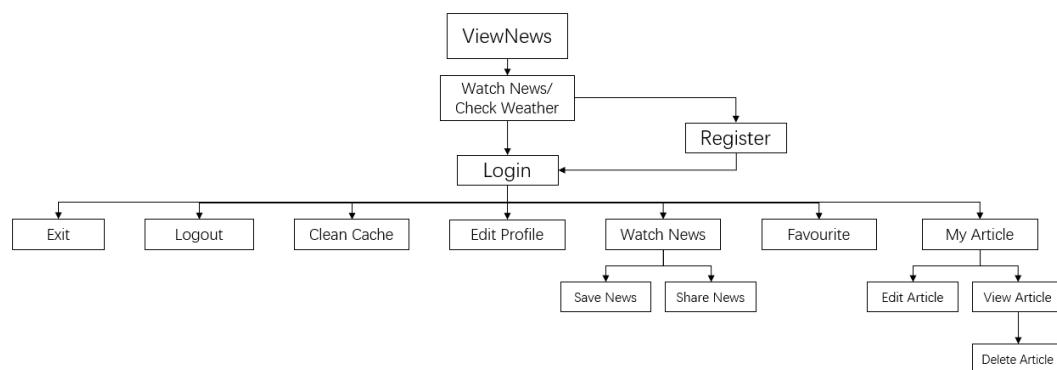
## Development Methodology

'ViewNews' App has a lot of functions. First, as a news App, it allows users to browse news by swiping to select news in different categories. After clicking on the news details page, users can browse the news articles and pictures. If users think this news is good and like it, they can choose to bookmark or share it. When the user clicks the 'Favourite' button, the system will first detect whether the user has logged in, if not logged in it will pop-up a 'please log in first' message. After registration or logging in, the news user saved will be in 'My Favorites'. At the same time, if the user clicks on the share button, it will invoke the system's share interface.

ViewNews App is more than just view news. It has registration and login functions by connecting to the Litepal data base. At the same time, after the registration or login, users can edit their own user profiles, which include user nicknames, birthday, gender, personality signature, etc., users also can change their profile photo by choosing photos stored in the phone's internal storage. After logging in, users can not only view their own news collection, but also can write their own news, the news will be stored in the phone's internal storage, users can edit or delete their own news.

ViewNews also stores the news data in the internal storage of the device when it receives the news data through the API. Of course, the app also has the ability to clean the cache after clicking the clean cache button, the app automatically clears all cached news. When the APP is not connected to the internet, it will try to read the news data that is already cached locally.

ViewNews also offers the ability to view the weather by taking data from the phone's GPS sensor, getting the user's current location, and uploading the data back to the API. After that, the data of location, weather, and temperature will be displayed in the sidebar.

**Here's the mind map of the design and implementation of the ViewNews APP:**



## Software Choices

During the development of the ViewNews Application, I have used some third party apis and libraries.

Like 'de.hdodenhof:circleimageview:2.1.0' to show circle images like avatar, 'com.google.code.gson:gson:2.8.5' to get data form apis, 'org.litepal.android:java:3.0.0' to build local database. At the same time, I use news api from 'http://v.juhe.cn/toutiao/index' to get news data, and use weather api from 'https://api.weatherapi.com/v1/current.json' to get weather data.

