**Title:** Home Automation

**Description:**

We are attempting to create a home automation database management system in this work. To begin, we establish a database in which we will store the entries or bits of information about the house. “Home\_Automation.sql” is the name of the database. We build three tables in this database, each with three to four rows and characteristics. There are three Entities in this assignment.

The three tables are:

1. Device control

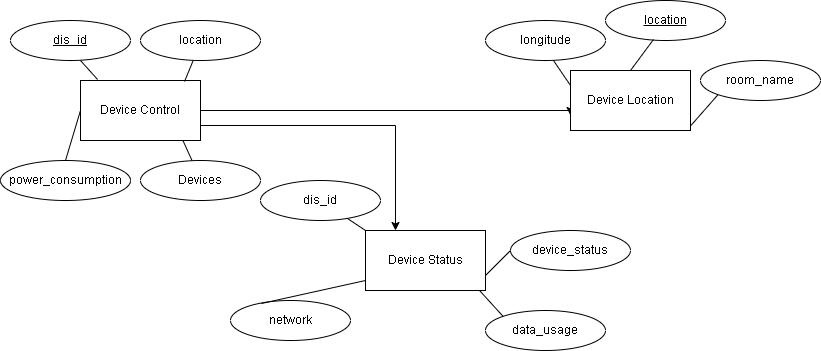
2. Device location

3. Device status.

**Attributes & Entities:**

The attributes are dis\_id, location, power\_consumption, devices, room\_name, longitude, network, data\_usage. We used SQL Scripting Language to create certain commands for the SQL Creation. INSERT, SELECT, DELETE, UPDATE, GROUP BY, and join operations are implemented here. All outcomes are added here after execution.

1. **R Diagram:**

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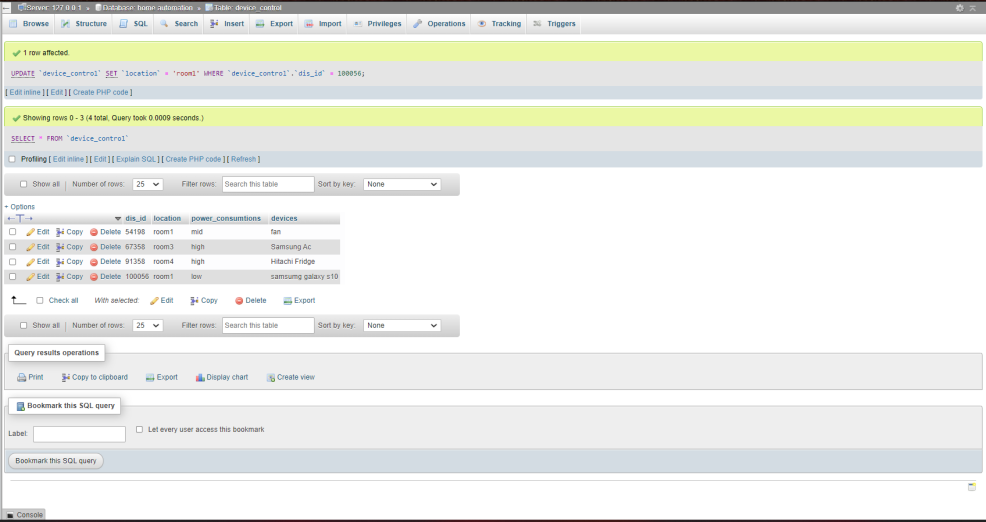
**Programs:**

**Insert Command:**

INSERT INTO `device\_control`(`dis\_id`, `location`, `power\_consumtions`, `devices`) VALUES ('100056','room 1','low','samsumg galaxy s10');

INSERT INTO `device\_control`(`dis\_id`, `location`, `power\_consumtions`, `devices`) VALUES ('67358','room3','high','Samsung Ac');

