

AQU DB queries

```
SHOW DATABASES;
```

```
DROP DATABASE IF EXISTS aquarium;
```

```
CREATE DATABASE aquarium;
```

```
USE aquarium;
```

```
CREATE TABLE tank(  
    tankId VARCHAR(6) PRIMARY KEY  
);
```

```
CREATE TABLE fish(  
    fishId VARCHAR(6) PRIMARY KEY,  
    name VARCHAR(20),  
    description TEXT,  
    img VARCHAR(20),  
    minTemp DECIMAL(5,2),  
    maxTemp DECIMAL(5,2),  
    minPH DECIMAL(4,2),  
    maxPH DECIMAL(4,2),  
    minAmo DECIMAL(5,2),  
    maxAmo DECIMAL(5,2)  
);
```

```
CREATE TABLE tankDetail(  
    tankId VARCHAR(6),  
    fishId VARCHAR(6),  
    fishQty INT,  
    minTemp DECIMAL(5,2),  
    maxTemp DECIMAL(5,2),  
    minPH DECIMAL(4,2),  
    maxPH DECIMAL(4,2),  
    minAmo DECIMAL(5,2),  
    maxAmo DECIMAL(5,2),  
    addedDate TIMESTAMP,  
    CONSTRAINT FOREIGN KEY(tankId) REFERENCES tank(tankId),  
    CONSTRAINT FOREIGN KEY(fishId) REFERENCES fish(fishId),  
    PRIMARY KEY(tankId,fishId)  
);
```

```
CREATE TABLE tempRecords(  
    id INT PRIMARY KEY AUTO_INCREMENT,  
    timeStampTemp TIMESTAMP,
```

```
        tankId VARCHAR(6),
        temperature DECIMAL(5,2),
        CONSTRAINT FOREIGN KEY(tankId) REFERENCES tank(tankId)
);
```

```
CREATE TABLE pHRecords(
    id INT PRIMARY KEY AUTO_INCREMENT,
    timeStampPH TIMESTAMP,
    tankId VARCHAR(6),
    pH DECIMAL(4,2),
    CONSTRAINT FOREIGN KEY(tankId) REFERENCES tank(tankId)
);
```

```
CREATE TABLE ammoniaRecords(
    id INT PRIMARY KEY AUTO_INCREMENT,
    timeStampAmmo TIMESTAMP,
    tankId VARCHAR(6),
    ammonia DECIMAL(3,2),
    CONSTRAINT FOREIGN KEY(tankId) REFERENCES tank(tankId)
);
```

```
CREATE TABLE user(
    id INT PRIMARY KEY AUTO_INCREMENT,
    name VARCHAR(50),
    type VARCHAR(10)
);
```

```
INSERT INTO user VALUES(1,'admin','admin');
```

```
INSERT INTO tank VALUES('T001');
INSERT INTO tank VALUES('T002');
INSERT INTO tank VALUES('T003');
INSERT INTO tank VALUES('T004');
INSERT INTO tank VALUES('T005');
```

```
INSERT INTO tempRecords(timeStampTemp, tankId,temperature) VALUES
(NOW(), 'T001', 31.00);
```

```
INSERT INTO pHRecords(timeStampPH, tankId,pH) VALUES
(NOW(), 'T001', 6.9);
```

```
INSERT INTO ammoniaRecords(timeStampAmmo, tankId,ammonia) VALUES
(NOW(), 'T001', 0.20);
```

```
SELECT tankDetail.tankId , fish.name FROM tankDetail INNER JOIN fish ON
tankDetail.tankId = fish.fishId;
```

```
INSERT INTO tempRecords(timestampTemp, tankId,temperature) VALUES  
(NOW(), 'T001', 31.00);
```

```
INSERT INTO tempRecords(timestampTemp, tankId,temperature) VALUES  
( '2023-01-1 11:12:56', 'T001', 21.48),  
( '2023-01-2 11:12:56', 'T001', 21.47),  
( '2023-01-3 11:12:56', 'T001', 21.47),  
( '2023-01-4 11:12:56', 'T001', 21.97),  
( '2023-01-5 11:12:56', 'T001', 22.51),  
( '2023-01-6 11:12:56', 'T001', 20.8),  
( '2023-01-7 11:12:56', 'T001', 22.90),  
( '2023-01-8 11:12:56', 'T001', 22.58),  
( '2023-01-9 11:12:56', 'T001', 21.72),  
( '2023-01-10 11:12:56', 'T001', 21.59),  
( '2023-01-11 11:12:56', 'T001', 22.84),  
( '2023-01-12 11:12:56', 'T001', 20.59),  
( '2023-01-13 11:12:56', 'T001', 20.98),  
( '2023-01-14 11:12:56', 'T001', 22.62),  
( '2023-01-15 11:12:56', 'T001', 20.29),  
( '2023-01-16 11:12:56', 'T001', 22.49),  
( '2023-01-17 11:12:56', 'T001', 22.49),  
( '2023-01-18 11:12:56', 'T001', 20.52),  
( '2023-01-19 11:12:56', 'T001', 20.8),  
( '2023-01-20 11:12:56', 'T001', 21.23),  
( '2023-01-21 11:12:56', 'T001', 22.01),  
( '2023-01-22 11:12:56', 'T001', 22.64),  
( '2023-01-23 11:12:56', 'T001', 20.53),  
( '2023-01-24 11:12:56', 'T001', 21.16),  
( '2023-01-25 11:12:56', 'T001', 21.36),  
( '2023-01-26 11:12:56', 'T001', 20.47),  
( '2023-01-27 11:12:56', 'T001', 20.96),  
( '2023-01-28 11:12:56', 'T001', 20.39),  
( '2023-01-29 11:12:56', 'T001', 20.56),  
( '2023-01-30 11:12:56', 'T001', 20.28),  
( '2023-01-31 11:12:56', 'T001', 20.72);
```

```
INSERT INTO pHRecords(timestampPH, tankId,pH) VALUES  
( '2023-01-1 11:12:56', 'T001', 6.72),  
( '2023-01-2 11:12:56', 'T001', 7.93),  
( '2023-01-3 11:12:56', 'T001', 6.29),  
( '2023-01-4 11:12:56', 'T001', 6.86),  
( '2023-01-5 11:12:56', 'T001', 8.87),  
( '2023-01-6 11:12:56', 'T001', 6.24),  
( '2023-01-7 11:12:56', 'T001', 6.01),  
( '2023-01-8 11:12:56', 'T001', 8.1),  
( '2023-01-9 11:12:56', 'T001', 7.53),
```

