CSE2004 DBMS DPJ - Final Project Submission

Project on Lawyers' Content Management System.

Title: lawyersAssist(CMS for Lawyers)

Submitted by
Team #14
Pallavi Chauhan-19BCE0102
Sarthak Srivastava-19BCE0459

School of Computer Science and Engineering,
Vellore Institute of Technology,
Vellore, Tamilnadu, India - 632014

I - Help file

Software used/required:

- 1) Front end: CSS3, Bootstrap(CSS), Bootstrap(JS). (No need to install. Loaded through CDN)
- 2) Database: MySQL with PhpMyAdmin as GUI
- 3) Server: Apache

Connection string used to connect the front end with database:

```
$servername = "localhost:8889";
$username = "root";
$password = "vashuhero1";
$dbname = "lawyer";
// Create connection
$conn = new mysqli($servername, $username, $password, $dbname);
// Check connection
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}
```

Use the default port of your system's MySql in \$servername. For examples, if it set to 8834, change the firstling to \$servername="localhost:8834" instead.

ALSO, dashboard/index.php is the home page.

Hardware requirement: (only if anything special is needed): Nothing

Database details:

No. of tables as per the normalized schema. : 13

No. of tables in the final project : 13

Front end details:

How many interface pages? : 20 pages with interface. Total

28 pages with SQL functionality

Type of interface (web page/application) : Web

SOFTWARE REQUIREMENTS

TO USE THE SOFTWARE, WE NEED ANY SERVER WHICH CAN RUN PHP AND MYSQL.

RECOMMENDED TOOLS ARE wampServer(For Windows) mampServer(For macOS)

Note: Please change your mysql port to 8889 before running the software and then run the sql files. Or you'll need to find and replace all the occurrences of 8889 with you default port using a directory level find/replace tool.

Below is the installation direction for the wampserver

Prerequisites for WAMP Server

In order to successfully install and run the WAMP Server, make sure that you must have Microsoft Visual C++ Redistributable packages installed in your system.

1) Microsoft Visual C++ 2008 Redistributable Package (x64)

- 2) Microsoft Visual C++ 2010 Redistributable Package (x64)
- 3) Visual C++ Redistributable for Visual Studio 2012 Update 4
- 4) Visual C++ Redistributable Packages for Visual Studio 2013
- 5) Visual C++ Redistributable for Visual Studio 2015
- 6) Microsoft visual c++ 2017 redistributable package

Installation Process of WAMP Server

Step 1

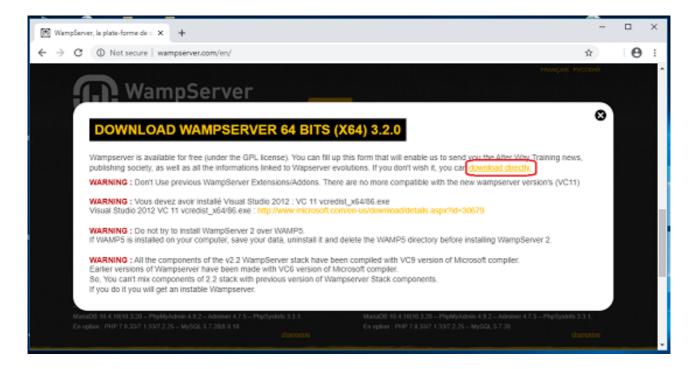
To download the WAMP Server, visit the "Wamp Server" website in your web browser.

Step 2

Click on the "WAMP SERVER 64 BITS (X64).

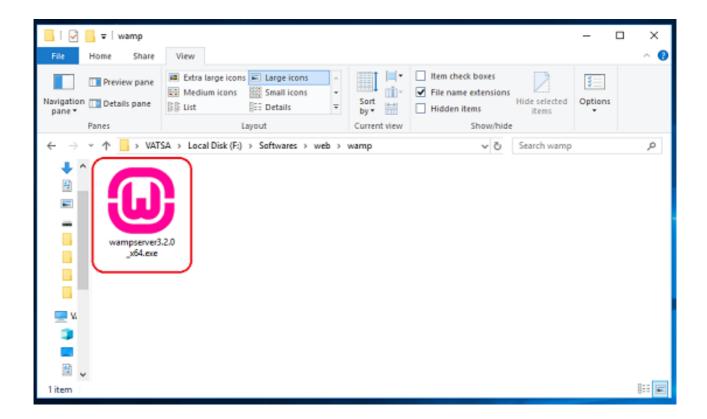


Now, click on the "download directly" link to start downloading.

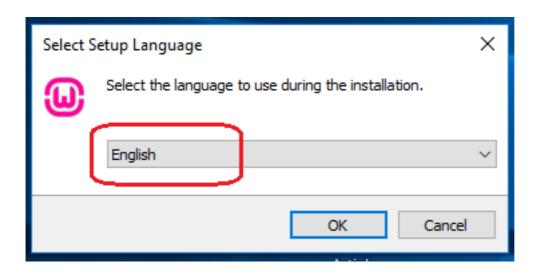


Step 4

Double-click the downloaded file to launch the WAMP installer.

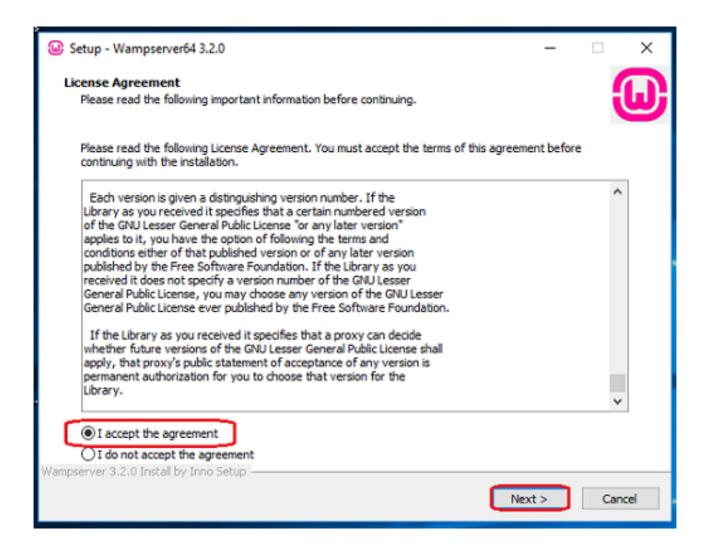


"Select Setup Language" window will appear on the screen and then choose your preferred language.

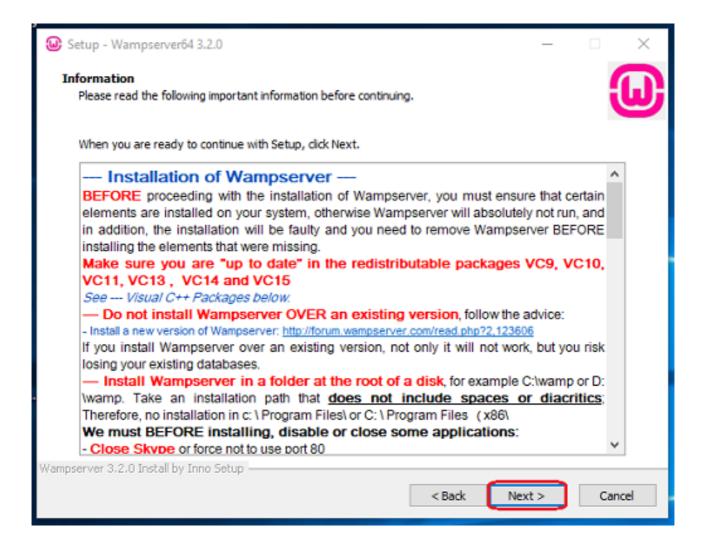


Step 6

Under the "License Agreement", click on the "I accept the agreement" radio button and then click on the "Next" button.



Click on the "Next" button.

