DESCRIPTION

Sensational Science Projects was developed to fill the need to conduct science projects remotely given the surge in remote learning.

Sensational Science Projects is modeled after the concept of Citizen Science Projects, where data collection is crowd sourced. The data can be collected remotely and submitted through an online platform. Sensational Science Projects applies this concept to enable remote data collection and adds in data compilation so that students and teachers can see trends within the entire class's data instead of just their own. It also allows teachers to create and edit projects to meet the needs of their class instead of adapting their wants to match the existing Citizen Science Project.

Sensational Science Projects is a flutter application that is designed to help teachers design and distribute science projects for students to do on a computer or mobile device in any location. It is available for web applications as well as on apple and android mobile devices.

Teachers are able to create projects including text input, short answer response, numerical input, multiple choice questions, location data (by using the device location), and image input from a file or via the device camera. Teachers can set up a class with a roster and add projects to that class with a specific due date.
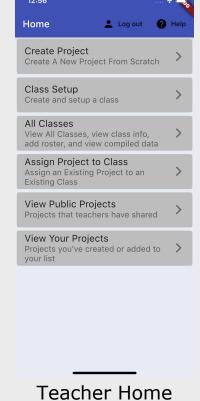
Each student on the class roster has a unique 7 digit code generated for each project assigned to a class. With the code, the student can submit and re-submit data up until the due date and view the compiled class data after the due date has passed.
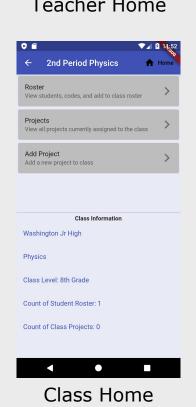
Oregon State University
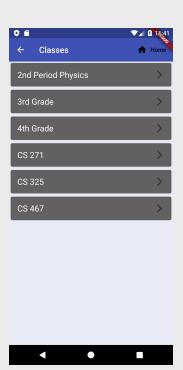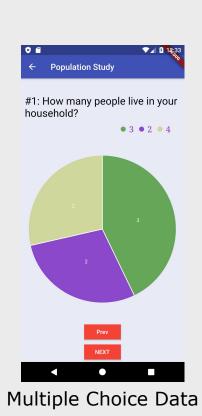
SENSATIONAL SCIENCE PROJECTS
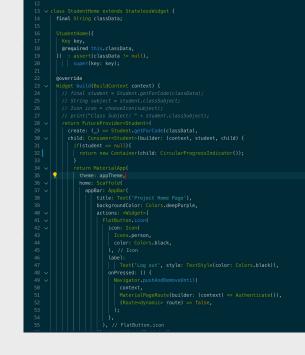## Flutter Application based on Citizen Science Projects

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https://citizen-science-app.web.app

Login page

Teacher Home

Collect Data

Location

Create Class

Class Home

List of Classes

Image Upload

Multiple Choice Data

Code snippets from main and student/teacher home pages

KEY FEATURES

- Cross-platform [iOS, Android, Web]

- Allows teachers to create new science projects in different subjects with as many of each type of question as desired and in any order

- Projects can be marked public and a teacher can save public projects to their library to assign to a class

- Allows for teachers to set and change due dates, create an answer key and view compiled student data

- Students can collect data for a project on a mobile device and upload it when connectivity is available

- Result compiling that includes mapped locations, graphed numerical results and pie charts for multiple choice results

TECHNOLOGIES USED

- Flutter open-source software

- Firebase datastore, storage, authentication and web hosting

- Open-source plugins for flutter including geolocator, image_picker, path_provider, and flutter_google_maps

NEXT STEPS

- External user testing of application by teachers

- Enable emailing class roster and associated project codes to teachers

- Allow teachers to import roster from a file

- Apply any changes users recommended to application

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