

BBQUA

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PROBLEM

The Biscayne Bay Project from the Marine Robotics Lab at FIU needs a web app to visualize datasets obtained from marine robotic mission. This web app should also serve to assist professionals by allowing them to create mission waypoints that can be downloaded for the robots to follow.

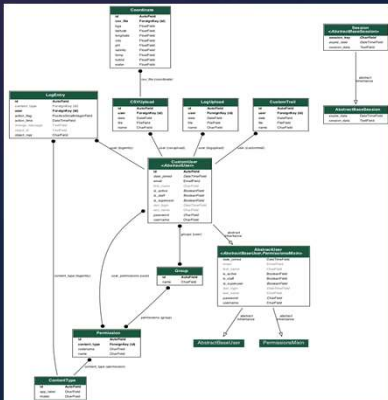
CURRENT SYSTEM

The current system in place only displays past missions that are manually added to the website and needs to be restarted for the updates to take effect. There is also no user implementation within the website or the ability to create missions for the robot.

REQUIREMENTS

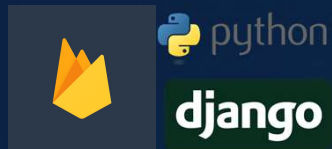
- New users should use the creation form to create a new account that will be registered into user's database for either custom or superusers.
- The creation form should check the user's database to verify if user already exist.
- Users are put into groups and are given permissions on what actions can be done to data files.
- Database allows data to be viewed up to 5 years then is deleted.

CLASS DIAGRAM



IMPLEMENTATION

The web application was built using Django as a backend and template engine with Bootstrap for the frontend. GitHub was used as our version control system.



VERIFICATION

Manual verification was used to verify program functionality:

Scenario: New users can register, and existing users can not create an identical account.

Status(Pass/Fail): Pass

Scenario: Logged in users can be put into groups with set permissions.

Status(Pass/Fail): Pass

SUMMARY

The login and register features allow users to have unique accounts and adds a layer of security to the overall application, while reducing the creation of duplicate accounts. Data is filtered and checked by the database based on its creation date and is deleted if older than 5 years

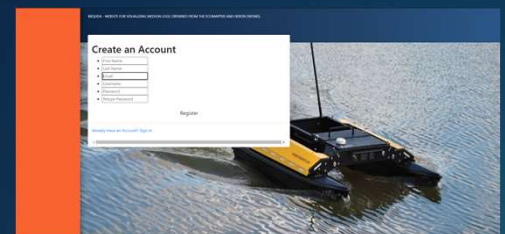
FUTURE WORK

Future work on this project would potentially focus on features such as:

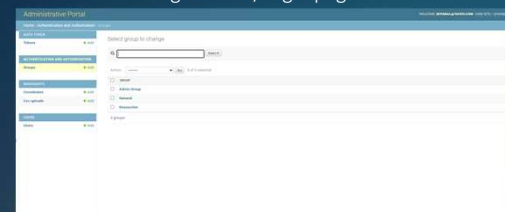
Multiple types of data input since currently the system only supports specific data parameters.

Converting from Django to Firebase, this will give the application a cloud base structure for its data collection and a NoSQL format to handle larger data sets.

SCREENSHOTS



Registration/Login page



Admin page