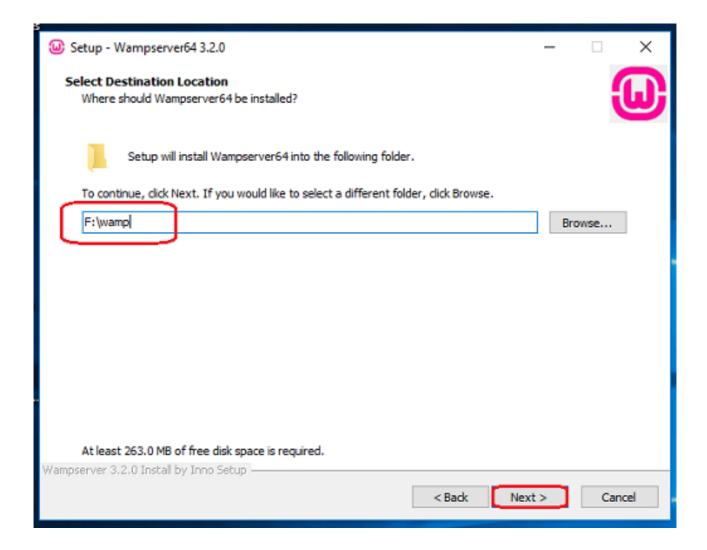


Note:-

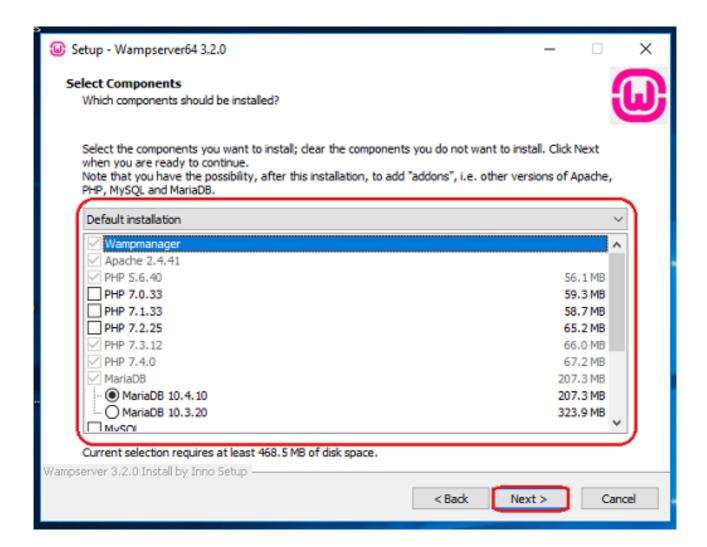
"Information" setup ensures that the required components (prerequisites) are installed on your system for the Wamp Server to function correctly.

Step 8

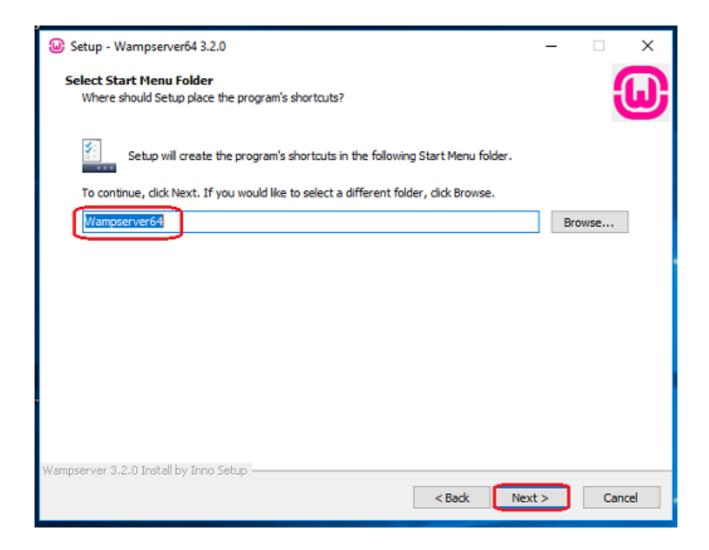
Choose a location (folder) to install the WAMP server and click on the "Next" button.



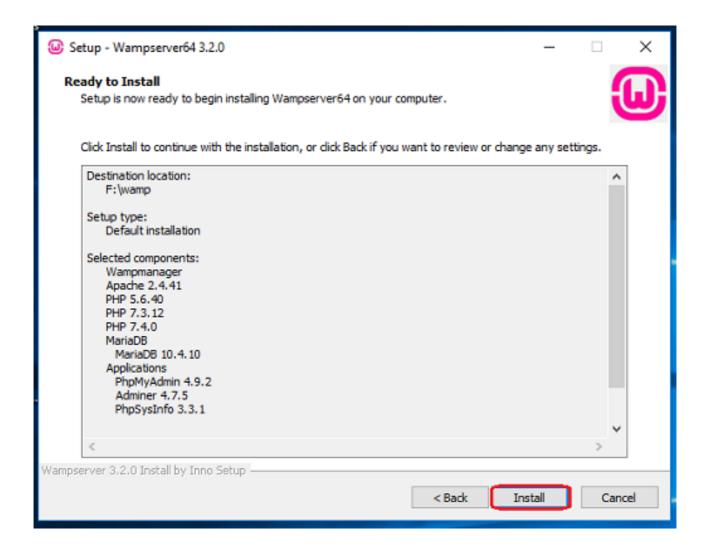
Select the components that you want to install and click on the "Next" button.



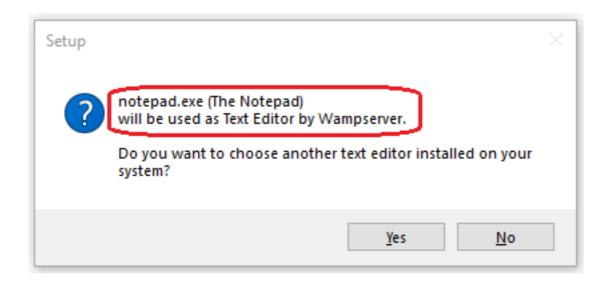
Select the start menu folder.



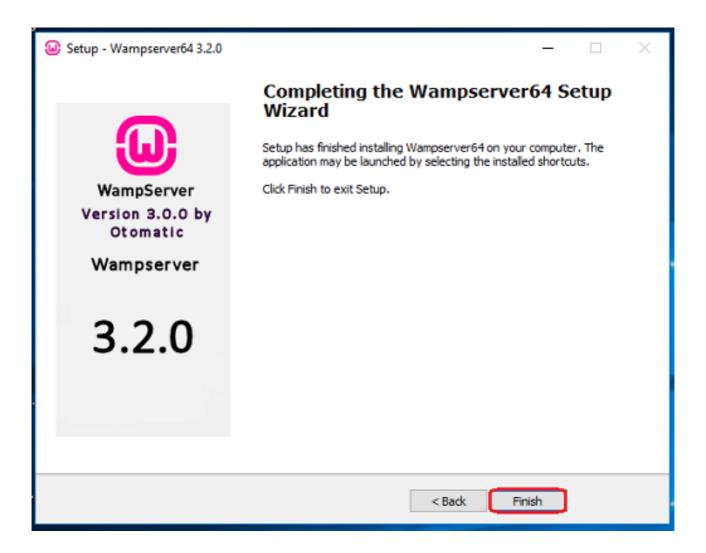
"Ready to Install" window will appear on the screen and then, click on the "Next" button.



Now, select the default browser and default text editor for the wamp server.



Click on the "Finish" button.



Configuration Process of WAMP Server

Step 1

Start the WAMP server through its shortcut on the desktop.

Step 2

When the WAMP Server starts, you can see the color of the WAMP server icon in the taskbar becomes green. Initially, it will be red, then turn into

amber and then green. When it turns green, it means all the services are now running fine.



IMP:CHANGE THE DEFAULT PORT OF MYSQL TO 8889 TO RUN OR CHANGE EVERY OCCURRENCE OF 8889 TO YOUR DEFAULT PORT IN THE WEBSITE DIRECTORY.....

Now, after changing your sql port, start the server and make sure all the servers are on, now go to http:localhost/ phpmyadmin. Now create a database of your choice name.

After creating the database, open the database and go to the SQL tab and run the sql file given in the zip file.

After this is done, make a new folder in www directory of ramp Installation and paste all the zip file content into the new folder.

To start the website, go to http://localhost/<new-folder>/ dashboard/index.php

ALSO, dashboard/index.php is the home page.

PHASE-I

(UPDATED SUMBISSION)

Introduction

We have decided to make a Lawyer management system where a lawyer can manage his cases, record the judgements, assign roles to

his staffs, manage fees and other transaction related details.

RELATIONSHIP SCHEMA

RULES KEPT IN MIND BEFORE CREATING THE SCHEMA:

If one to many take primary key of one side and include it as a foreign key in other.

If both are one the take any one of the primary key and include as a foreign key to other or vice versa

For many to many we have to create a seprate table with primary key of both and primary key will be combination of both.

