Personalised News App

CFGMasters - Mobile Development

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Team name: *Team 1*

1. Introduction

The purpose of this project report is to document the development process and outcomes of the "Personalised News" mobile app. The app was developed using React Native and utilised the NewsCatcher API to fetch news articles based on user preferences. This report outlines the project's objectives, methodologies, implementation details, challenges faced, and outcomes.

1.1 Aim

The "Personalised News" app aims to provide users with a personalised news experience. The app allows users to customise their news feed based on their preferred continent and news categories of interest. Users can explore news articles, read specific articles, and stay informed about topics that matter to them.

2. Steps Specification

2.1 Tools

React Native: A JavaScript framework for building native mobile applications
Redux: A state management library for managing application state.
React Navigation: A routing and navigation library for handling navigation within the app.
The code snippet fetches data from APIs. It utilises the built-in "fetch" method in JavaScript to make an HTTP request and retrieve the data. The retrieved data is then sorted by the preferences before being inserted in the component's state.

2.2 SDLC and Execution

In order to ensure a systematic and structured approach to our mobile app development project, we followed the Software Development Life Cycle (SDLC) methodology. Although we adapted the SDLC to the scale and timeframe of our project, we incorporated key phases and practices to ensure the successful delivery of the app.

June 15 - 18	Project idea

June 19 - June 22	App interface design
June 23 - July 5	Coding
July 2 - July 4	Documenting
July 5 - July 6	Finalising

Table1 Original Time Frame (created on 6/19/2023)

To be specific, Our adaptation of the SDLC consisted of the following stages:

1. Requirements Gathering: We conducted thorough discussions and analysis to identify the project requirements, including the desired features, functionalities, and user experience.
2. Design: Based on the requirements, our design phase involved creating wireframes, UI/UX designs, and information architecture for the app. Our team member, Wei, led this phase, ensuring the app's visual aesthetics and user-friendly interface.
3. Development: Tianxin and Lavi took charge of the development phase. We employed the agile development approach, breaking down the project into smaller tasks and sprints. We had roughly two group meetings each week to keep everyone on track. This allowed us to iterate and make continuous improvements throughout the development process.
4. Testing and Quality Assurance: We performed thorough testing to ensure the app's functionality, usability, and performance. We addressed any identified issues promptly to maintain the app's quality.
5. Maintenance and Support: We recognised the importance of post-deployment support and maintenance. We established plans for monitoring user feedback, addressing bug reports, and implementing future enhancements to keep the app up to date and in line with user expectations.

Throughout the project, we maintained regular communication, collaborated effectively, and adjusted our approach when necessary to meet the project's timeframe. While adhering to the core principles of the SDLC, we ensured flexibility to accommodate the specific needs and scale of our mobile app development project.

2.3 Design Related

2.3.1 Design Section:

In the design section of our project, we focused on creating a visually appealing and user-friendly interface for the "Personalised News" app. The following elements were considered during the design process:

Colour Scheme:

We chose a colour scheme that included dark brown (#322925), orange (#F96638), and a light cream colour (#F4E3DB) to create a vibrant and stylish look. The dark brown colour resembled black, drawing inspiration from oil paint works (such as figure1 below) depicting people reading newspapers. By combining the dark brown with the vibrant orange and cream colours, we achieved a visually appealing contrast and an overall sophisticated aesthetic.

