

Relational Database-II

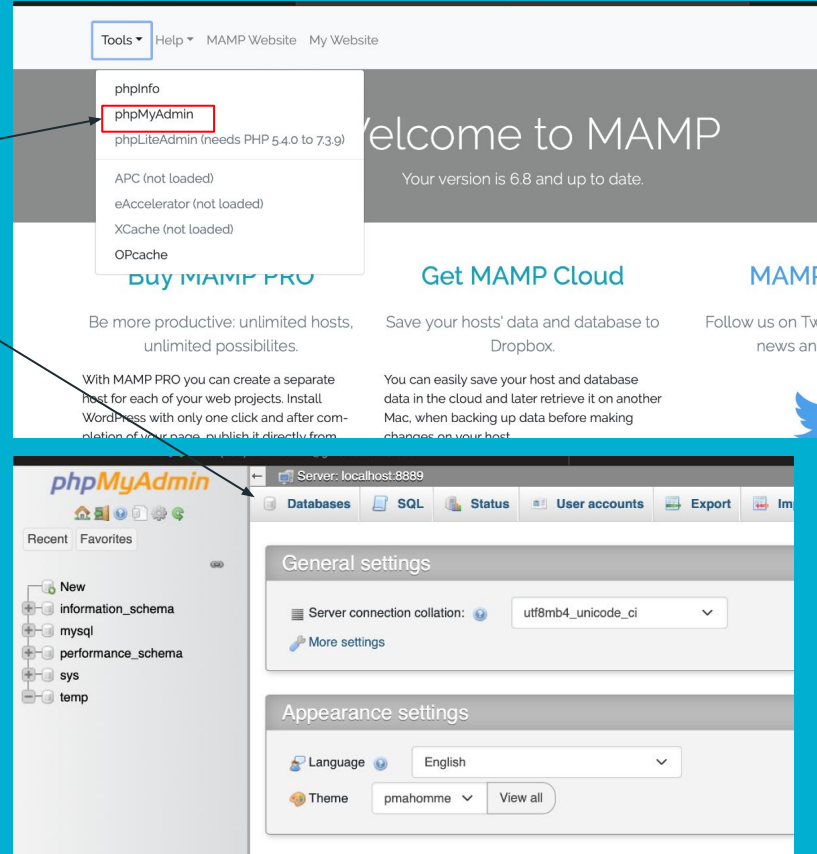
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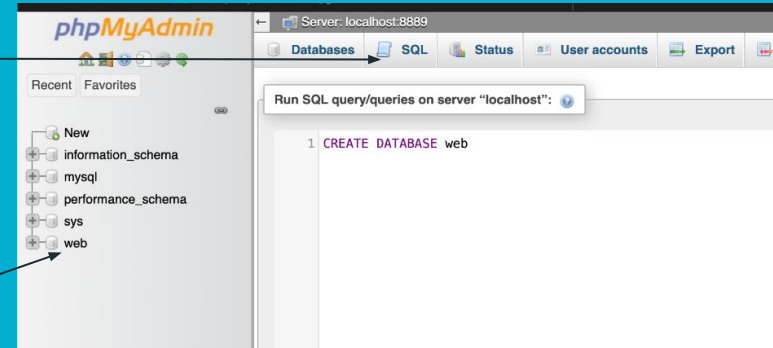
MAMP and database

- Click on phpMyAdmin
- After that click on Databases



Creating a database

- Click on the SQL tab
- Create a database (not a table)
- Inside of a database you can create tables
- To create a database, the command is:
 - CREATE DATA web
 - Here web is the name of the database, you can name it appropriately
 - After creation of the database it will be shown here



Creating a database

```
create database web;
```

- Using the database “web” to create tables inside of it

```
use web;
```

```
CREATE TABLE students (  
  id INT NOT NULL AUTO_INCREMENT,  
  name VARCHAR(255) NOT NULL,  
  age INT NOT NULL,  
  grade VARCHAR(255) NOT NULL,  
  PRIMARY KEY (id)  
);
```