For multi valued attributes create a new table for that with the primary key of the base table and remove it from the base table and the primary key of child table will be both.

For composite attribute instead of the attribute put its sub attribute.

For derived attribute instead of the attribute put its derive value(eg:instead of age put dob).

For weak entity set include the discriminator but that alone is not sufficient so we have to include the primary key of strong entity set.

EXAMPLE TABLE STRUCTURE

Case id	Case type	Case year	Party 1	Party 2	Affiliated counsels	Case description
234584	Civil	2005	Ramesh	Mukesh	Rajiv verma	Divorce case
647283	Civil	2010	Aditi	Suresh	Arun kumar	Domestic violence
947252	Criminal	2015	Surjeet	Ajay	Ravi chauhan	Murder
745245	Criminal	2008	Kushi	Vijay	Rakesh singh	Rape

927537	Criminal	2007	Nishtha	Savita kumari	Theft

CASES:-

CLIENTS:-

Client	Client	Case id	Client	Client address	Client	Client
Tanmay mishra	74836	927537	9125272517	Sarita vihar, delhi	34	M
Chirag thakur	25342	647283	9835426373	MG road, delhi	40	M
Jay bahayana	98452	234584	8372635367	Friends colony,delhi	45	M
Siddharth singh	28312	745245	9735426784	Ashok vihar,delhi	47	M
Sagar sharma	37372	947252	9836253732	Radha nagar,delhi	48	M

CASES THIS MONTH:-

Case id	Listing date	Court no.	Court name	Court behaviour
927537	25- may-2007	5	Lajpath nagar	Normal
647283	15- aug-2010	3	Karol bagh	Favour
234584	10-jan-2005	4	Rajori garden	Hostile
745245	26-feb-2008	1	Pritampura	Normal

	947252	18-jun-2015	2	Sarita vihar	Normal
--	--------	-------------	---	--------------	--------

CASE DESCRIPTION:-

Case id	Judgment id	Judgement description	Next state	Last judgement date
745245	37382	Party1 is found guilty and subject to punishment.	Case closed	15- july-2016
647283	47462	Media; on suite has been filed.	Refer to supreme court	20- may-2018
234584	28373	DIvorce has been granted.	Case closed	30- aug-2019
745245	33827	Party2 is found guilty and subject to punishment.	Case	17- sept-2018

947252	38362	Further evidences required. Case furthered to SC.	Refer to supereme court	24- dec-2017
--------	-------	---	-------------------------	-----------------

COURTS:-

Court type	Court name	Case in the court	Court id
Single bench	Lajpath nagar	927537	7363
Single bench	Karol bagh	647283	8263
jury	Rajori garden	234584	3748
Single bench	Pritampura	745245	2973
Single bench	Sarita vihar	947252	4637

TOTAL FEES:-

Client	Case id	Typing fees	Consultation fees	Law fees	Court fees	Mode if payment
74836	927537	1000	35000	10000	10000	Credit
25342	647283	2000	37000	15000	12000	Credit
98452	234584	1500	30000	17000	20000	Debit

28312	745245	3000	40000	12000	14000	Cash
37372	947252	2500	32000	20000	11000	Debit

AFF ID

Aff id	Lawyer name	Lawyer contact	Lawyer address
6473	Rajesh kumar	7456393829	Rajori garden, delhi
3849	Sanjay Mishra	8735382938	Pritampura , delhi
8283	Aman sorout	9930283763	Lajpath nagar , delhi
4537	Shilpi sharma	9839274622	Sarita vihar, delhi
9638	Geeta shah	7383725372	Chandni chowk, delhi

Lawyer assignment

Affid	Case id
6473	927537
3849	647283
8283	234584
4537	745245
9638	947252

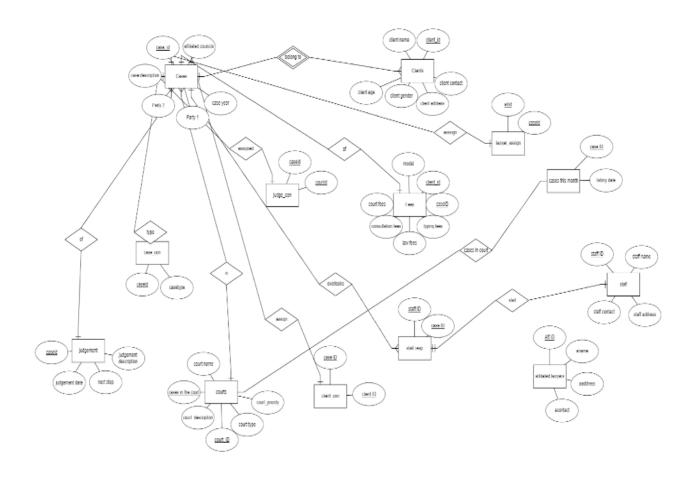
Staff

Staff id	Staff name	Staff contact	Staff address
6778	Pradeep	8658964356	Badarpur, delhi
5478	Shubham	9753456778	Badhkal road, delhi
8754	Shivansh	8765456778	Manav Rachna , Faridabad
9754	Aayush	9865356778	Sarita vihar, delhi
3258	Lakshay	9643567788	Karol bagh, delhi

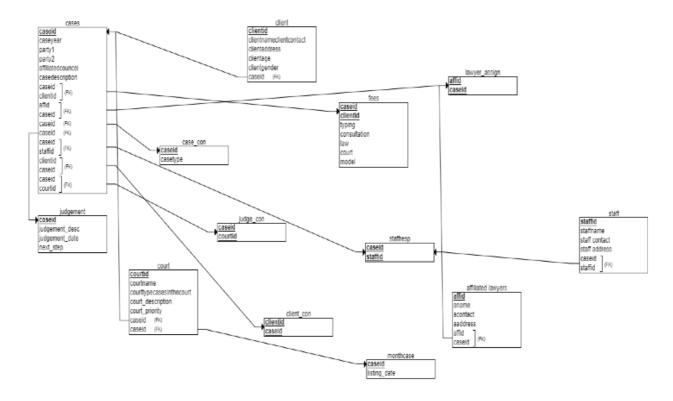
Staff resp

Case id	Staff id
927537	6778
647283	5478
234584	8754
745245	9754
947252	3258

ER diagram



ER SCHEMA



PHASE II

1. Table for normalization

CASES:-

Functional Dependencies case_id next_state
Attributes

•

judgement_id judgement_desc last_judgement_date

Functional Dependencies judgement_id →judgement_desc last_judgement_date Attributes

case_id judgement_id

1NF

A table is in 1 NF iff:

1. There are only Single Valued Attributes.

In our table, there are only single-valued attributes. So the table is already in 1NF

2NF

A table is in 2NF iff:

1. 2.

It is in 1NF

Our table is in 1NF It has no partial dependency.

We've a partial dependency in our table, so it's not it 2NF.

The FD [judgement_id --> judgement_desc] is a partial dependency (i.e., LHS is a proper subset of some CK),

Solution:

Decomposition of table into two different tables.

TABLE 1=

(judgement_id,judgement_desc,last_judgement_date), with FDs:

judgement_id --> judgement_desc,last_judgement_date TABLE
2= (case_id,judgement_id)

3NF

3NF ensures that the table is free of transitive dependencies.

Checking FD case_id --> next_state

The FD violates 3NF as its LHS is not a superkey (and RHS is a set of non-key attributes).

The following 3NF table is obtained:

case_id,next_state with FDs

case id --> next state

Checking FD judgement_id --> last_judgement_date,judgement_desc

The FD violates 3NF as its LHS is not a superkey (and RHS is a set of non-key attributes).

The following 3NF table is obtained:

judgement_id,last_judgement_date,judgement_desc
with FDs

judgement_id --> last_judgement_date,judgement_desc

Normalize to BCNF

1st table is already in BCNF.

2nd table is not in BCNF.

The FD [judgement_id --> judgement_desc,last_judgement_date] violates BCNF as the LHS is not superkey.

