# Dandelion data collection platform

System specification

## Architectural overview

SRUC sever

Python Flask app

REST API

Database

File system

files

├─ 123

│ ├─ 66

│ │ ├─ file1

│ │ ├─ file2

│ │ └─ file3

React app

Local authority network

School WiFi network

GrowCube

Lilygo TTGO T5

Sensors

Battery

Internet



## User roles

|  |  |
| --- | --- |
| Role | Description |
| Sysadmin | Superuser with access to all parts of the system for development, maintenance, management and problem resolution |
| Superuser | Designated staff member(s) within a school with management responsibility for the school’s users and content |
| User | Staff or student user without management responsibility. The system does not differentiate between staff and students. A user may be part of a project team with additional privilege to update the project data. |
| Public | Unauthenticated user visiting the public site to view content and data |

## Database structure conventions

The following column definitions will be used in all tables where required:

|  |  |  |
| --- | --- | --- |
| Column | Datatype | Description |
| id | Integer | Synthetic primary key |
| description | Varchar(120) | Short description of the entity represented by the record |
| created\_date | Datetime | Record creation timestamp |
| updated\_date | Datetime | Timestamp of last update to this record |
| created\_by | Integer | Foreign key to the users table |
| status | Char(2) | Status code |

Columns that represent Boolean flags have names starting with is\_ (e.g. is\_superuser).

Foreign key columns names include the name of the related table (e.g. school\_id) unless the name is context-specific (e.g. created\_by).

Columns that represent files held in the file system have names ending in \_link (e.g. project\_image\_link).

Columns containing large bodies of text (>255 characters) have names ending in \_text (e.g. project\_text).

## Auditing

The auditing function tracks changes made to existing data. It records the previous value of any modified fields, the new value, the id of the user making the change and the timestamp.