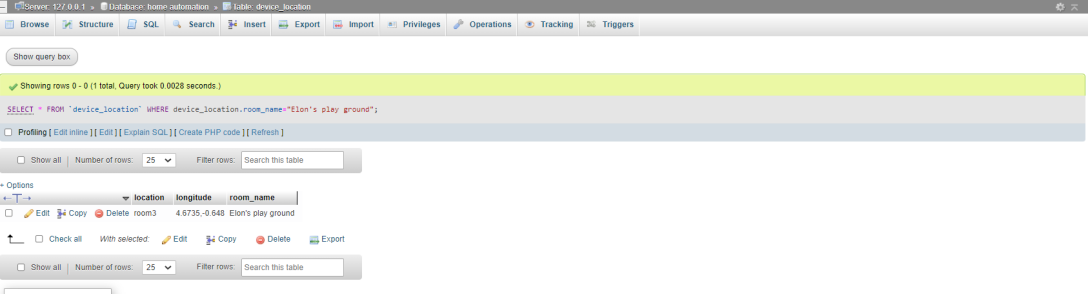
INSERT INTO `device\_control`(`dis\_id`, `location`, `power\_consumtions`, `devices`) VALUES ('91358','room4','high','Hitachi Fridge');



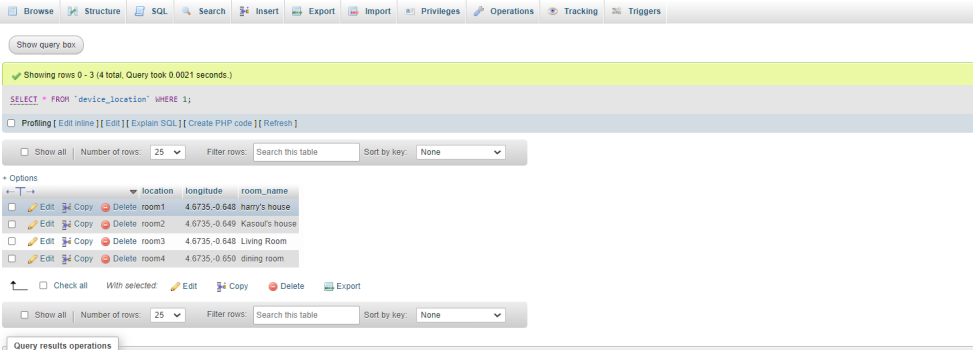
**Update Command:**

UPDATE `device\_location` SET `room\_name`='Living Room' WHERE device\_location.room\_name="Elon's play ground";

Before Update:

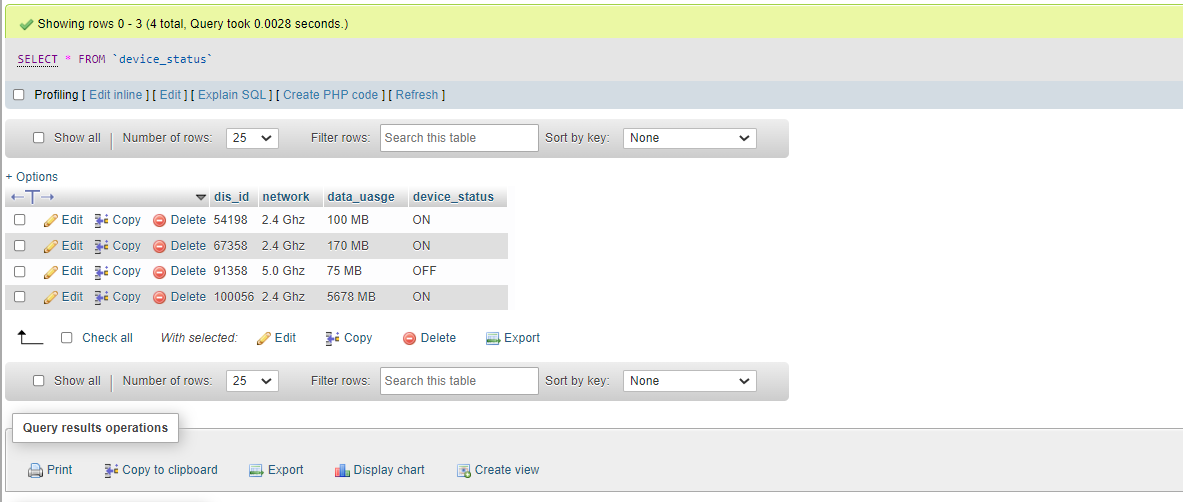


After Update:

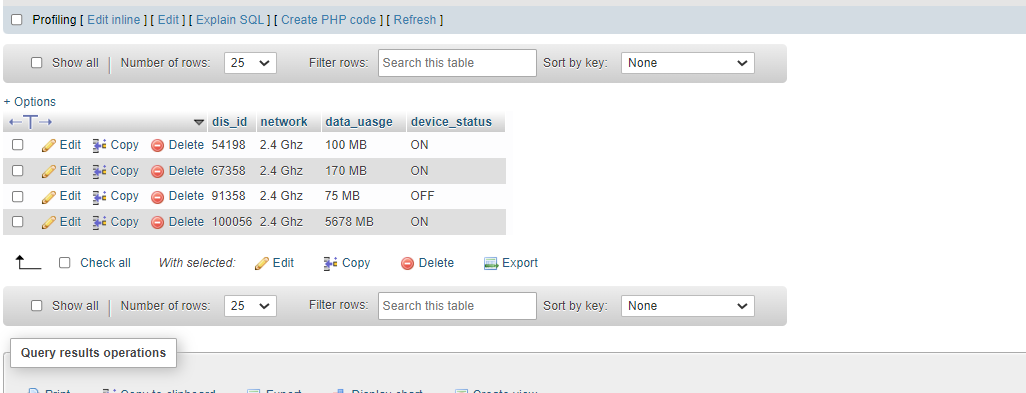


UPDATE `device\_status` SET `network`='2.4 Ghz' WHERE dis\_id=91358;