Table is split into the two below:

TABLE 1= (judgement_id,judgement_desc,last_judgement_date) With FDs:

TABLE 2= (case_id,judgement_id)

STAFF TABLE

Already in 1NF

Normalize to 2NF

Staffid Staffname Staffcontact Staffaddress

Functional Dependencies
Staffid Staffname Staffcontact Staffaddress

Normalize to 3NF

Attributes

Staffid Staffname Staffcontact Staffaddress

Functional Dependencies

Staffid → Staffname Staffcontact Staffaddress Table already in 3NF

Normalize to BCNF

Attributes

Staffid Staffname Staffcontact Staffaddress

Functional Dependencies
Staffid Staffname Staffcontact Staffaddress

COURTS TABLE

Already in 1NF Normalize to 2NF

Attributes

Courttype Courtname Caseinthecourt Courtid

Functional Dependencies
Courtid Courtype Courtname Caseinthecourt

Same for 3 NF and BCNF

Attributes

Courttype Courtname Caseinthecourt Courtid

Functional Dependencies
Courtid Courtype Courtname Caseinthecourt

LAWYER ASSIGNMENT TABLE Already in 1NF

Attributes: Affid Caseid

Functional Dependencies Caseid Affid

SAME FOR 2 NF, 3 NF AND BCNF

Attributes: Affid Caseid

Functional Dependencies Caseid Affid

STAFF RESP TABLE ALREADY IN 1NF

Attributes

→ →

Caseid Staffid

Functional Dependencies

→

Caseid Staffid

Same for 2NF, 3 NF and BCNF

Functional Dependencies Caseid Staffid

→

CASES TABLE Already in 1NF Normalize to 2NF

Attributes

case_id case_year party1 party2 case_description

Functional Dependencies case_id →case_year party1 party2 case_description

Attributes

case_type affiliated_counsels

Functional Dependencies case_type affiliated_counsels

→

Normalize to 3NF

case_id case_description party2 party1 case_year

Functional Dependencies

case_id →case_description party2 party1 case_year

Attributes

case_type affiliated_counsels

Functional Dependencies

→

case_type affiliated_counsels

Attributes

case_id case_type

Normalize to BCNF

case_id case_year party1 party2 case_description

Functional Dependencies

case_id →case_year party1 party2 case_description

Attributes

case_type affiliated_counsels

Functional Dependencies

→

case_type affiliated_counsels

Attributes

case_id case_type

CLIENTS TABLE Already in 1NF Normalize to 2NF

Clientname Clientid Caseid Clientcontact Clientaddress Clientage Clientgender

Functional Dependencies

Clientid Clientname Clientcontact Clientaddress Clientage Clientgender Caseid Clientid

Normalize to 3NF





Clientid Clientgender Clientage Clientaddress Clientcontact Clientname

Functional Dependencies

→

Clientid Clientgender Clientage Clientaddress Clientcontact Clientname

Attributes

Clientid Caseid

Functional Dependencies Caseid Clientid

→

Normalize to BCNF

Attributes

Clientid Clientname Clientcontact Clientaddress Clientage Clientgender

Functional Dependencies

Clientid Clientname Clientcontact Clientaddress Clientage Clientgender

Attributes

Clientid Caseid

Functional Dependencies Caseid Clientid

→

CASES THIS MONTH Already in 1NF Normalize to 2NF

Caseid Listingdate

Functional Dependencies

→

Caseid Listingdate

Attributes

Courtno. Courtname Courtbehaviour

Functional Dependencies

→

Courtno. Courtname Courtbehaviour

Attributes

Caseid Courtno.

Normalize to 3NF

Caseid Listingdate

Functional Dependencies

→

Caseid Listingdate

Attributes

Courtno. Courtbehaviour Courtname

Functional Dependencies

→

Courtno. Courtbehaviour Courtname

Attributes

Caseid Courtno.

Normalize to BCNF

Caseid Listingdate

Functional Dependencies

→

Caseid Listingdate

Attributes

Courtno. Courtname Courtbehaviour

Functional Dependencies

→

Courtno. Courtname Courtbehaviour

Attributes

Caseid Courtno.

Functional Dependencies

AFF ID TABLE Already in 1NF Normalize to 2NF

Attributes

Affid Lawyername Lawyercontact Lawyeraddress

Functional Dependencies
Affid → Lawyername Lawyercontact Lawyeraddress

Normalize to 3NF

Attributes

Affid Lawyername Lawyercontact Lawyeraddress

Functional Dependencies
Affid → Lawyername Lawyercontact Lawyeraddress

Normalize to BCNF

Attributes

Affid Lawyername Lawyercontact Lawyeraddress

Functional Dependencies
Affid → Lawyername Lawyercontact Lawyeraddress

TOTAL FEES TABLE TABLE IS IN 1NF Normalize to 2NF

Attributes

Clientid Caseid Typingfees Consultationfees Lawfees Courtfees Modeifpayment

Functional Dependencies

Caseid Clientid Typingfees Consultationfees Lawfees Courtfees Modeifpayment

Normalize to 3NF

Attributes

Clientid Caseid Typingfees Consultationfees Lawfees Courtfees Modeifpayment

Functional Dependencies

Caseid Clientid Typingfees Consultationfees Lawfees Courtfees Modeifpayment

Normalize to BCNF

Attributes

Clientid Caseid Typingfees Consultationfees Lawfees Courtfees Modeifpayment

Functional Dependencies

Caseid Clientid Typingfees Consultationfees Lawfees Courtfees Modeifpayment

PHASE - III

SOFTWARE REQUIREMENTS

TO USE THE SOFTWARE, WE NEED ANY SERVER WHICH CAN RUN PHP AND MYSQL.

RECOMMENDED TOOLS ARE wampServer(For Windows) mampServer(For macOS)

Below is the installation direction for the wampserver

Prerequisites for WAMP Server

In order to successfully install and run the WAMP Server, make sure that you must have Microsoft Visual C++ Redistributable packages installed in your system.

- 1) Microsoft Visual C++ 2008 Redistributable Package (x64)
- 2) Microsoft Visual C++ 2010 Redistributable Package (x64)
- 3) Visual C++ Redistributable for Visual Studio 2012 Update 4
- 4) Visual C++ Redistributable Packages for Visual Studio 2013
- 5) Visual C++ Redistributable for Visual Studio 2015
- 6) Microsoft visual c++ 2017 redistributable package

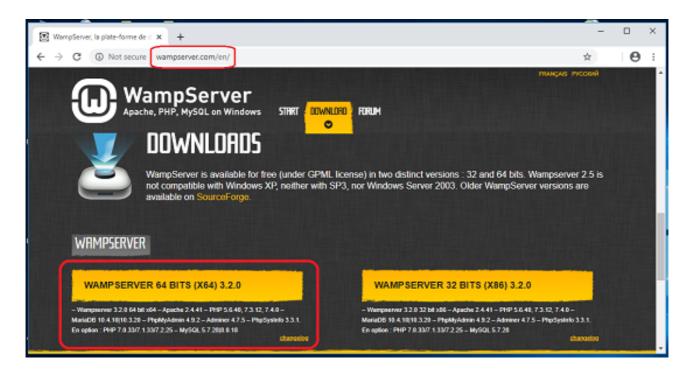
Installation Process of WAMP Server

Step 1

To download the WAMP Server, visit the "Wamp Server" website in your web browser.

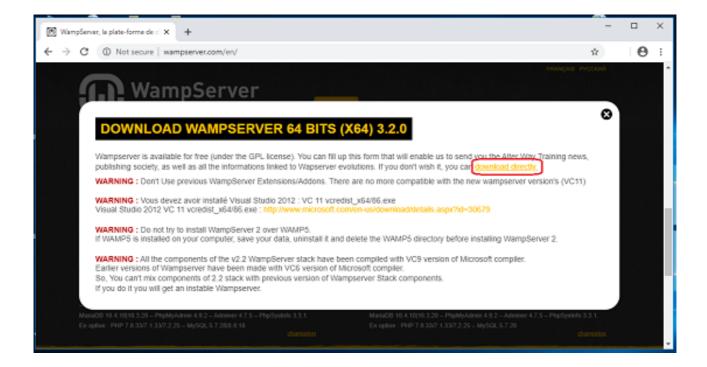
Step 2

Click on the "WAMP SERVER 64 BITS (X64).