Figure1

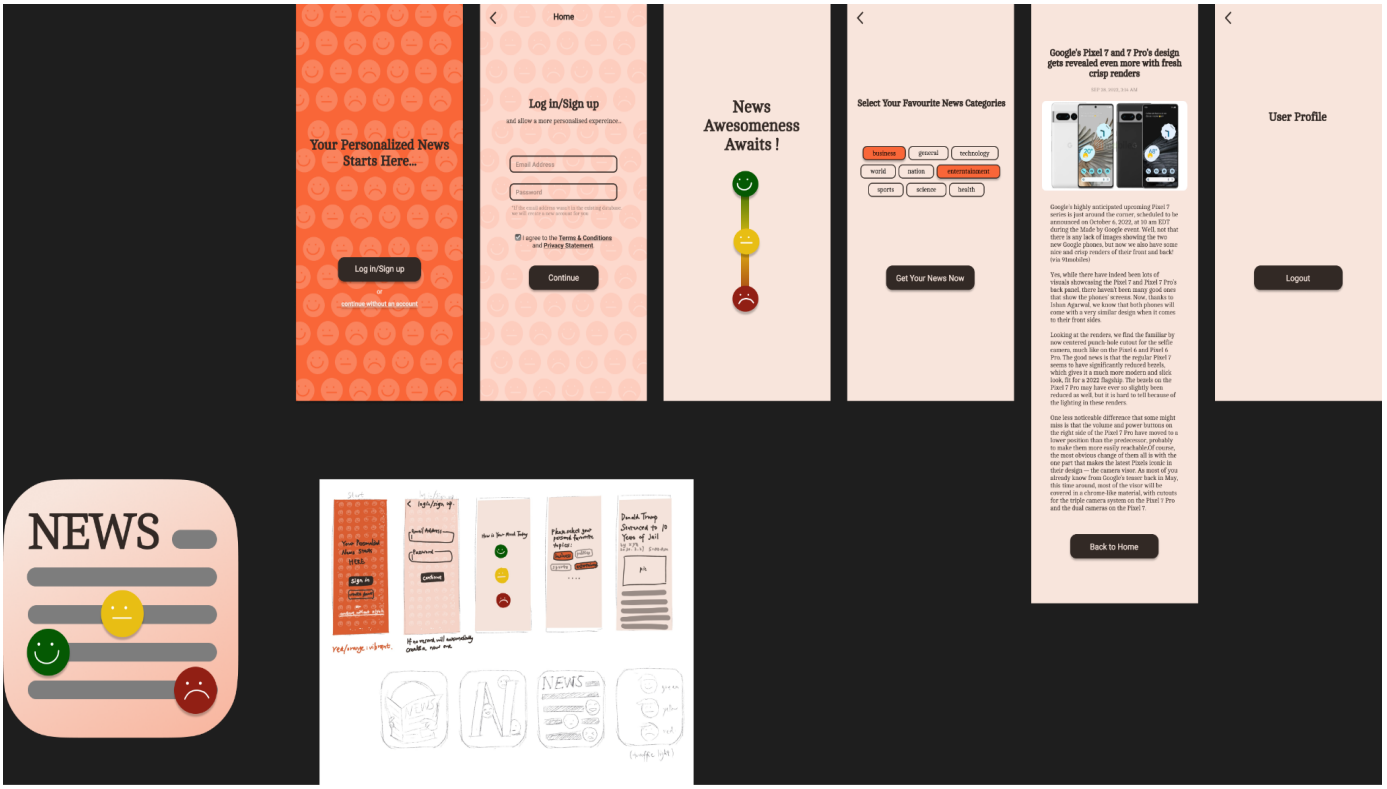
Design Philosophy:
Our design choices were influenced by the desire to create a unique and engaging user experience. We opted for hand-drawn simplified faces as background elements to add a touch of artistic style. These backgrounds contributed to the app's overall visual appeal and helped create a distinctive atmosphere.

Typography:
We carefully selected fonts to enhance the app's readability and aesthetics. We chose Cambo for displaying news articles, a font that added a touch of elegance and complemented the overall design. For buttons and notifications, we chose Roboto, as it is a clean and widely used font that ensures legibility.

Justifications for Design Choices:
During the design process, we made several considerations and trade-offs. For example, we initially planned to use a brighter shade of brown. However, we realised that using a brighter brown would negatively affect the contrast of the screen, compromising readability. As a result, we opted for a darker brown colour that resembled black but still maintained visual appeal and legibility. We believed that this loss in brightness was worth the gain in contrast and overall aesthetic balance.