**Before Update:**

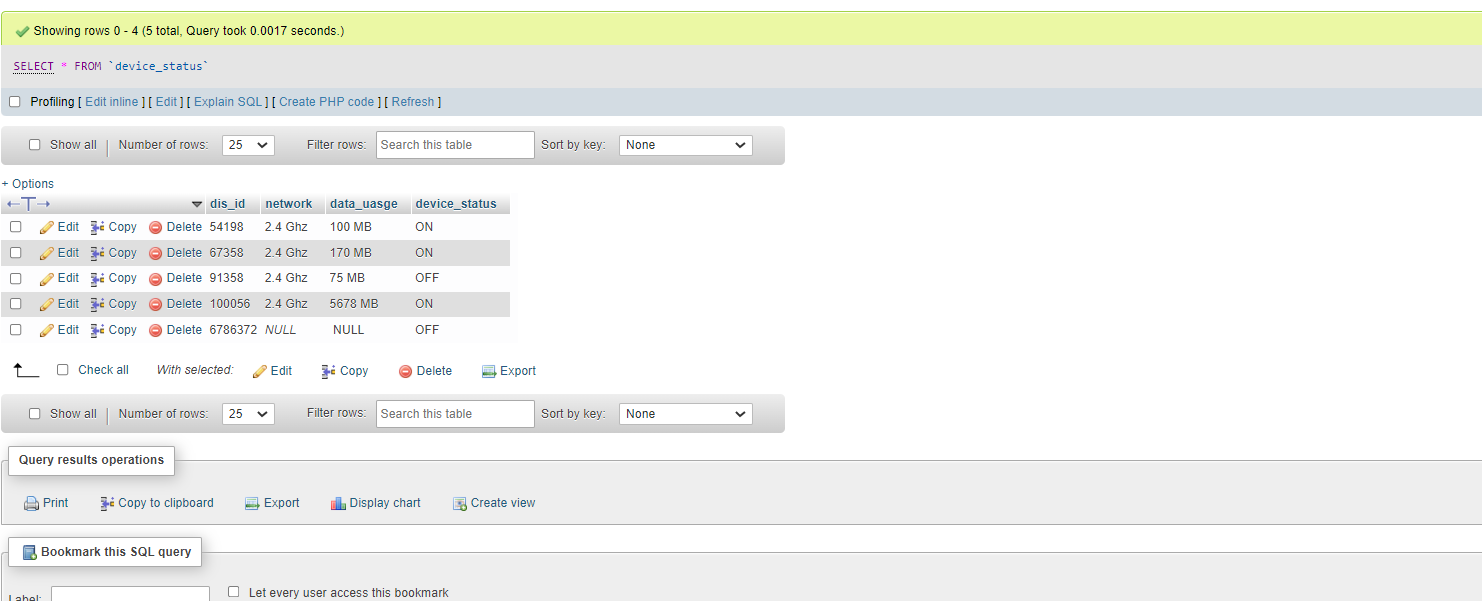


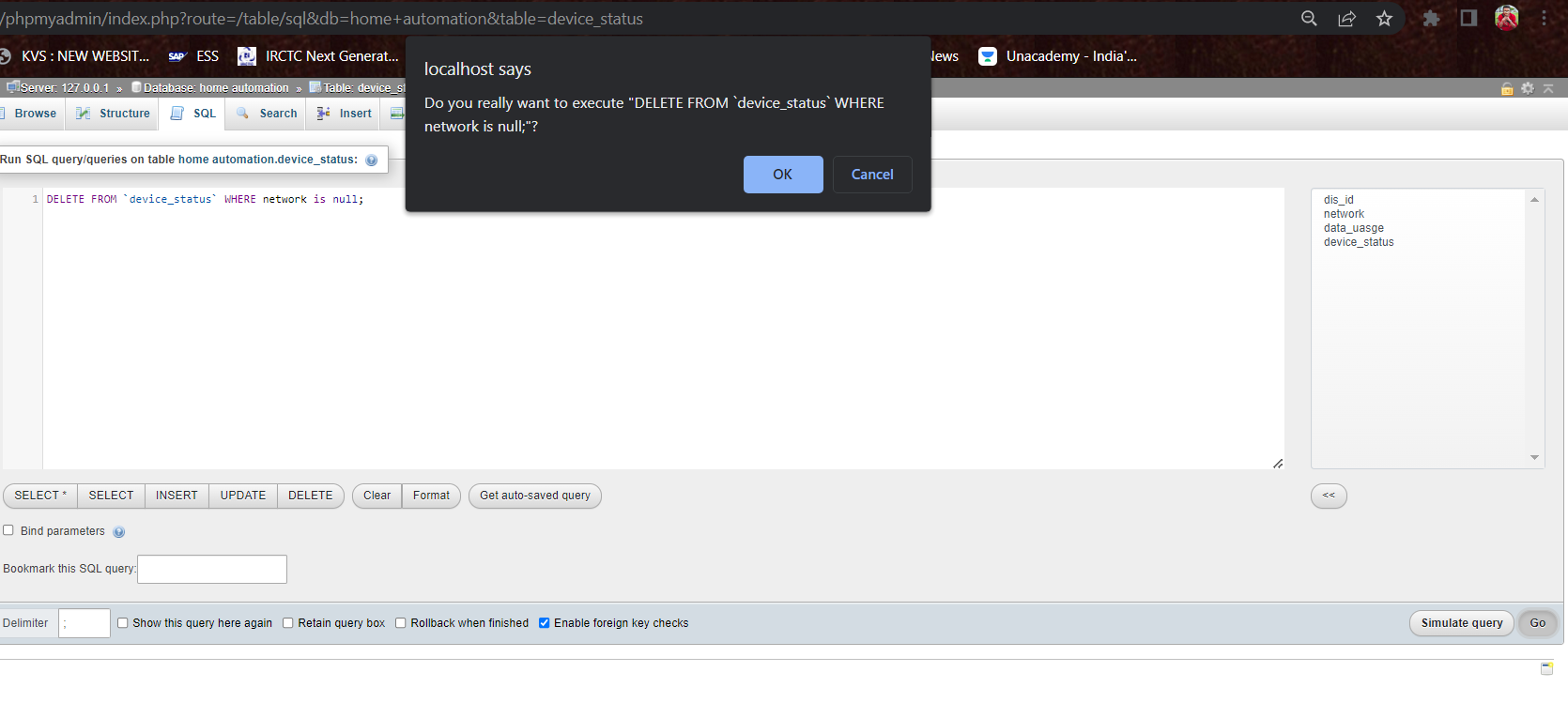
**After Update:**



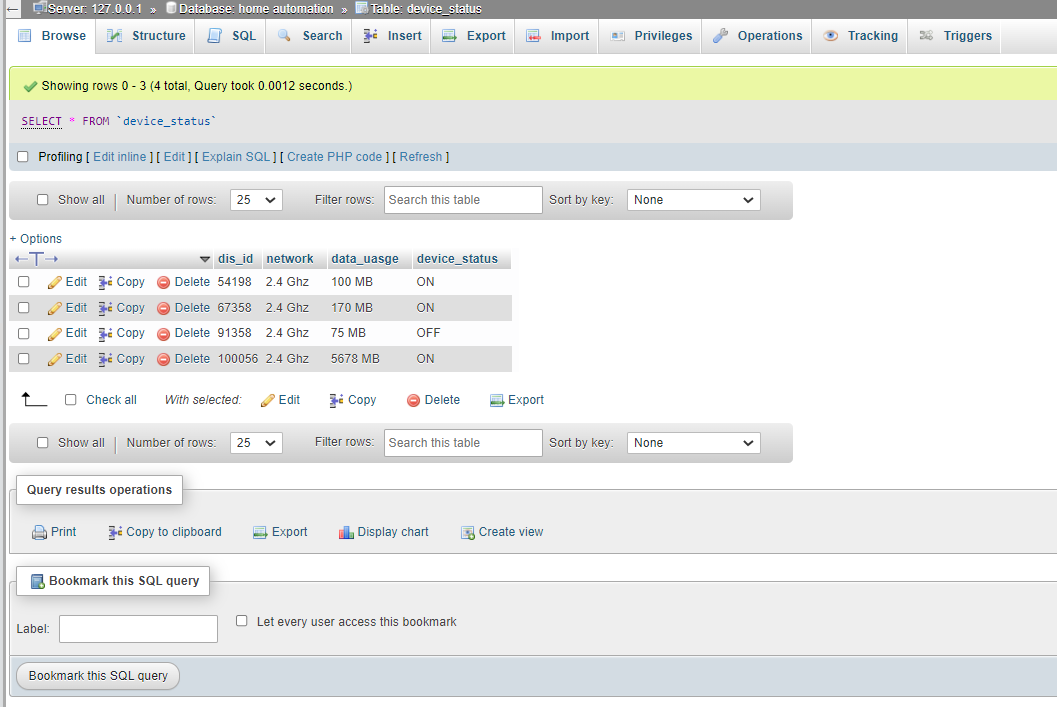