('2023-01-10 11:12:56', 'T001', 8.47),
('2023-01-11 11:12:56', 'T001', 6.81),
('2023-01-12 11:12:56', 'T001', 7.06),
('2023-01-13 11:12:56', 'T001', 8.04),
('2023-01-14 11:12:56', 'T001', 7.3),
('2023-01-15 11:12:56', 'T001', 6.77),
('2023-01-16 11:12:56', 'T001', 6.19),
('2023-01-17 11:12:56', 'T001', 8.16),
('2023-01-18 11:12:56', 'T001', 7.93),
('2023-01-19 11:12:56', 'T001', 6.37),
('2023-01-20 11:12:56', 'T001', 7.24),
('2023-01-21 11:12:56', 'T001', 8.76),
('2023-01-22 11:12:56', 'T001', 6.38),
('2023-01-23 11:12:56', 'T001', 8.37),
('2023-01-24 11:12:56', 'T001', 8.22),
('2023-01-25 11:12:56', 'T001', 8.33),
('2023-01-26 11:12:56', 'T001', 8.89),
('2023-01-27 11:12:56', 'T001', 7.53),
('2023-01-28 11:12:56', 'T001', 6.19),
('2023-01-29 11:12:56', 'T001', 7.27),
('2023-01-30 11:12:56', 'T001', 8.49),
('2023-01-31 11:12:56', 'T001', 8.15);