Mock-ups and Prototypes:
We utilised Figma to create design templates and wireframes for the initial version of the app. However, as the project progressed, we made modifications and added additional functionality and pages. The original plan underwent changes due to feasibility considerations. For instance, we initially aimed to incorporate sentiment analysis and categorization of fetched news from the API, but due to time constraints, we decided to focus on other core features instead. Additionally, Figma's limitations in exporting designs directly

into React Native code necessitated slight modifications to the original design during implementation.
(The links of our temples are https://www.figma.com/file/Juzlp437xNbpEpYPymilcK/CFG-Mobile-Team1?type=design&node-id=0-1&mode=design&t=lW53jlm0fjT4WlMi-0 and https://www.figma.com/file/GNgM2QeIknW5dk73YVBgMM/CFG-project?type=design&node-id=0-1&mode=design&t=VHumtR7Bf2UhSK8v-0 .)



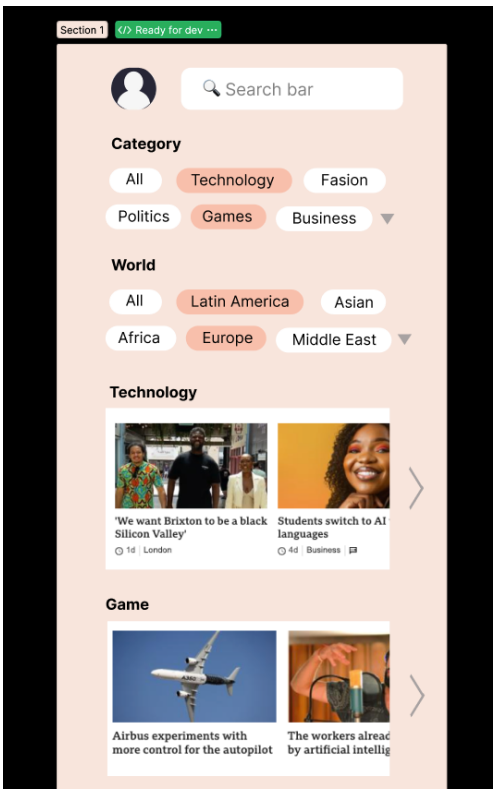


Figure2 Design Template

By carefully considering our colour scheme, design philosophy, typography choices, and making necessary design trade-offs, we successfully created a visually appealing and user-friendly interface for the "Personalised News" app. The design process involved

continuous refinement and adaptation to ensure a seamless user experience while maintaining the app's unique style.