**Delete Command:**

DELETE FROM `statusdevices` WHERE `Date` IS NULL



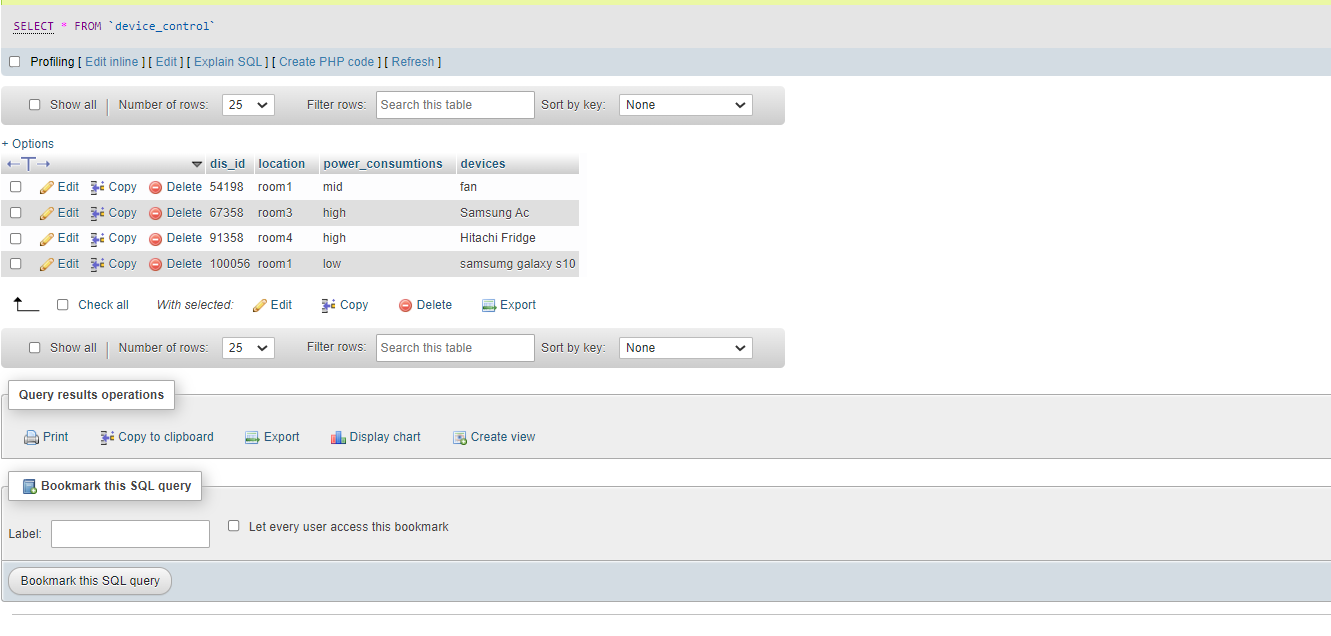


After Delete:

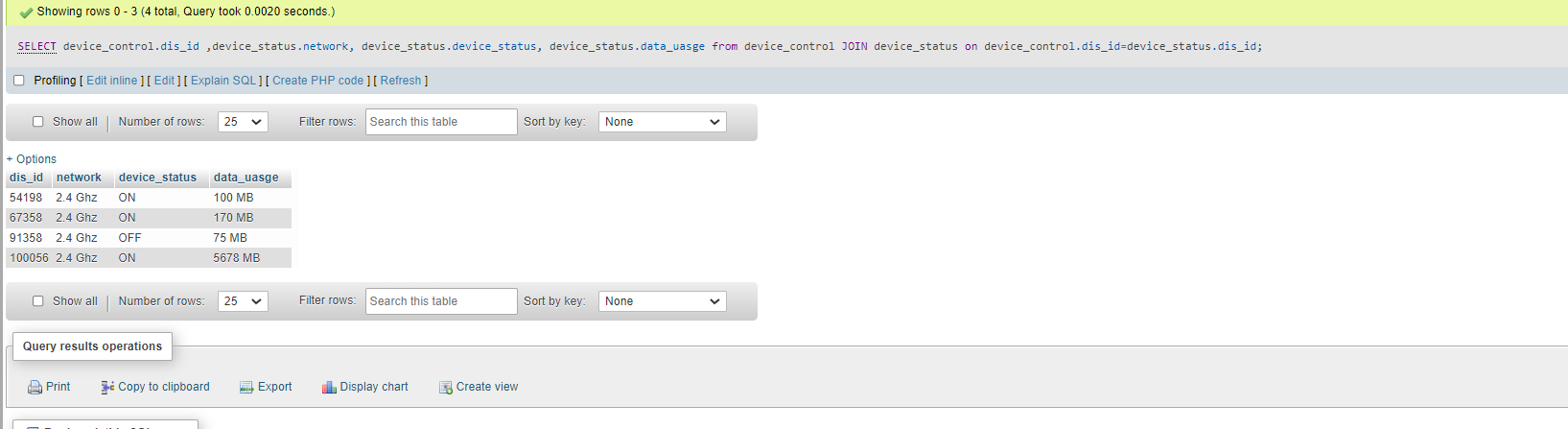


**Select Command:**

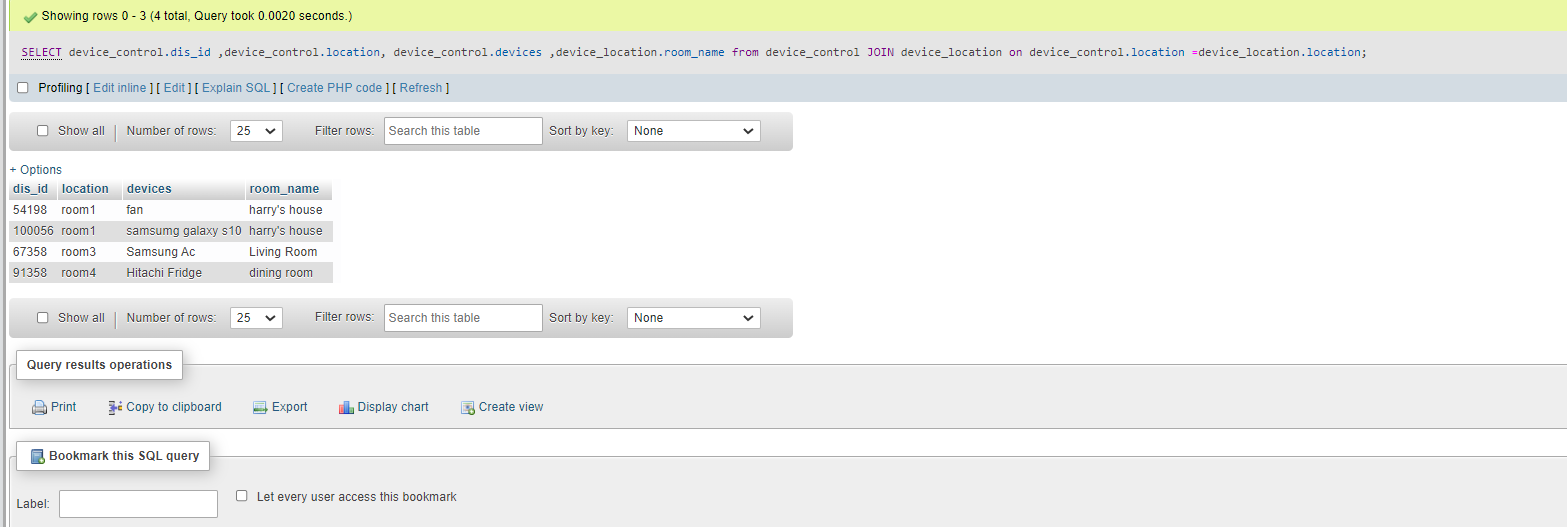
[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html" \t "http://localhost/phpmyadmin/index.php?route=/mysql_doc) \* FROM `device\_control`