INSERT INTO ammoniaRecords(timestampAmmo, tankId, ammonia) VALUES

('2023-01-1 11:12:56', 'T001', 0.272),
('2023-01-2 11:12:56', 'T001', 0.145),
('2023-01-3 11:12:56', 'T001', 0.11),
('2023-01-4 11:12:56', 'T001', 0.015),
('2023-01-5 11:12:56', 'T001', 0.068),
('2023-01-6 11:12:56', 'T001', 0.192),
('2023-01-7 11:12:56', 'T001', 0.086),
('2023-01-8 11:12:56', 'T001', 0.131),
('2023-01-9 11:12:56', 'T001', 0.133),
('2023-01-10 11:12:56', 'T001', 0.026),
('2023-01-11 11:12:56', 'T001', 0.087),
('2023-01-12 11:12:56', 'T001', 0.213),
('2023-01-13 11:12:56', 'T001', 0.056),
('2023-01-14 11:12:56', 'T001', 0.236),
('2023-01-15 11:12:56', 'T001', 0.066),
('2023-01-16 11:12:56', 'T001', 0.072),
('2023-01-17 11:12:56', 'T001', 0.331),
('2023-01-18 11:12:56', 'T001', 0.185),
('2023-01-19 11:12:56', 'T001', 0.185),
('2023-01-20 11:12:56', 'T001', 0.057),
('2023-01-21 11:12:56', 'T001', 0.05),
('2023-01-22 11:12:56', 'T001', 0.024),
('2023-01-23 11:12:56', 'T001', 0.24),
('2023-01-24 11:12:56', 'T001', 0.169),

('2023-01-25 11:12:56', 'T001', 0.148),
('2023-01-26 11:12:56', 'T001', 0.195),
('2023-01-27 11:12:56', 'T001', 0.238),
('2023-01-28 11:12:56', 'T001', 0.043),
('2023-01-29 11:12:56', 'T001', 0.132),
('2023-01-30 11:12:56', 'T001', 0.003),
('2023-01-31 11:12:56', 'T001', 0.097);

INSERT INTO fish VALUES('F001' , 'gold fish' , 'Gold fish is gold fish' , 'goldfish.png' , 20.00 , 23.00 , 6.5 , 7.5 , 0 , 0.25);

INSERT INTO fish VALUES('F002', 'Catfish', 'Catfish is catfish', 'catfish.png', 21.00, 22.00, 8.3, 8.5, 0.0, 0.34);

insert into fish values('F003', 'Guppy', 'Description. The guppy is a small fish. Males are significantly smaller than females, measuring just 0.6-1.4 in (1.5-3.5 cm) long. Females, at about 1.2-2.4 in (3-6 cm) in length, are about twice the size. Males also tend to be more colorful, and extravagant, with ornamental fins absent in the females.', 'Guppy.png',22,28,42,49,49,24);

insert into fish values('F004', 'Danio', 'Danio is a genus of small freshwater fish in the family Cyprinidae found in South and Southeast Asia, commonly kept in aquaria. They are generally characterised by a pattern of horizontal stripes, rows of spots or vertical bars. Some species have two pairs of long barbels.', 'Danio.png',1,6,3,8,44,24);

insert into fish values('F005', 'Betta', 'The Betta, on average, is 7.5 centimeters in length. Its body shape is streamlined, allowing it to slip smoothly and effortlessly through open water. The fish's body is covered with scales that overlap each other like the shingles on the roof of a house.', 'Betta.png',72,86,76,85,44,24);

insert into fish values('F006', 'Cherry Barb', 'The cherry barb is a freshwater fish of the Cyprinidae family. The fish is small, bright red, and has a distinctive lateral stripe that spans the length of the body. Cherry barbs are active and peaceful schooling fish. The species thrives in groups of six or more. The fish's hardy nature makes it popular among beginner and experienced fishkeepers alike.', 'CherryBarb.png',73,81,6,8,44,24);

insert into fish values('F007', 'Pearl Gourami', 'Its body is a brownish-silver colour, covered in a pearl-like pattern with a distinct black line running from the fish's head, and gradually thinning towards the caudal fin. The pearl gourami's appearance has given rise to other popular names, such as the lace gourami and the mosaic gourami.', 'PearlGourami.png',25,28,6,8,6,8);

