

# Lab 1

CS460 Fall 2021

# Agenda

→ Lab outline

→ Project 1 Introduction

# Lab Outline

- Primary focus will be discussion related to projects!
- We will also try to solve the issues you are facing.
- 2 Projects
- SQL Hands-on

# Lab Schedule (Tentative)

Lab 1	Project 1 Introduction
Lab 2	ER Modeling
Lab 3	SQL Setup & Practice
Lab 4	UI Design
Lab 5	SQL Hands-on
Lab 7	Complex SQL + Project 1 Discussion
Lab 8	Project 1 Discussion
Lab 9	Project 2 Introduction
Lab 10, 11	Query Optimization + MonetDB, Postgres
Lab 12, 13	Project 2 Discussion

# Project 1 Introduction

# Project 1



- You'll work on designing a movie database
- We will specify the details and you will design accordingly!
- There should be a UI that connects to the database
- This web application should be able to create new entries, list movies, search movies (based on different criteria) and calculate some statistics.

# Project 1 Steps

1. Create/Design an ER Diagram
2. Create Table Schema
3. Create DB Tables and insert some data
4. Create an UI that connects to the DB
5. Run simple queries from the UI (e.g., list all movies, list movies directed/acted by X)
6. Add more functionalities to run some complex queries.

# ER Modeling & Schema Design

- **Entity Relationship** Model (ER Modeling) is a graphical approach to database design.
- Depends on application requirements
- Good ER modeling eliminates redundant data, maintains data integrity, and provides an efficient way to access data.


More about this in next class...



# Project 1 Infrastructure Setup

# XAMPP


- Download XAMPP from this link: <https://www.apachefriends.org/download.html>
- On mac, use safari to download
- Use the installer and follow instructions
- After installing open the application
- Move .app file to “Applications” panel
- Double click “XAMPP.app” to open the application
- Alternatively: you may have to search (using Cmd + space) for control panel if the shortcut is not on the applications panel

 XAMPP for Windows 7.3.30, 7.4.23 & 8.0.10

Version	Checksum	Size
7.3.30 / PHP 7.3.30	What's Included? md5 sha1	Download (64 bit) 158 Mb
7.4.23 / PHP 7.4.23	What's Included? md5 sha1	Download (64 bit) 160 Mb
8.0.10 / PHP 8.0.10	What's Included? md5 sha1	Download (64 bit) 161 Mb


Requirements Add-ons More Downloads -

Windows XP or 2003 are not supported. You can download a compatible version of XAMPP for these platforms here.

 XAMPP for Linux 7.3.30, 7.4.23 & 8.0.10

Version	Checksum	Size
7.3.30 / PHP 7.3.30	What's Included? md5 sha1	Download (64 bit) 151 Mb
7.4.23 / PHP 7.4.23	What's Included? md5 sha1	Download (64 bit) 154 Mb
8.0.10 / PHP 8.0.10	What's Included? md5 sha1	Download (64 bit) 152 Mb

Requirements Add-ons More Downloads -

 XAMPP for OS X 7.3.30, 7.4.23, 8.0.10, 7.3.30, 7.4.23 & 8.0.10

Version	Checksum	Size
7.3.30 / PHP 7.3.30	What's Included? md5 sha1	Download (64 bit) 161 Mb
7.4.23 / PHP 7.4.23	What's Included? md5 sha1	Download (64 bit) 164 Mb
8.0.10 / PHP 8.0.10	What's Included? md5 sha1	Download (64 bit) 162 Mb

for XAMPP: We wrote the documentation in the form of FAQs. Have a burning question that's not answered here? Try the Forums or Stack Overflow.

- Linux FAQs
- Windows FAQs
- OS X FAQs
- OS X XAMPP-VM FAQs

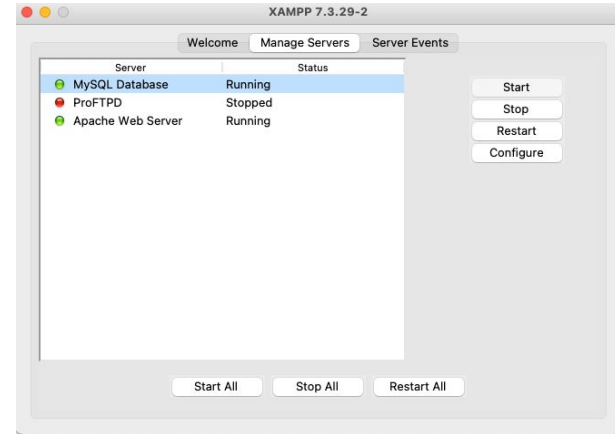
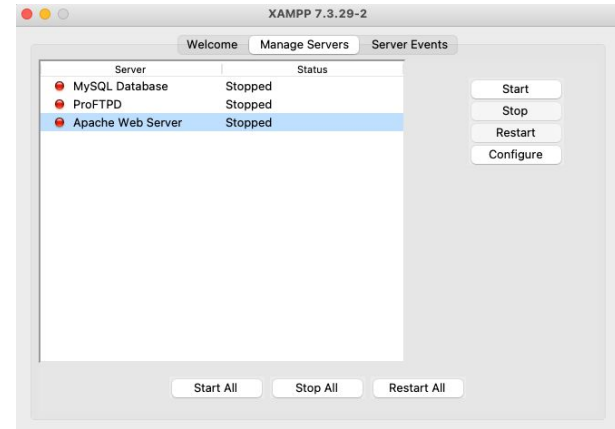
Add-ons