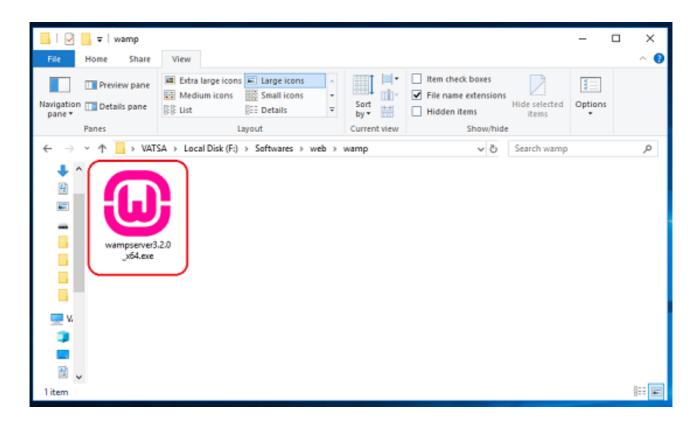


Step 3

Now, click on the "download directly" link to start downloading.

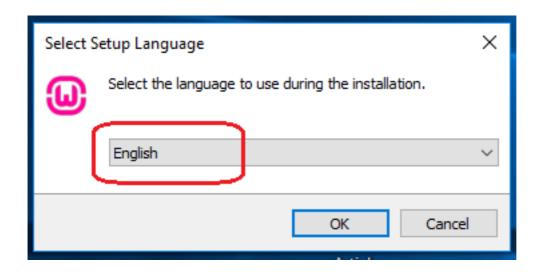


Double-click the downloaded file to launch the WAMP installer.



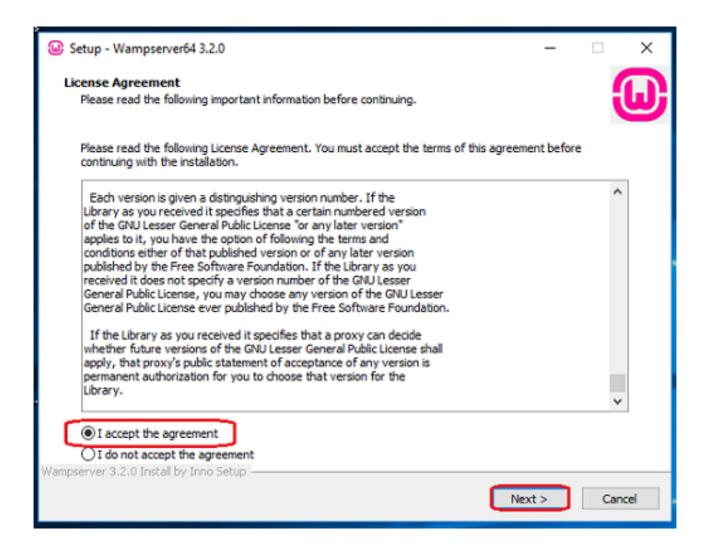
Step 5

"Select Setup Language" window will appear on the screen and then choose your preferred language.

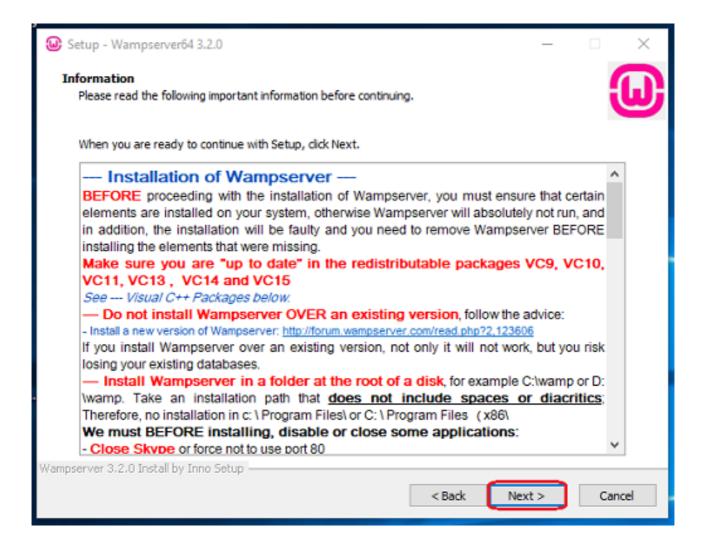


Step 6

Under the "License Agreement", click on the "I accept the agreement" radio button and then click on the "Next" button.



Click on the "Next" button.

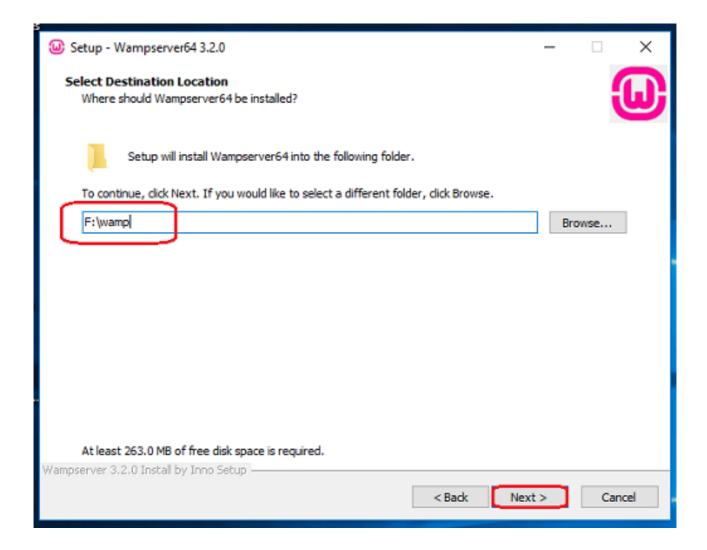


Note:-

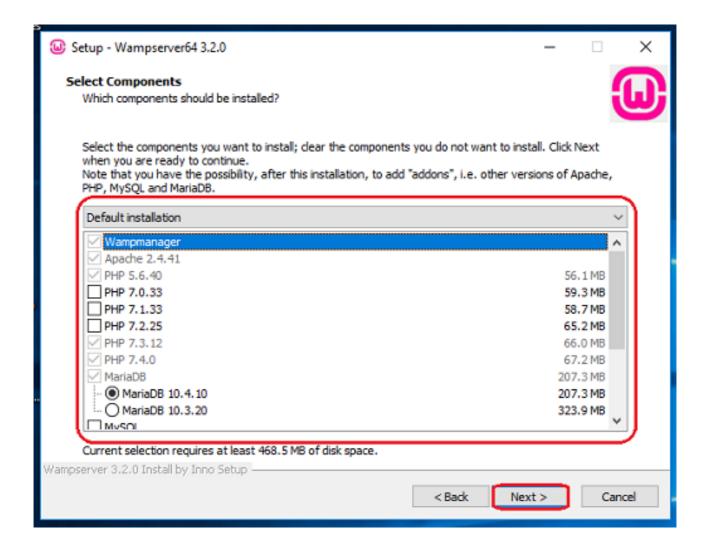
"Information" setup ensures that the required components (prerequisites) are installed on your system for the Wamp Server to function correctly.

Step 8

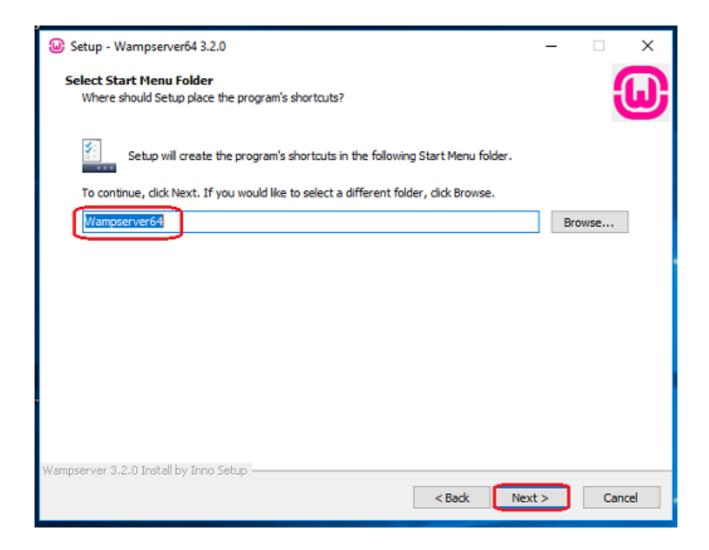
Choose a location (folder) to install the WAMP server and click on the "Next" button.



