CyRanch Connect

CyRanch Connect is a tool to help improve student involvement at Cypress Ranch High School.

Features

- Stunning UI
- Interactive Q & A
- Security Features (CSRF Token Authentication, Password Hashing, XSS protection, etc.)
- Account System
- Student Leaderboards
- Event Calendar
- Point System
- Dynamic QR Codes
- Fully Functional Admin Panel

Deployment

Begin by cloning the repository to your local machine. Then, run the following commands:

Installing the dependencies

(PIP)

```
python -m pip install
```

(Poetry)

```
poetry install
```

Changing the secret key

Change the secret key in the `settings.py` file to a random string of characters.
We recommended that you store this key in an environment variable for enhanced security.

```
SECRET_KEY = "<Your Secret Key>"
```

Run the server

```
python manage.py runserver <host>:<port>
```

Example:

```
python manage.py runserver 0.0.0.0:8000
```

Note: Make sure your firewall is configured to let through port traffic!

Admin Panel

Creating an admin account

```
python manage.py createsuperuser
```

Accessing the admin panel

1. Visit `http://<host>:<port>/admin` to access the admin panel.
2. Login with the credentials you created in the previous step.

Adding events

Events can be created through the admin panel GUI

Adding points

Points can be added by students scanning the QR code for a given event or through the admin panel GUI by increasing the `points` field of a student object.

Advanced Features

Creating Dynamic QR codes

An admin user who is logged in can create a dynamic QR code for any event by visiting the following URL:

```
http://<host>:<port>/event-qr/<event ID>
```

Note: By using dynamic QR codes, we ensure that students cannot share links with other students to gain points without attending events as each link is only valid for a short period of time

Creating database backups

```
python manage.py dbbackup
```

Restoring database backups

```
python manage.py dbrestore
```

Note: If you are restoring a database containing relations you may need to run the above command twice.

Note: This will overwrite the current database with the backup.

File Structure

File	Purpose
`CyRanch_Connect/views.py`	The main router for the CyRanch Connect web application
`CyRanch_Connect/models.py`	Stores the database models used in CyRanch Connect
`CyRanch_Connect/templates/`	The frontend for CyRanch Connect
`CyRanch_Connect/static/`	Static files for the frontend to be served by the server
`templates/base.html`	Base template which is extended by all other templates
`FBLA_CodingProgramming_2023/settings.py`	Manages all settings for CyRanch Connect
`manage.py`	Control over server functions (Including starting the server and database backups)

Tech Stack

- Bootstrap, HTML, CSS, JavaScript
- Jinja2 Templating Engine
- DJango Web Framework
- SQLite3 Database
- Python

Contact

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