SCMP Mobile Team Interview - Coding Assignment (Senior)

User Story: Staff Management App

Title: Implement Staff Management App with Login and Staff List

People Department wants to provide employees with a secure and convenient way to access staff information through a centralized mobile application, so that they can efficiently find and connect with colleagues while ensuring data security and access control.

This sprint focuses on developing the foundational features, including

1. **(Required) Login Authentication Page**
    a. Simple UI for email and password input and action button
    b. Email validation
    c. Masked password (Constraint: letter and number only, 6-10 characters)
    d. Indicator for API Loading
    e. Route to the Staff Directory page once login is successful
    f. Error handling (Display a simple error message with action buttons)
2. **(Required) Staff Directory Page**
    a. Display the login token at the top of a page
    b. Display a list of staff information (List item should contain at least avatar, email, first and last name)
    c. Show "Load more" UI when reaching the bottom of the current page until no next page of data available
    d. Trigger API call to load data in next page and expend the data at the bottom of the list **without re-rendering the whole list**
3. **(Optional/Bonus) Support Persistent Login Session and Offline Mode**
    a. If the user login successfully, store the user token in a secure local storage
    b. If the user token is exist when app launching, landing to Staff Directory page directly
    c. Support offline mode for Staff Directory (if the user logged in and the data is loaded previously, show the cached data instead of remote data from the API)

Note: Focus on software architecture and user experience (UX) design. While UI aesthetics do not need to be fully polished at this stage, ensure that the UX is intuitive, functional, and meets production-quality standards.

Technical Requirements

Required

- Language: Kotlin (Android); Swift (iOS)
- Utilize the functionalities from the native SDK; **No 3rd party library is allowed**
- Create a **public repository** in GitLab/GitHub (Share the Git url when submitting your assignment)
- Contains clear Git commit history that can demonstrate your development progress
- Maintain clean code and readability
- Implements proper unit tests (cover test cases as much as possible)
- Modular your code based on reusability and scalability
- **Make sure the app can be built** with Android Studio (Android) or Xcode (iOS)
- **No app crash**

Optional (Bonus Points)

- App architecture: MVVM, MVI or other suitable frameworks
- Adapt proper design patterns, such as dependency injection, factory, observer and so on
- Adhering to SOLID principles during development

API Details

Login

API Endpoint	https://reqres.in/api/login?delay=5
Method	POST

Request JSON:

```
{
    "email": "eve.holt@reqres.in",
    "password": "cityslicka"
}
```

Sample Response:

```
{
    "token": "QpwL5tke4Pnpja7X4"
}
```

Staff List

API Endpoint	https://reqres.in/api/users?page=1
Method	GET

Sample Response:

```
{
  "page": 1,
  "per_page": 6,
  "total": 12,
  "total_pages": 2,
  "data": [
    {
      "id": 1,
      "email": "george.bluth@reqres.in",
      "first_name": "George",
      "last_name": "Bluth",
      "avatar": "https://reqres.in/img/faces/1-image.jpg"
    }
    //...
  ],
}
```