2.4 Development Process

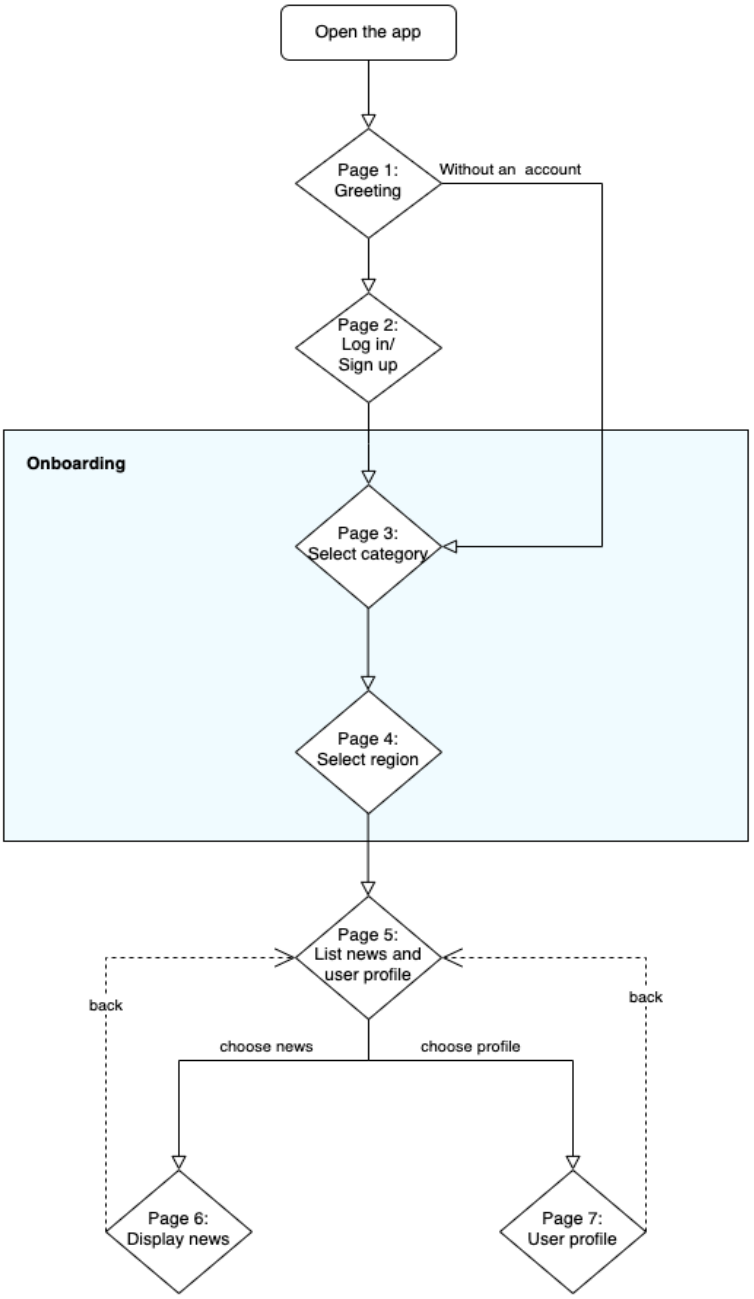


Figure3 App Flow Diagram

The development process followed the following key steps:

a. Loading, Welcome, and Login:

- The app begins with a welcome page that introduces the user to the app's features and navigates to the login page.

- Users have the option to continue without logging in.