insert into fish values('F008', 'Angelfish', 'Angelfishes are native to the freshwaters of tropical South America and may grow to a length of about 15 cm (6 inches). They are commonly silvery with vertical dark markings but may be solid or partially black. They are carnivorous and take care of their eggs and young', 'Angelfish.png',78,86,6.5,7.1,6.8,7.8);

insert into fish values('F009', 'Black Molly', 'The Black molly have an elongated body with a round belly and pointed head, large eyes and wide mouth. The dorsal fin is elongated, the delta queue or typically "lyre" and other rounded fins. The colors are different, often the most common are blacks with shades and stains yellow gold', 'Black Molly.png',70,80,7.5,8.2,44,24);

insert into fish values('F010', 'Red-Tailed Shark', 'The Red Tail Shark (Epalzeorhynchus bicolor) is a freshwater fish that is found in Thailand. It is often referred to by other names like the Red-Tailed Shark, Red-Tailed Black Shark, Fire Tail Shark, and Red Rail Shark

Minnow. The origin of these names are rather obvious when you see one', 'Red-Tailed Shark.png',75,82,6.5,6.5,0,0.23);

insert into fish values('F011', 'Cory Catfish', 'Cory Catfish are often described as armored catfish, due to their plates of bone-like material running the length of their bodies. There are many different Cory Catfish types, all varying in size and color, but Bronze Cory Catfish are probably the most common.', 'Cory Catfish.png',73,82,6.5,7.8,0,0.4);

insert into fish values('F012', 'Kuhli Loach', 'The kuhli loach is an eel-shaped fish with slightly compressed sides, four pairs of barbels around the mouth, and very small fins. The dorsal fin starts behind the middle of the body, and the anal fin well behind this. The eyes are covered with transparent skin.', 'Kuhli Loach.png',72,86,6.5,7.5,44,24);

insert into fish values('F013', 'Firemouth Cichlid', 'The firemouth cichlid (*Thorichthys meeki*) is a species of cichlid fish native to Central America. They occur in rivers of the Yucatán Peninsula, Mexico, south through Belize and into northern Guatemala. Their natural habitat is typically shallow, slow-moving, often turbid, water with a pH of 6.5 - 8.0.', 'Firemouth Cichlid.png',75,86,6.5,8.0,0,0.25);

insert into fish values('F014', 'Tiger Barb', 'The tiger barb or Sumatra barb (*Puntigrus tetrazona*), is a species of tropical cyprinid fish.', 'Tiger Barb.png',77,82,6,8,0,24);

insert into fish values('F015', 'Discus', 'Its body is very compressed on the sides, it has a disk-shaped profile and its fins are large and elegant. It is a species characterised by iridescence, streaks and vertical bands and can have different colours: white, yellow, orange, red, blue, blue and green, brown and black.', 'Discus.png',82,86,6,7,0,0.24);

insert into fish values('F016', 'Neon Tetra', 'The neon tetra (*Paracheirodon innesi*) is a Freshwater fish of the characin family (family Characidae) of order Characiformes. The type species of its genus, it is native to blackwater and clearwater streams in the Amazon basin of South America.[2][3] Its bright colouring makes the fish visible to conspecifics in the dark blackwater streams,[4] and is also the main reason for its popularity among freshwater fish hobbyists, with neon tetras being one of the most widely kept tropical fish in the world.[5]', 'Neon Tetra.png',72,76,3,8,0,20);

insert into fish values('F017', 'Platy', 'platy, (species *Xiphophorus maculatus*), popular tropical aquarium fish of the live-bearer family, Poeciliidae (order Atheriniformes). The platy is a compact fish, about 5 cm (2 inches) long and extremely variable in colour.', 'Platy.png',4,14,7.5,8.5,44,24);

```
INSERT INTO tankDetail VALUES('T001', 'F001',5,20.00 , 23.00 , 6.5 , 7.5 , 0 , 0.25,
NOW());
INSERT INTO tankDetail VALUES('T002', 'F002',10,21.00, 22.00, 8.3, 8.5, 0.0, 0.34,
NOW());
```