Bitnami provides a free all-in-one tool to install WordPress on top of XAMPP: Visit Bitnami XAMPP to download the installer.

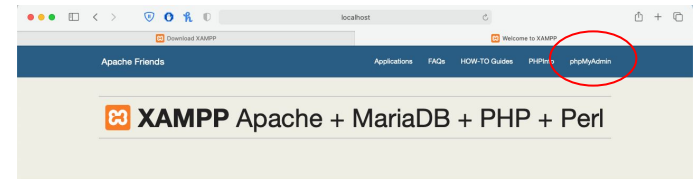
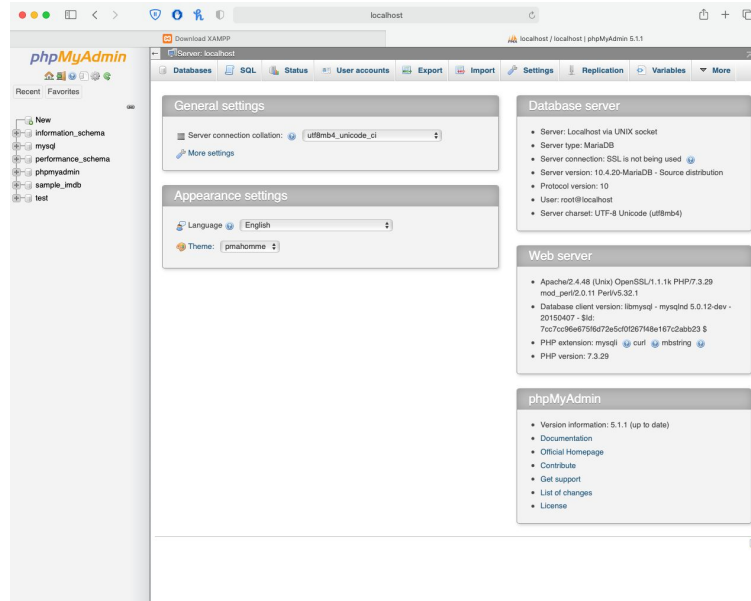
# phpMyAdmin

- Click on the “Manage Servers” tab in the XAMPP control panel
- Start the Apache Web server and the MySQL Database
- In a web browser, go to the following url: localhost:port\_number.  
In my case, I would go to localhost:80
- If the apache webserver does not start, you may have one from another application running. Stop this service. On mac, go to terminal: “sudo apachectl stop”



# phpMyAdmin

- Click on phpMyAdmin option on the top right corner of the webpage



## Welcome to XAMPP for OS X 7.3.29

You have successfully installed XAMPP on this system! Now you can start using Apache, MariaDB, PHP and other components. You can find more info in the FAQs section or check the HOW-TO Guides for getting started with PHP applications.

XAMPP is meant only for development purposes. It has certain configuration settings that make it easy to develop locally but that are insecure if you want to have your installation accessible to others. If you want have your XAMPP accessible from the internet, make sure you understand the implications and you checked the FAQs to learn how to protect your site. Alternatively you can use WAMP, MAMP or LAMP which are similar packages which are more suitable for production.

Start the XAMPP Control Panel to check the server status.

## Community

XAMPP has been around for more than 10 years – there is a huge community behind it. You can get involved by joining our Forums, adding yourself to the Mailing List, and liking us on Facebook, following our exploits on Twitter, or adding us to your Google+ circles.

## Contribute to XAMPP translation at [translate.apachefriends.org](http://translate.apachefriends.org).

Can you help translate XAMPP for other community members? We need your help to translate XAMPP into different languages. We have set up a site, [translate.apachefriends.org](http://translate.apachefriends.org), where users can contribute translations.

## Install applications on XAMPP using Bitnami

Apache Friends and Bitnami are cooperating to make dozens of open source applications available on XAMPP, for free. Bitnami-packaged applications include WordPress, Drupal, Joomla! and dozens of others and can be deployed with one-click installers. Visit the Bitnami XAMPP page for details on the currently available apps.