## Target Audience

The target audience of ViewNews App is mainly for users who aged around 20-50. Cause the younger people are not very interested in news and they mostly receive news by their parents and their friends. And about the older people, they are not used to use smart phones and are keener on reading newspapers or listening radios.
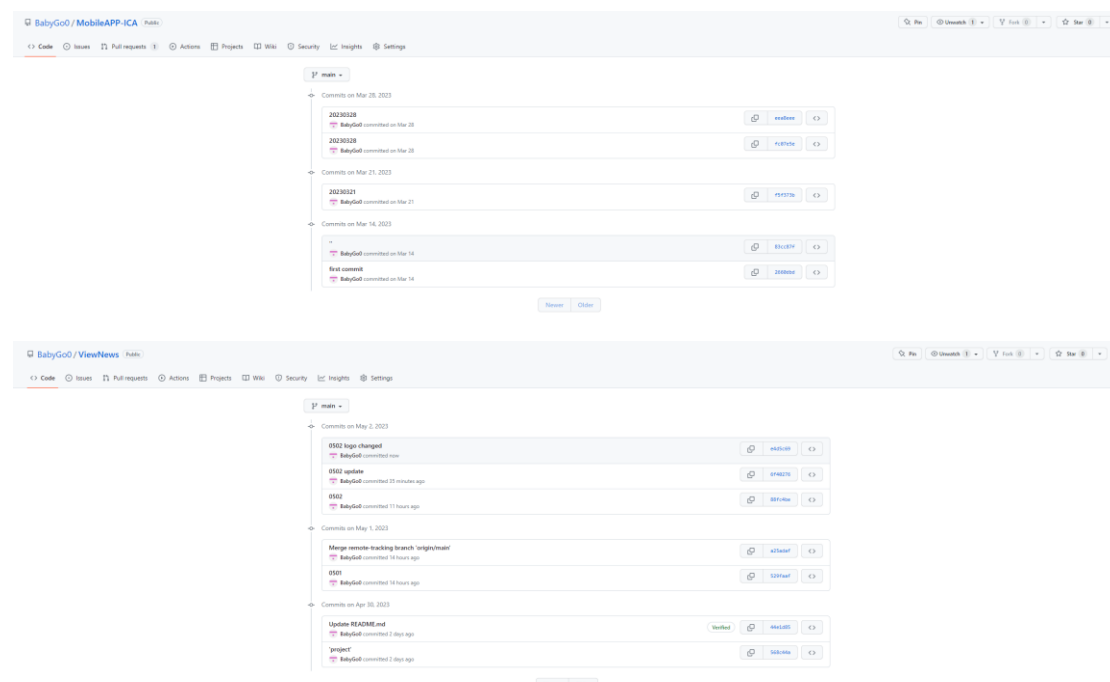
## Ethics and Security

Regarding the ethical and legal issues related to GDPR, first of all, installing and launching ViewNews for the first time the APP will request permission from the user to read and write to the internal storage and access location information of the user, only with the approvement of the user can the local file be modified and the user's current location information be obtained, and users have their right to refuse. At the same time, the user information and avatar information are stored in the internal storage of the device through Litepal, and the app will not need to update any data and will not share any data to anybody, so it is relatively safe. After users uninstall the application, the application will automatically delete all information including users' data.

## Git Hub

Git Hub is a very useful tool for us. Not only it can become our cloud drive for code, it also provide a lot of excellent code examples for us to learn. Also, Git Hub is very useful while you want to try a new function, you can just create a new branch and try the new code here, so that it will not change your main code.
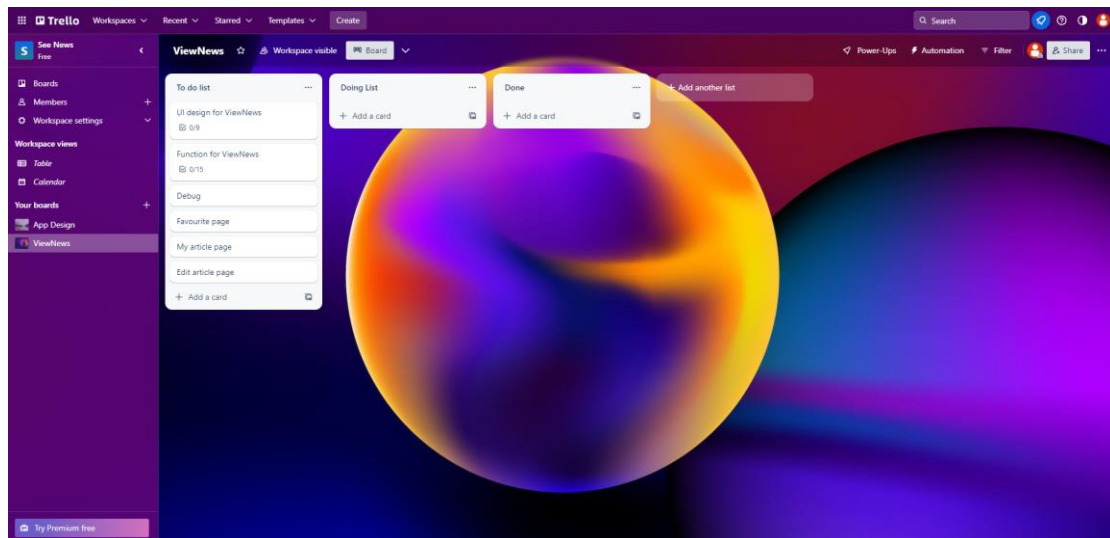
Here are 12 commits for the ICA project. There show two projects because during the development, there are some strange problems force me to create a new project and copy the previous code and continue developing in the new project. Here is my Git Hub Link: https://github.com/BabyGo0/ViewNews.git
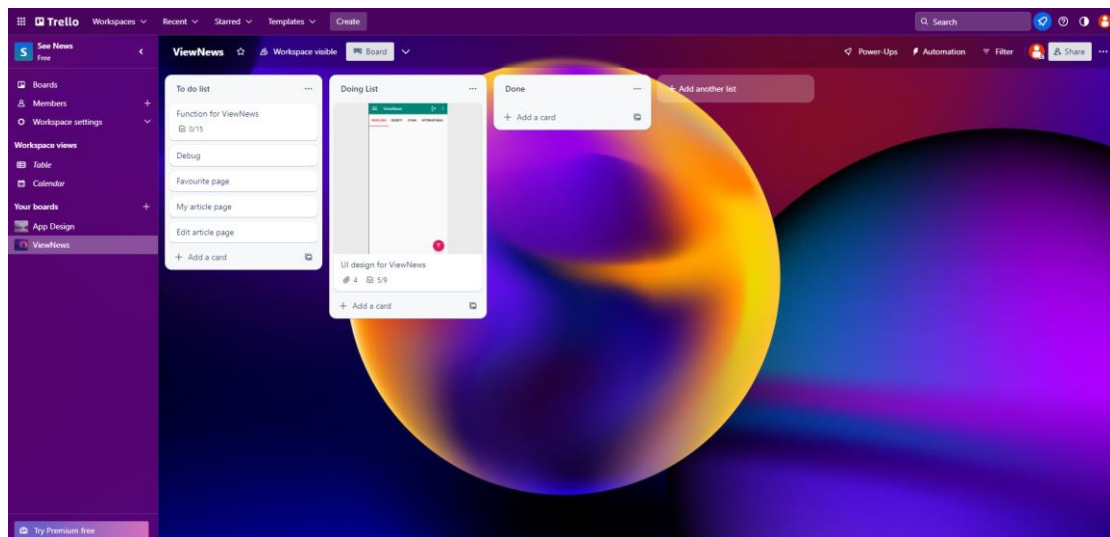
# Trello

Trello is a useful tool for us to make plans. For me, I use Trello to record what I need or plan to do, what I am doing and what I have done.
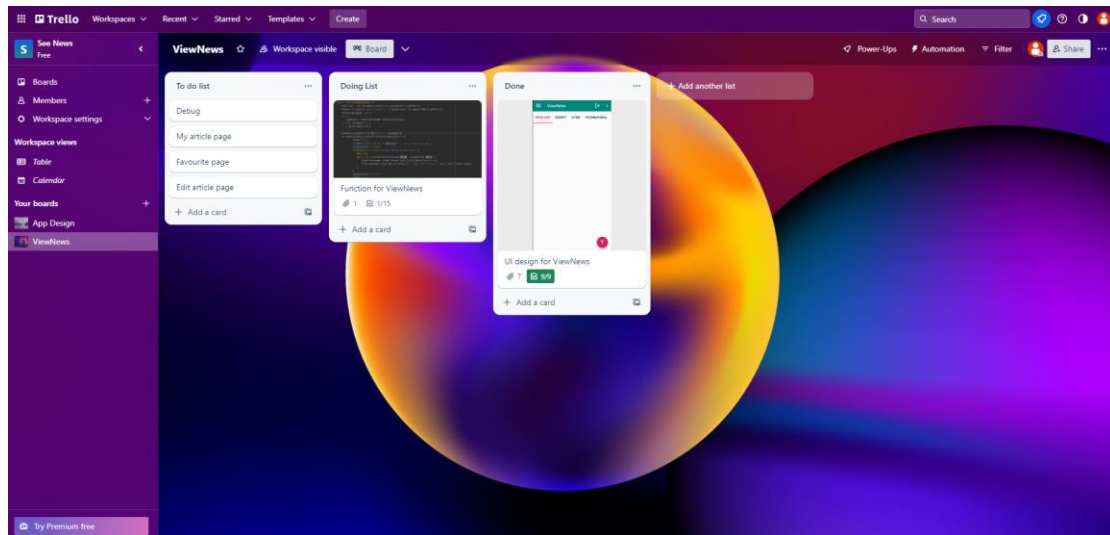
Here are some screenshots of Trello to record my progress of my project.
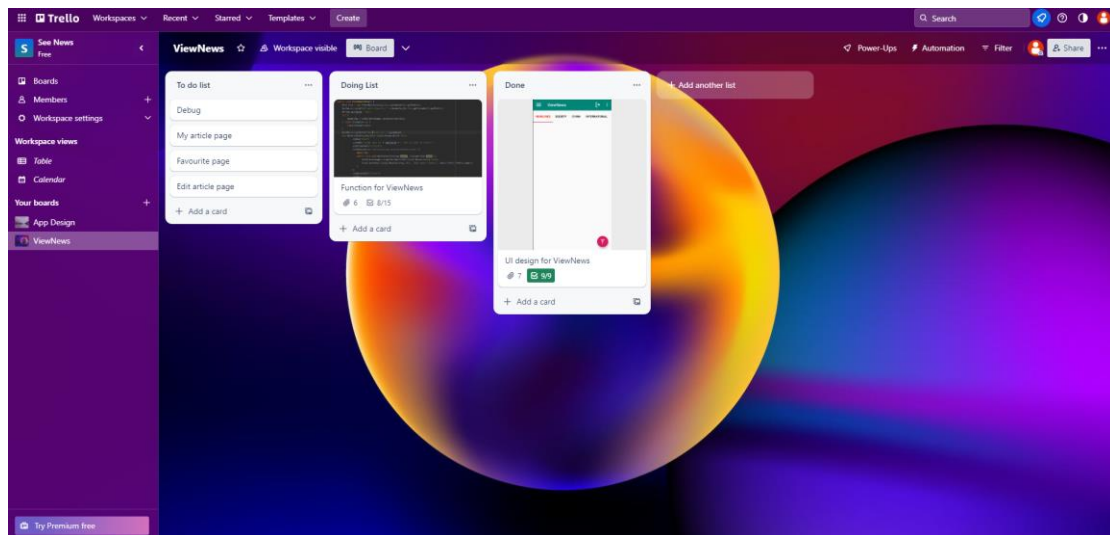