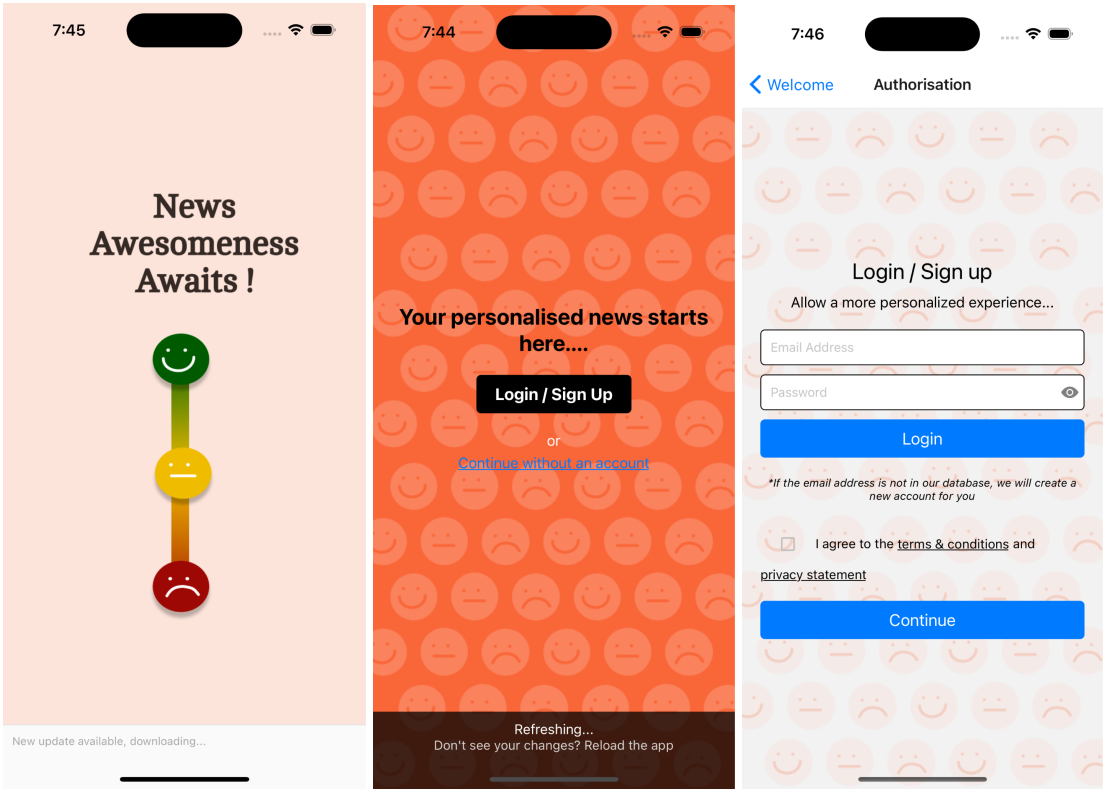


Figure 4-6 Loading Page, Welcome Page and LogIn Page

b. Continent/Region Selection:

- After logging in or choosing to continue without login, users are presented with a world map.
- Users can interact with the map and select their preferred continent of interest.

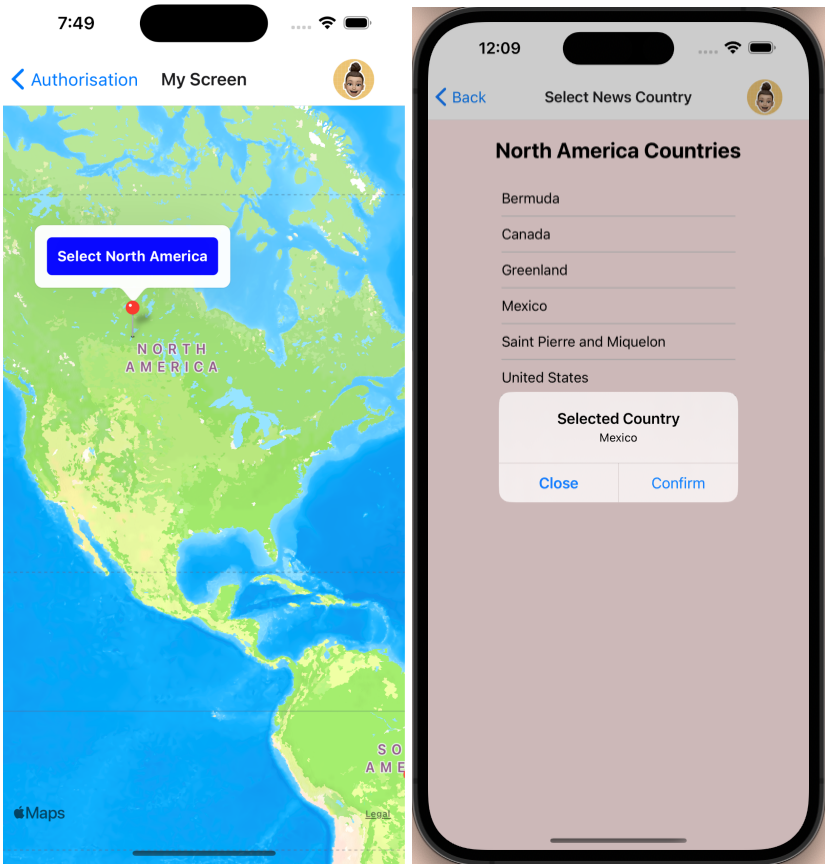


Figure 7-8 Select Map Pages

c. News Category Selection:

- Users are then prompted to select news categories that align with their interests (e.g., sports, business, entertainment).
- Multiple categories can be chosen.

