# Industrial Mobility Technology - Android Code Challenge

## Overview

Implement a solution for an Android application that monitors network and battery status.

The application should notify the user about significant changes in network connectivity and battery levels. This challenge will evaluate your ability to work with Android's system services, manage background tasks, and provide real-time updates to the user interface.

## Use Case

You are tasked with building a simple application that performs the following functions:

1. **Network Status Monitoring**:
    - Monitor the device's network connectivity status.
    - Detect when the device loses network connectivity and when it recovers.
    - Notify the user through a UI alert whenever there is a change in network status.
2. **Battery Status Monitoring**:
    - Monitor the device's battery level in real-time.
    - Alert the user when the battery level falls below 20% using a notification.
    - Update the UI to reflect the current battery status whenever it changes.
3. **User Interface**:
    - Implement a simple UI that displays the current network status and battery level.
    - Provide a visual indication that updates in real-time as the network and battery status change.
    - Ensure that the UI remains responsive, and updates correctly based on the monitored events.

## Requirements

- **Language**: The solution must be implemented in Kotlin.
- **Architecture**: Remember to use Coding Best Practices and Guidelines, following a clean code approach to separate concerns in your application.
- **Lifecycle Awareness**: Use Android's lifecycle components to manage resources properly and avoid memory leaks.
- **Testing**: Include basic unit tests for your logic where applicable.
- **Documentation**: Write clear comments and documentation for your code to explain your thought process and implementation choices.
- **Assistance**: third party libraries and use of AI tools are allowed, although the fully customization would be highly appreciated.

## Deliverables

- A complete Android project that meets the outlined requirements.
- A README file that explains how to set up, run, and test your application.
- Instructions on how to build and run the project, including any dependencies that need to be installed.

## Time

The time allocated for the code challenge should not exceed of 4 hours. Please feel free to manage your time as you see fit within this duration.

## Submission

Please submit your completed project as a zip file or share a link to a public GitHub repository containing the code by the specified deadline. Ensure that your code is well-organized and easy to navigate.