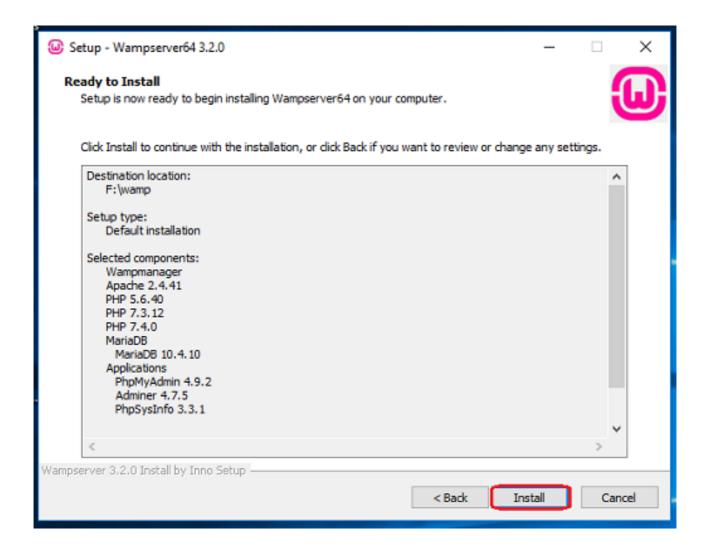
Select the components that you want to install and click on the "Next" button.



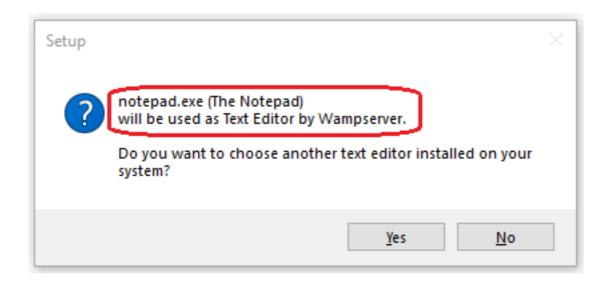
Select the start menu folder.



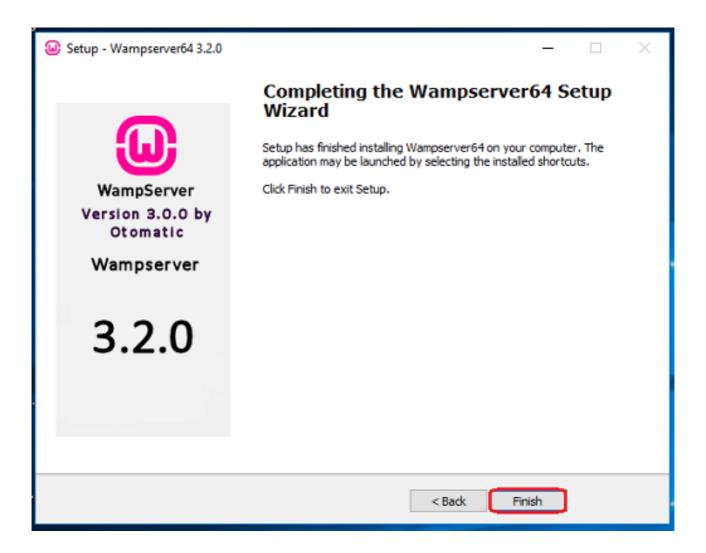
"Ready to Install" window will appear on the screen and then, click on the "Next" button.



Now, select the default browser and default text editor for the wamp server.



Click on the "Finish" button.



Configuration Process of WAMP Server

Step 1

Start the WAMP server through its shortcut on the desktop.

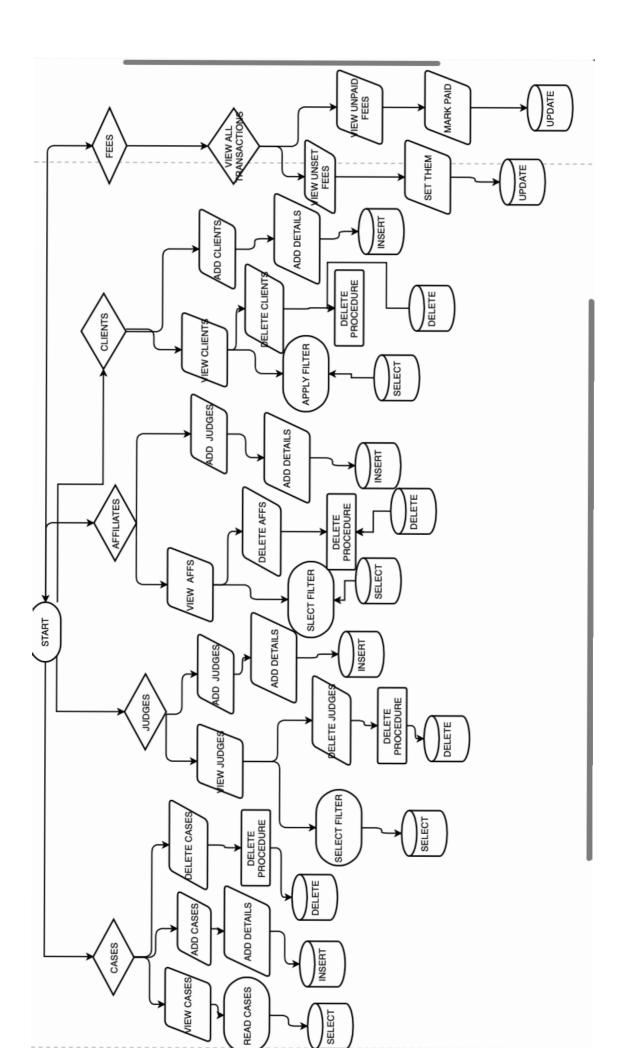
Step 2

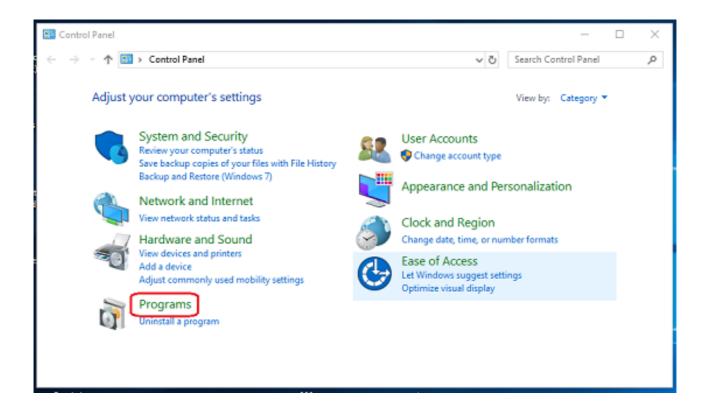
When the WAMP Server starts, you can see the color of the WAMP server icon in the taskbar becomes green. Initially, it will be red, then turn into

amber and then green. When it turns green, it means all the services are now running fine.

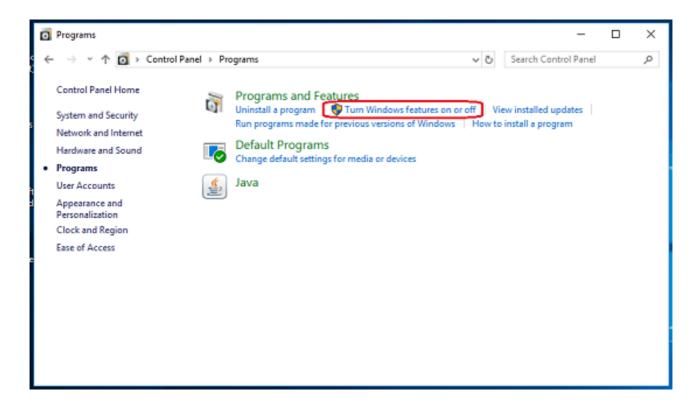


IMP:CHANGE THE DEFAULT PORT OF MYSQL TO 8889 TO RUN OR CHANGE EVERY OCCURRENCE OF 8889 TO YOUR DEFAULT PORT IN THE WEBSITE DIRECTORY.....



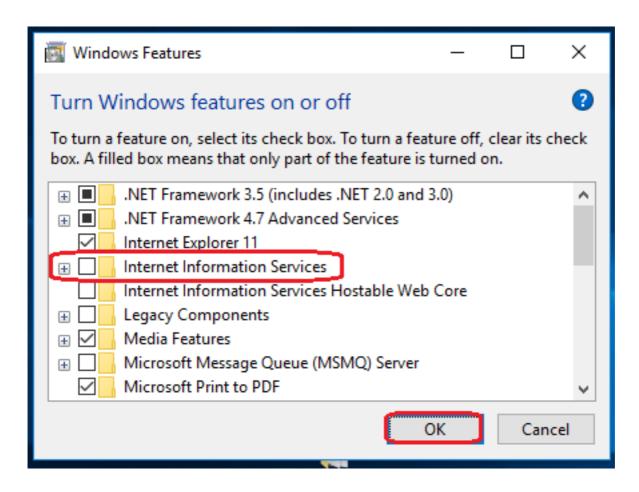


Click on the "Turn Windows Feature on or off" option.



Step 4

Uncheck (clear) the "Internet Information Services" option and click on the "OK" button.



Step 5

Click on the "Restart Now" option (This will reboot/restart your computer/laptop).

Step 6

Now, open and check the "WAMPP Server" and check the localhost.



following the above steps, you can install and configure the WAMP server in Windows 10

You can setup your databases as according to the sql files that will be uploaded on the link.

After setting up the database, the website is good to go.

README

The project, which could've never been possible without the help of our very helpful faculty. My father(19BCE0459) had been facing many problems with all the paperwork that goes into his lawyer work in day to day business. Inspired by this, we've designed a fully fledged lawyer based content management system(CMS) where lawyers can store their cases, judgements, add new clients, record their transaction and almost everything that they need to do on paper.

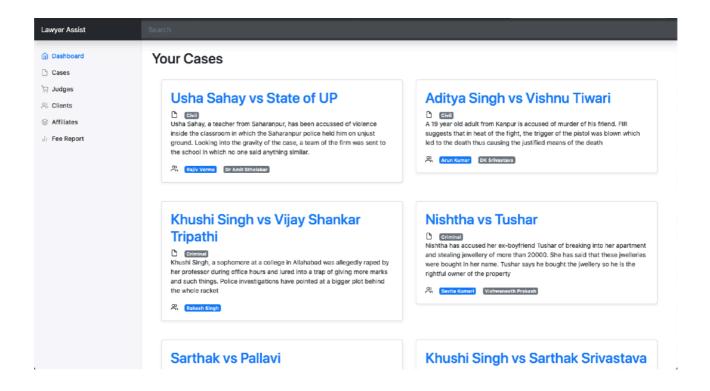
Full functionality list

- Add new case, read old cases, sort cases according to types, add judgements to old cases, update old cases and judgments, delete old cases and judgements.
 - 2. Add new judges, view existing judges, delete old judges, update details of the judges, sort judges on the basis of their courtroom behaviour, take a place at the judges who have your case in upcoming 30 days.
- 3. Add new clients, update old clients, view client details, delete client, watch client related to a particular case, see the client who has a case upcoming or see a client who has not yet paid the fees.
 - 4. Add new affiliate counsel, assign a new affiliate lawyer to a case, delete an affiliate counsel, update an affiliate counsel, see affiliate counsels who have a case in next 30 days.
- 5. Check fees status of all the cases, see fee status of cases for which fees hasn't been set and update them. Check fees status of clients who have not yet paid and mark them paid.

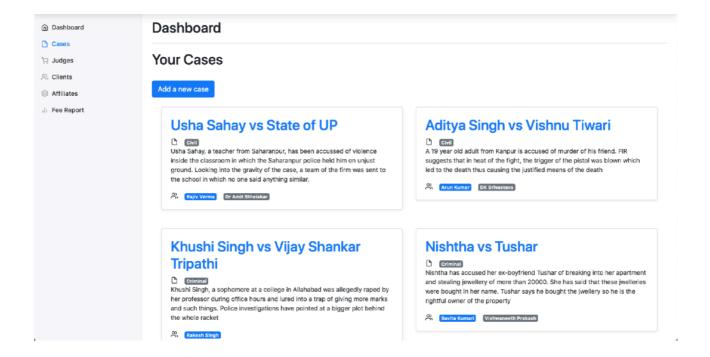
FLOWCHART OF THE WORKING WEBSITE

INPUT FILES AND THEIR USAGE.

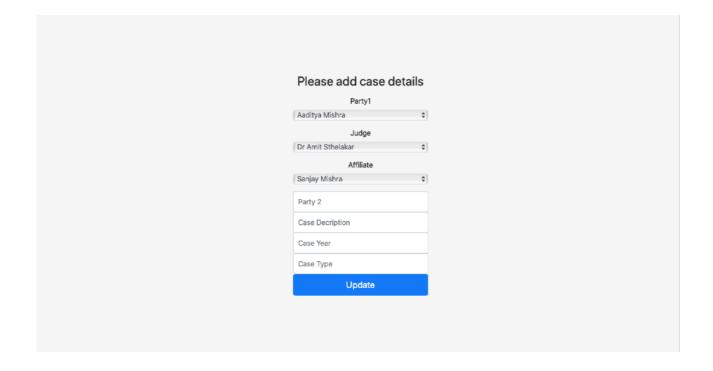
Index.php: Used to take a quick glance at all the cases and contains link to all the other pages.



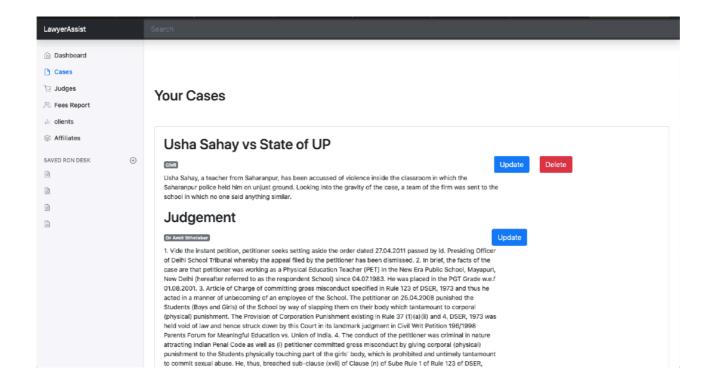
readcases.php: Used to read cases details and update its details



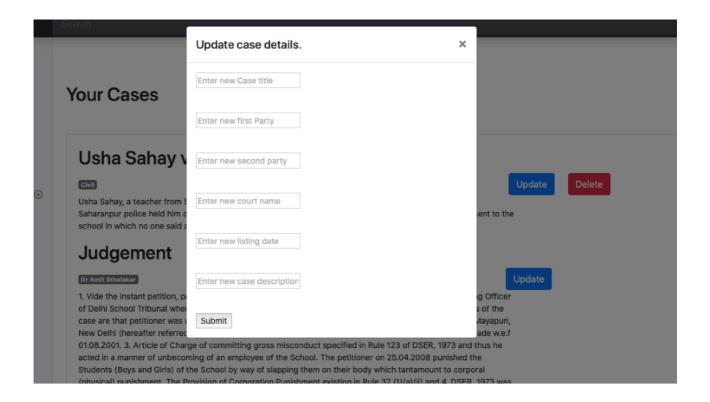
wizard.php: Used to add a new case to database.



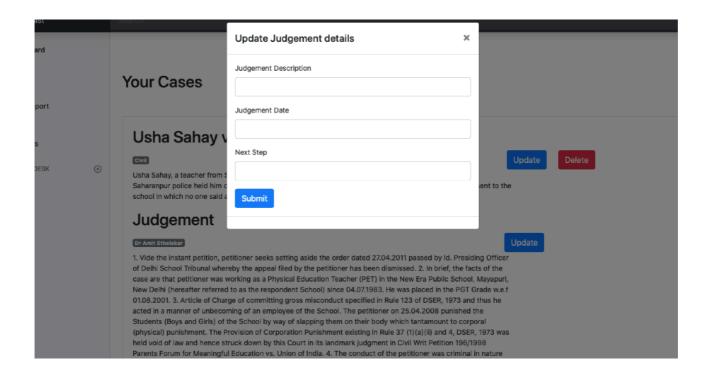
cases.php:Used to read a particular case in full and update its case and judgement details.



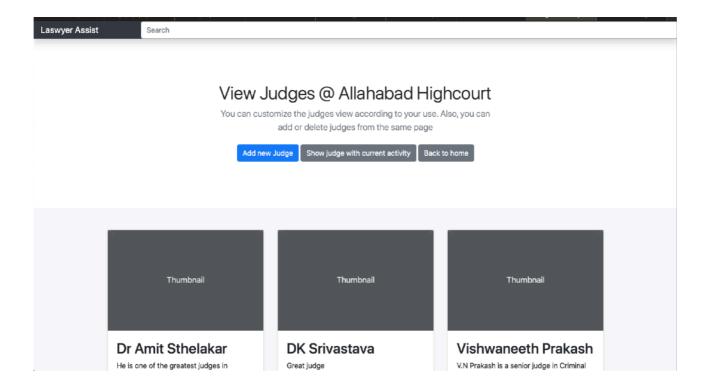
Case update modal: To update the case details.