**Join Command:**

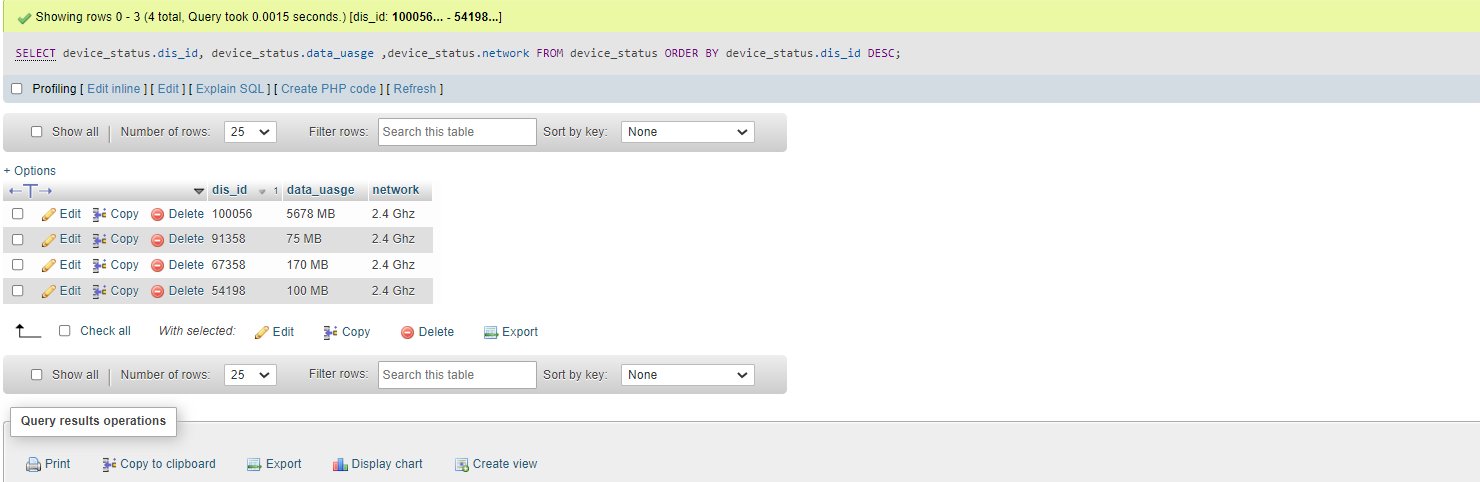
SELECT device\_control.dis\_id ,device\_status.network, device\_status.device\_status, device\_status.data\_uasge from device\_control JOIN device\_status on device\_control.dis\_id=device\_status.dis\_id

SELECT device\_control.dis\_id ,device\_control.location, device\_control.devices ,device\_location.room\_name from device\_control JOIN device\_location on device\_control.location =device\_location.location;