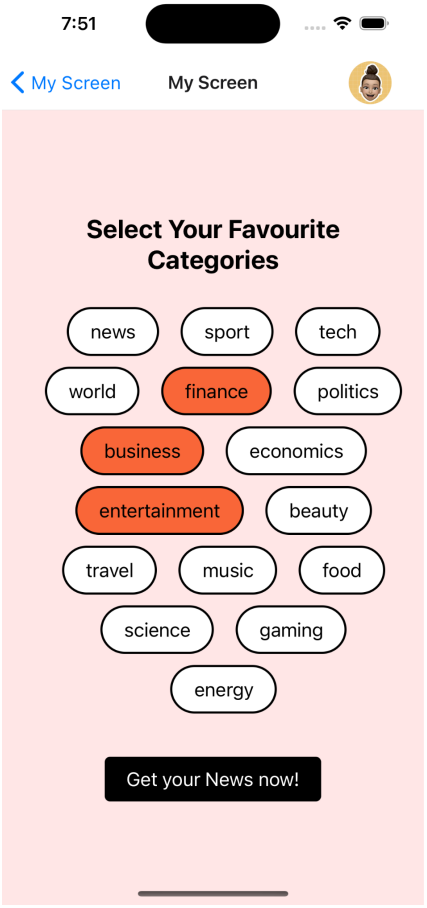


Figure 9 Category Selection

d. Displaying User Choices and News Articles:

- The app displays the user's selected continent and news categories.
- News articles relevant to the chosen categories are fetched using the NewsCatcher API and displayed to the user.

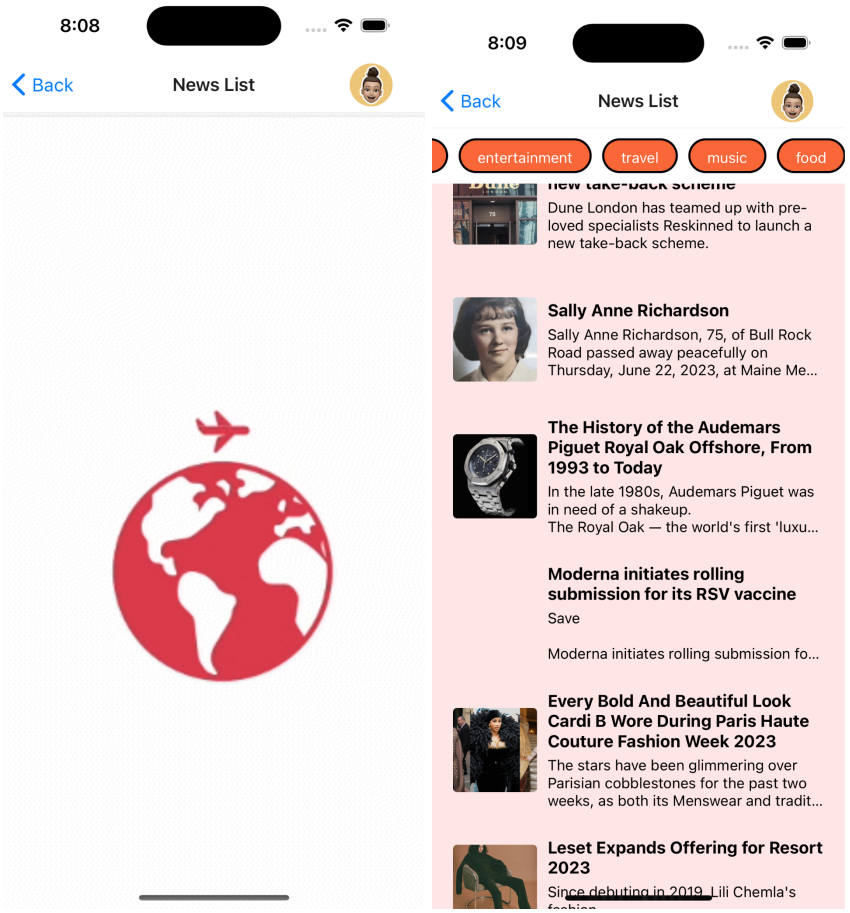


Figure 10-11 Loading page and category display page

e. Reading Specific News:

- Users can select a specific news article to read in detail.
- The app will instantly open the browser with the original source of that piece of news

Figure 12 News Website

f. User Profile Page:

- Can be accessed by clicking the avatar on top right of the screen
- Displays a personalised welcome message, such as "Welcome [user name]," providing a personalised touch.
- Shows the user's avatar, allowing for visual representation and personalisation.
- Includes the user's nickname for further customization and identification.
- Provides a secure password section for the user to manage their account.
- Offers a logout button for convenient session termination.
- Includes a button to easily navigate back to the homepage for seamless user experience.

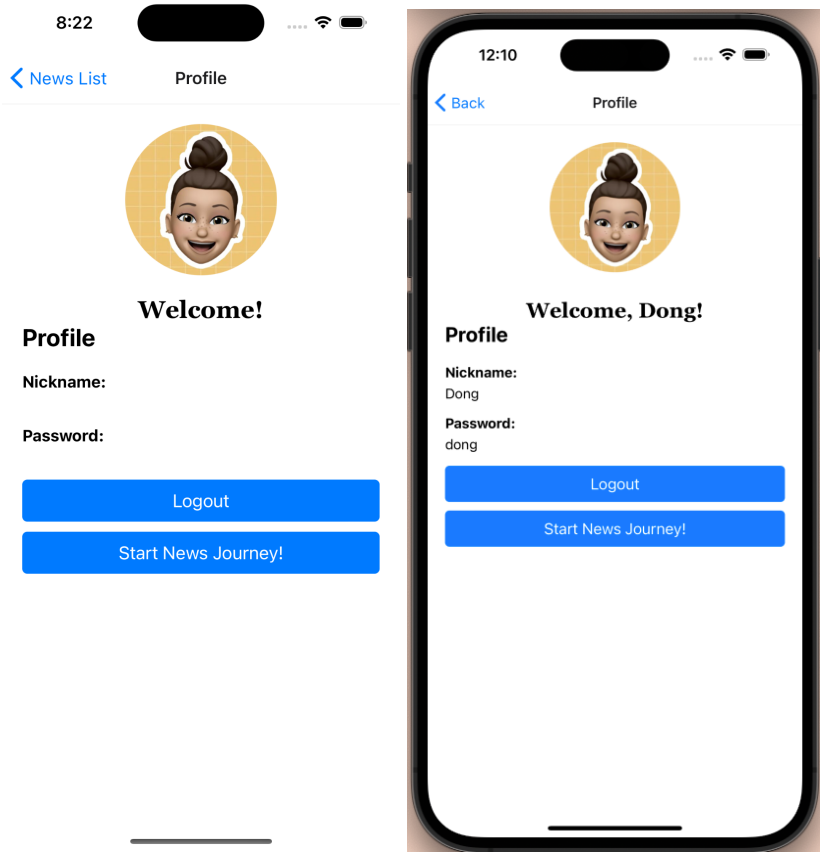


Figure 13 User Profile

3. Responsibilities[1]

Tianxin: Involved in the majority of the coding tasks, including frontend and backend development.
Lavi: Collaborated with Tianxin on coding tasks, focusing on implementing app functionality and integrating APIs.
Wei: Responsible for the design aspects of the app, including UI/UX design and visual aesthetics.

4. Challenges and Reflection

4.1 Challenges

Throughout the project, several challenges were encountered, including:

- Integration with the NewsCatcher API and handling API responses.
- Implementing the world map and ensuring seamless interactivity.
- Designing an intuitive user interface that provides a smooth user experience.
- Managing data flow and state management within the app.

[1] See Project Activity Log for a detailed overview of members' tasks. Available at: