



Background

Many Non-Governmental Organisations (NGOs) work with bandwidth-constrained beneficiaries, but are unable to provide educational content face-to-face, due to Covid-19.

This project objective was to develop a mobile application framework that allows NGOs to create their own mobile applications to upload and manage their educational content and share them with their bandwidth-constrained beneficiaries.

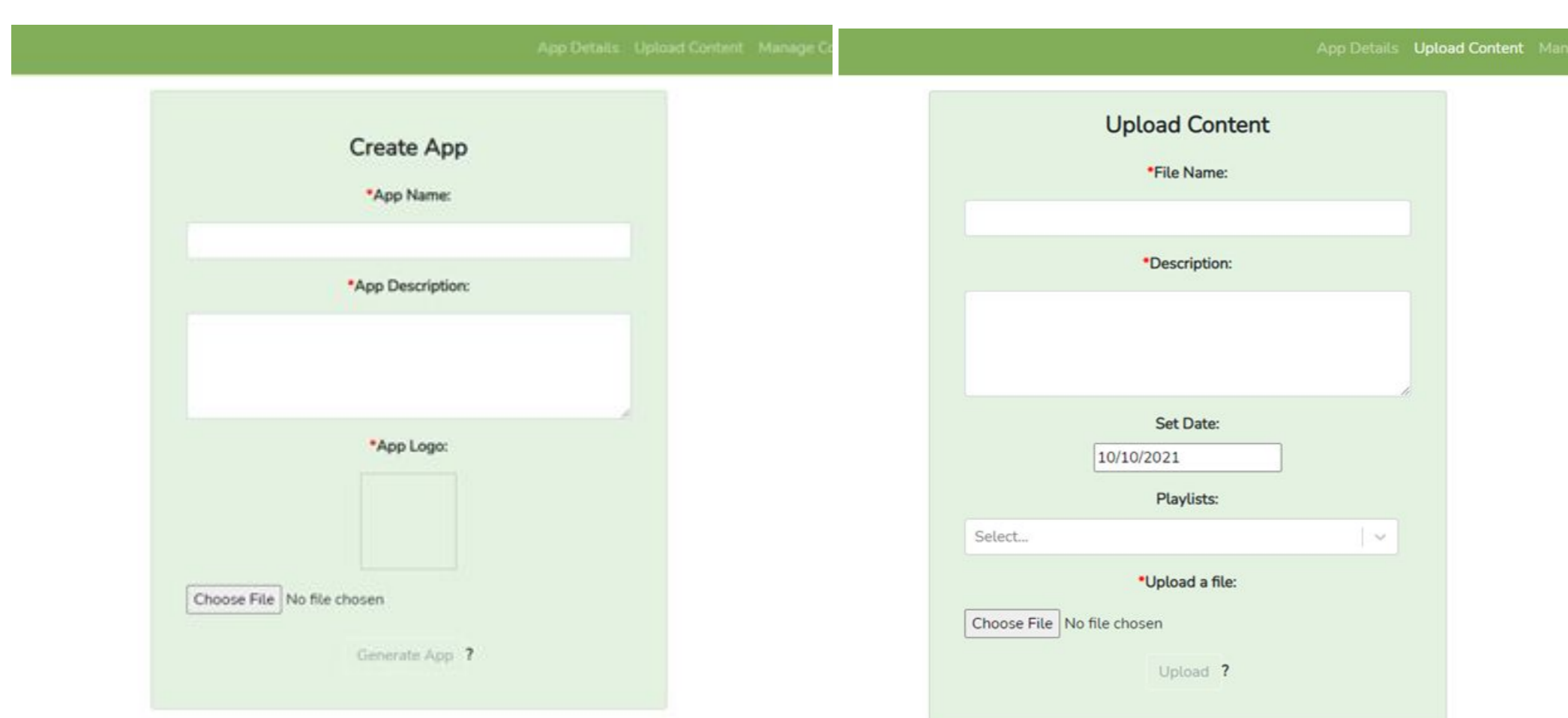
Methodology

Each team member worked with an NGO to design the NGO Educate framework. The team worked with the Bhabhisana Baby Project, Common Ground Church Wynberg, SaveAct and Neonatal Intensive Care Unit(NICU) health staff.

The project consisted of three main stages. Stage 1 involved conceptualisation interviews with the NGOs and designing the framework and its components. Stage 2 involved creating a prototype, which was demonstrated to the NGOs. Stage 3 consisted of the NGOs final system evaluation.