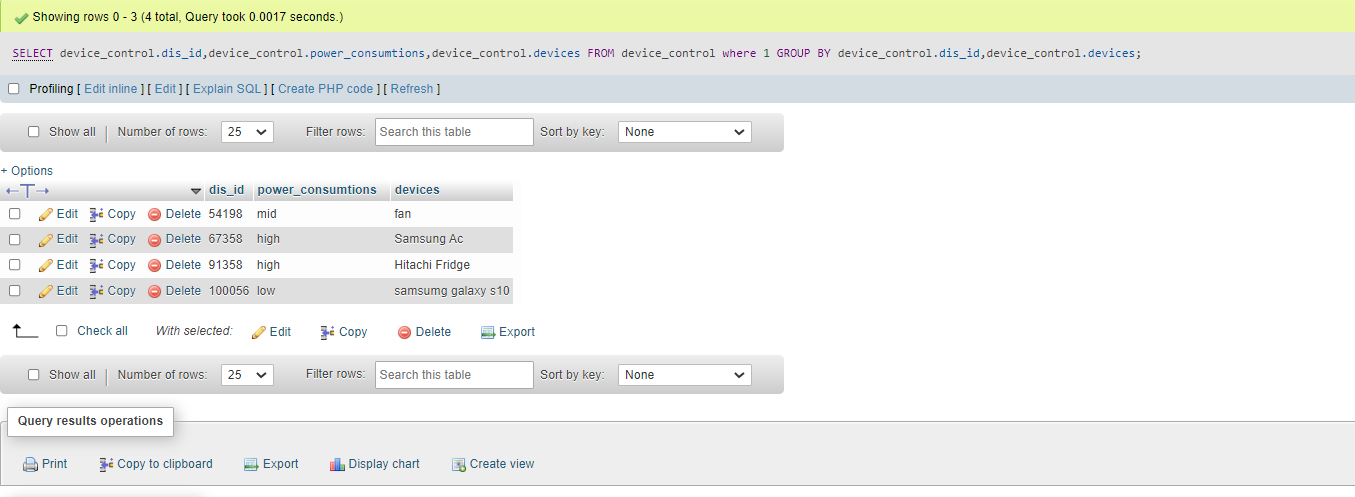


**Summary Command:**

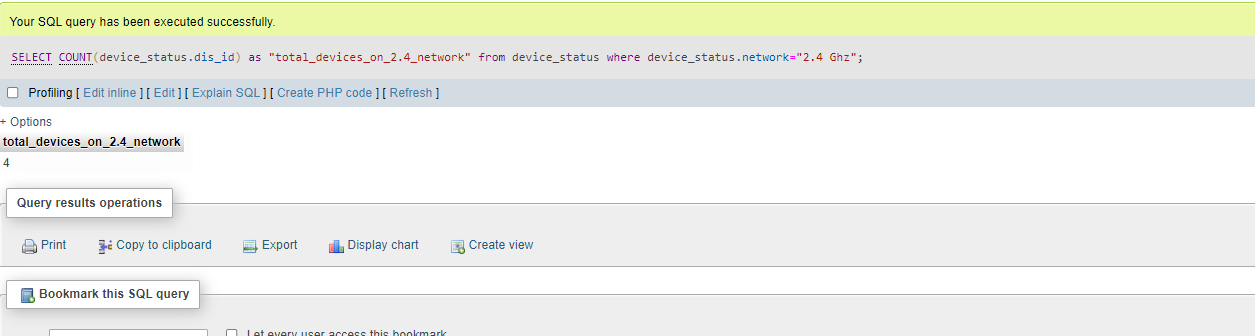
SELECT device\_status.dis\_id, device\_status.data\_uasge ,device\_status.network FROM device\_status ORDER BY device\_status.dis\_id DESC;



SELECT device\_control.dis\_id,device\_control.power\_consumtions,device\_control.devices FROM device\_control where 1 GROUP BY device\_control.dis\_id,device\_control.devices;



SELECT COUNT(device\_status.dis\_id) as "total\_devices\_on\_2.4\_network" from device\_status where device\_status.network="2.4 Ghz";



**Multi-Table Query:**

SELECT de.dis\_id,de.network ,de.data\_uasge,dc.power\_consumtions,dc.devices from device\_status de JOIN device\_control dc on de.dis\_id=dc.dis\_id GROUP BY de.dis\_id,dc.devices;

