



DIGI-Teens

WP2 Proof of Concept Creation

D2.2.1 and D2.3.1 Implementation

<https://digiteens.polito.it>



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Please see <https://digiteens.polito.it> for more information.

The partners in the project are Politecnico di Torino and Alma Mater Studiorum - Università di Bologna. The content of this document is the result of the work developed by the partners in the context of the project.

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1 Introduction

This deliverable lists the repositories related to the **implementation** of the *Proof of Concept* (POC) developed within the project. It serves as an overview for both the core implementation and the subsequent refinements and adjustments, which happened following the in-the-lab evaluation.

All the code, with an open source licence and a brief description of the architecture and implementation choices, is available in the public DIGI-Teens GitHub organization at <https://github.com/digiteens>.

Through a dedicated teacher application, educators can design personalized learning paths by selecting from a range of structured activities, while students engage with them through a separate interactive application enhanced with gamification elements. Both applications support classroom discussion and critical reflection by providing results, theoretical insights, and practical guidance to stimulate collective dialogue. This repository is focused on the teacher application.

This project is composed of two independent applications that operate synchronously within a unified system architecture, sharing a common Firebase Realtime Database.

The system is designed to:

- Enable teachers to plan and customize digital wellbeing learning paths by selecting activities organized into topics and modules, via a web application.
- Allow students to complete assigned activities through a dedicated mobile application enhanced with gamification elements.
- Synchronize activity planning, execution, and results in real time between teacher and student applications.

2 Student Mobile Application

The Student Mobile Application is the interactive component of the digital wellbeing education system designed for classroom use. It enables students to engage with the learning paths created by their teacher, complete structured activities, and reflect on their results within a gamified environment. The app has been realised in React Native with the Expo framework.

Source code and instructions on how to modify and run it are shared under the Apache 2.0 licence: <https://github.com/digiteens/digiteens-students>.

3 Teacher Web Application

The Teacher Web Application is the administrative and planning component of the digital wellbeing education system designed for classroom use. It enables teachers to manage learning paths, plan activities and monitor student progress. The app has been realised in React.

Source code and instructions on how to modify and run it are shared under the Apache 2.0 licence: <https://github.com/digiteens/digiteens-teachers>.

4 Shared Data

For sharing and synchronising data between the two apps, the project adopts Firebase Real-time Database. It serves as the shared persistence layer that stores activities, planning configurations, results, user data, class information, and gamification-related elements, ensuring real-time synchronization between both applications.

Sample data and instructions on how to use it with the two apps are shared under the Apache 2.0 licence: <https://github.com/digiteens/digiteens-shared-data>.