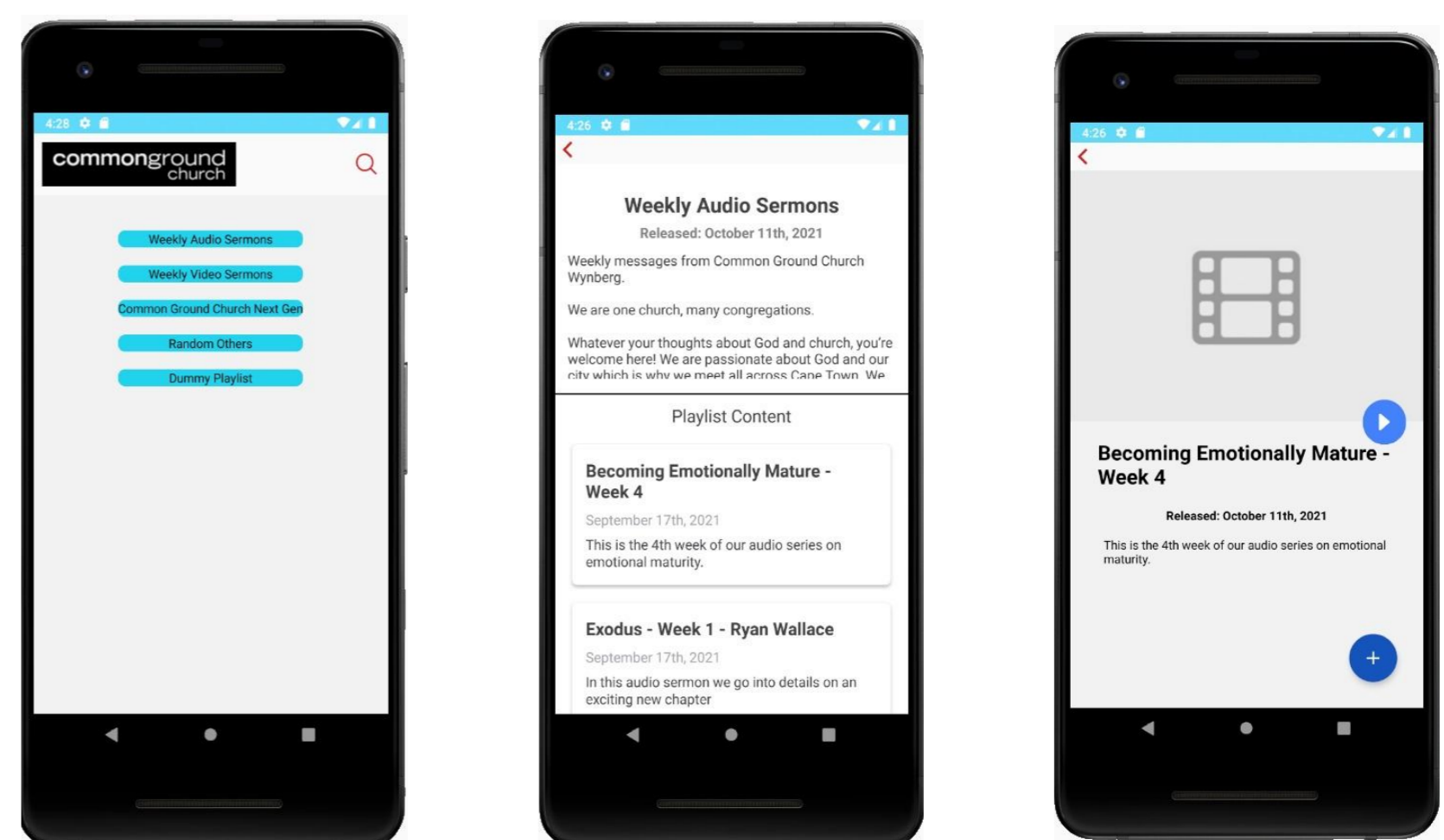
Components

Content Manager (Web UI)



Content Manager is the front-end web user interface. NGOs can create an app, upload and manage content, as well as create and manage playlists for their beneficiaries. They can also view overall summary statistics and feedback received from their beneficiaries.

Client Mobile App



The Mobile Client Application is a cross platform React Native application primarily aimed towards Android users. The mobile application is custom generated to a specific NGO, only showing the relevant content.

Backend CMS

Aims to manage content uploaded via the Content Manager by the NGOs and accessed via the mobile application by the beneficiaries. It provides a set of API endpoints tailored for the two client systems.



App Generation Service

The service enables the automated generation of a customised mobile app and allows the generated mobile apps to have audio and video content embedded within the APK file.



Conclusion

The project was able to confirm the need for NGO Educate as all NGOs confirmed the need for a solution to support content-sharing for bandwidth constrained beneficiaries. The NGOs showed a great interest and willingness to use NGO Educate during the final evaluations. Although the system does not meet all of the requirements requested by the NGOs, it is still considered a success as it contains the most important features and can be used as a starting point to create a more robust offline educational app framework.