Inserting into a table

```
INSERT INTO students (name, age, grade) VALUES
('John Doe', 15, '9th grade'),
('Jane Doe', 16, '10th grade'),
('Peter Jones', 17, '11th grade'),
('Mary Smith', 18, '12th grade'),
('David Williams', 14, '8th grade'),
('Susan Brown', 13, '7th grade'),
('Michael Johnson', 12, '6th grade'),
('Sarah Miller', 11, '5th grade'),
('William Davis', 10, '4th grade'),
('Elizabeth Garcia', 9, '3rd grade');
```

Selecting

- Selecting all the rows/tuples:

```
use web;  
select * from students;
```

- Selecting a particular tuple with some condition:

```
use web;  
select * from students where name ='mary smith';
```

```
use web;  
select * from students where name ='mary';
```

Will not work need full name



```
use web;  
select * from students where name like 'mary %';
```

Where?

use web;

```
CREATE TABLE products (  
  id INT NOT NULL AUTO_INCREMENT,  
  name VARCHAR(255) NOT NULL,  
  price DECIMAL(10,2) NOT NULL,  
  category VARCHAR(255) NOT NULL,  
  PRIMARY KEY (id)  
);
```

Where is the data?

```
INSERT INTO products (name, price, category) VALUES  
('Apple iPhone 14 Pro', 999.00, 'Smartphone'),  
('Samsung Galaxy S23 Ultra', 1199.00, 'Smartphone'),  
('Google Pixel 7 Pro', 899.00, 'Smartphone'),  
('MacBook Air M2', 999.00, 'Laptop'),  
('Dell XPS 13 Plus', 1299.00, 'Laptop'),  
('Microsoft Surface Laptop 5', 1099.00, 'Laptop'),  
('Sony WH-1000XM5', 399.00, 'Headphones'),  
('Bose QuietComfort 45', 349.00, 'Headphones'),  
('Apple AirPods Pro', 249.00, 'Headphones');
```

```
select * from products
```


where!

- Select all the products which are more than \$500 and is a smartphone

```
SELECT * FROM products WHERE price > 500 AND category = 'Smartphone';
```

- To add another column called rating to the existing table

To add another column

Another column called rating gets added to the table

```
use web;  
alter table products add column rating tinyint;
```

Inserting into a table with id number

```
use web;  
update products set rating = 5 where id = 1;  
select * from products;
```

Updating a column

Inserting a value with some condition

```
use web;  
update products set rating = 7 where category='laptop';  
select * from products;
```

another example, inserting a value with some condition

```
use web;  
update products set rating = 10 where name like 'google%';  
select * from products;
```

Updating a column

Use of between operator

```
use web;  
update products set rating = 8 where price BETWEEN '1100' AND '1200';  
select * from products;
```

Use of > and <= operator

```
use web;  
update products set rating = 6 where price > 240 AND price <= 400;  
select * from products;
```

Update

Updating a row by partial information

```
use web;  
update products set price = 1200 where name like '%m2%';  
select * from products;
```

Delete

Format to delete a row(s) based on some condition

DELETE FROM table_name WHERE condition;

Deleting one tuple

```
use web;  
delete from products where price = 1200;  
select * from products;
```

Delete rows

Deleting multiple rows/tuples

```
use web;  
delete from products where category = 'laptop';  
select * from products;
```

Delete a column

Delete a column: ALTER TABLE table_name DROP COLUMN column_name

```
use web;  
alter table products drop column category;  
select * from products;
```


Delete a table

To delete a table: DROP TABLE table_name

```
use web;  
drop table products;
```

```
use web;  
drop table students;
```

Delete the database

The whole database gets deleted: `DROP DATABASE database_name`

```
use web;  
drop database web;
```

Thank you

See you all in the next class