An IOT Based **Aquarium** System

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Objectives

- This project proposes an efficient way to monitor the quality of water in real-time through IOT (Internet of Things) and different sensors.
- Allow fish owners to feed their fish even though they are not at home.
- Alerting the user when the quality of water inside the fish tank is deteriorating.
- Provide a better living environment for fish to survive.

Automatic Fish Feeder

- The automatic fish feeder is a device that automatically feeds the fish at a predetermined time.
- Using 3D printing technology to build the body of fish feeder
- Combining servo motor to drop fish feed from fish feeder.
- The fish feeder could control through mobile apps.
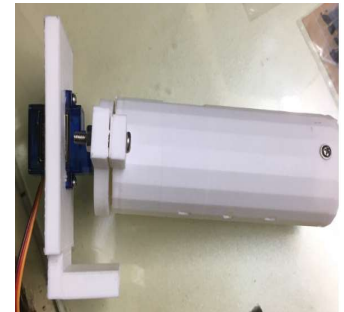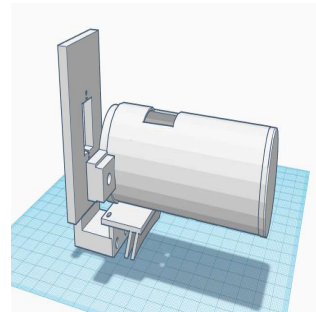
Mobile apps (data mode)

- The user could see the real-time temperature, dissolved oxygen, and turbidity values in data mode.
- The user could also monitor different values graphically.
- when the quality of water is not satisfactory, it will send a notification to alert the user.
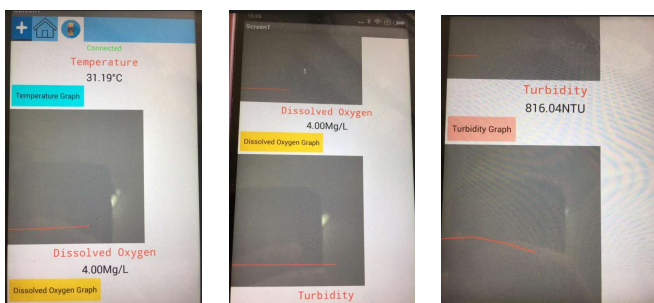
Mobile apps (fish feed mode)

- There are two functions in this fish feeding mode, including feeding fish immediately and at the predetermined time.
- The user could press the fish feed button in the mobile apps to turn on the fish feeder.
- If the user is on a trip, they could input the predetermined and rotate times for feeding their fish.
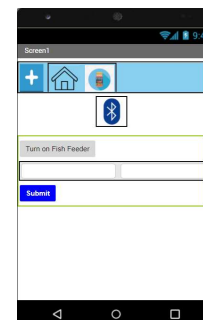
Result

- Once the users have opened the apps, they need to connect Bluetooth to our HC-05 module by clicking the Bluetooth button.
- After connecting Bluetooth, all the data will display in LCD and mobile apps.
- The user could set the predetermined time for feeding fish before they go on a trip.