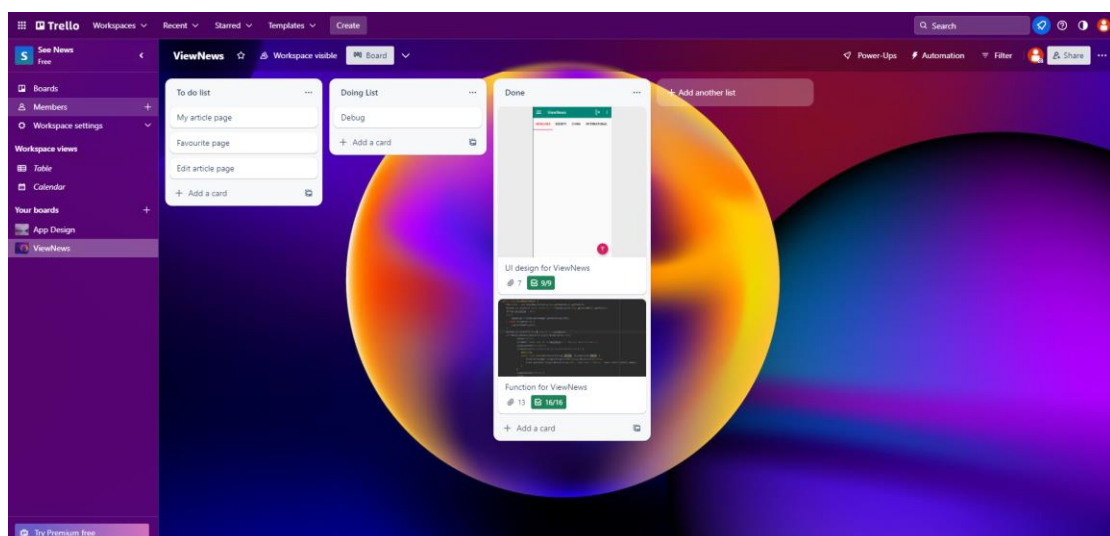First time I just plan what I need to do.



Second time I have made some progress on UI design.

Third time I finish UI design and start coding.



Fourth time I keep making progress on coding.



Finally I finish coding and start to debug.

## Justification

After finishing this project, I have learnt a lot. I learn a lot of knowledge about Android development, I learn how to find solutions from websites such as 'stack overflow', and how to use debug function to find out the problems etc. A news app is not a necessary application but it will make people's life better. In the future, I will keep improving this application and make it a perfect news application.