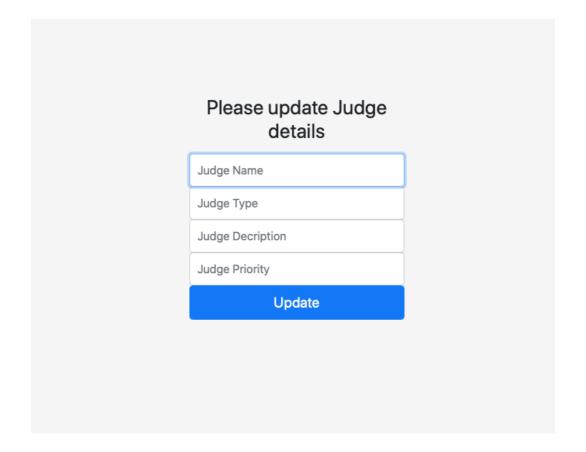
Judgement update modal: To update the judgement details of the case.



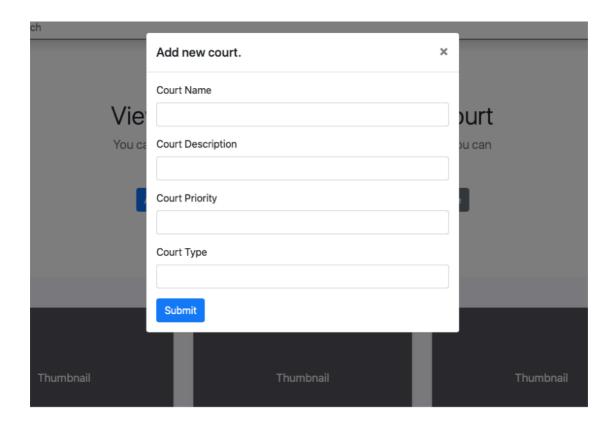
judges.php: To view all the judges in the court.



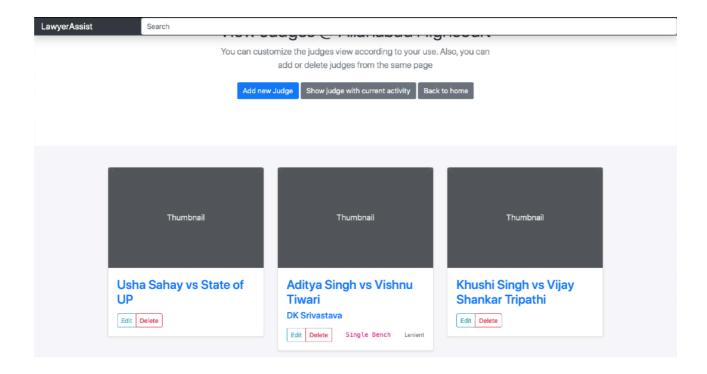
updatejudges.php: To update details of a particular judge.



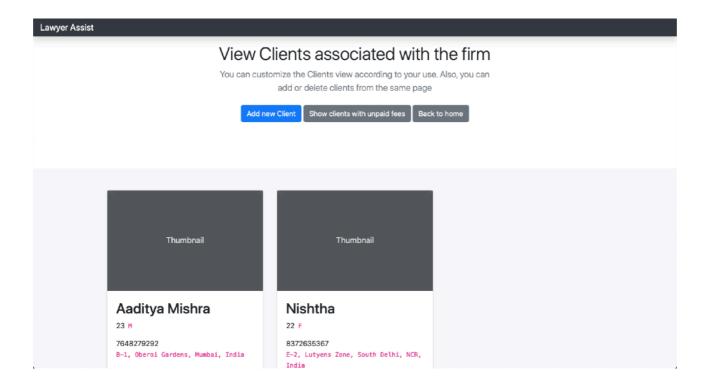
Add new court modal: To add a new court to the database.



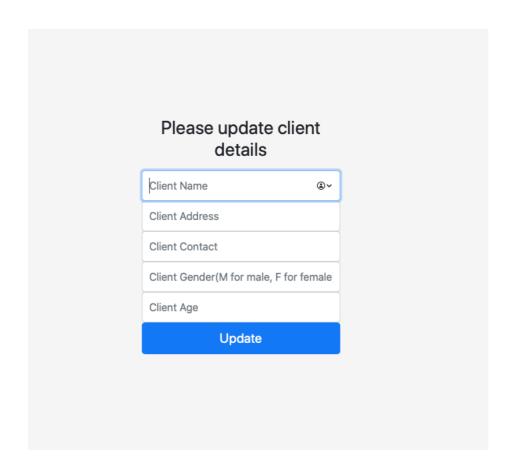
Currentjudge.php: To show judges who are currently on a case within 30 days of current date.



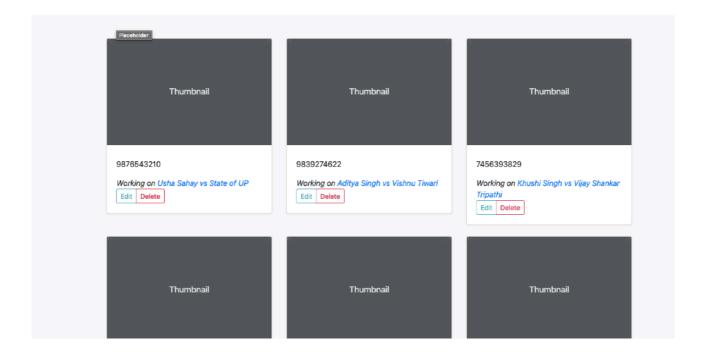
client.php: Shows details of all the clients.



Updateclient.php: To update client details.



Affiliates.php: Shows details of all the affiliate counsels with the firm.

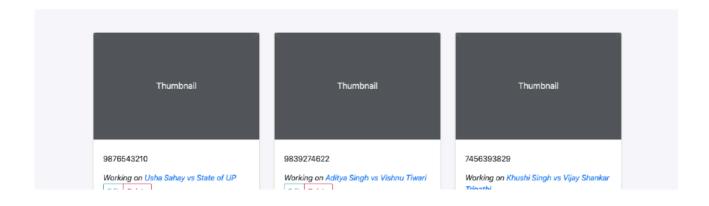


currentaffiliates.php

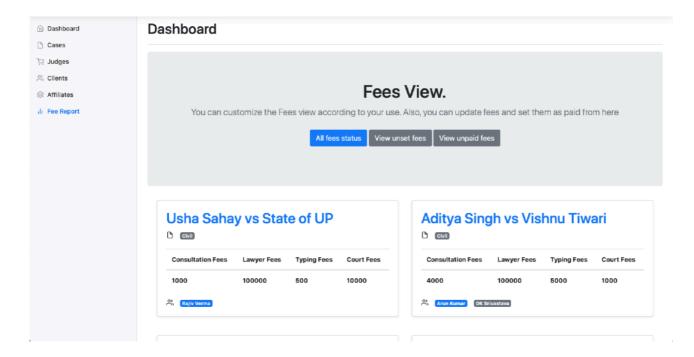
View Affiliated Advocates with your firm

You can customize the Affiliates view according to your use. Also, you can add or delete Affiliates from the same page

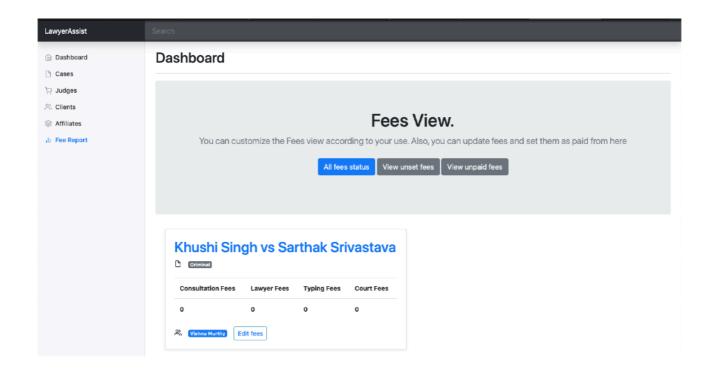
Add new Affiliate Show affiliates currently on a case Back to home



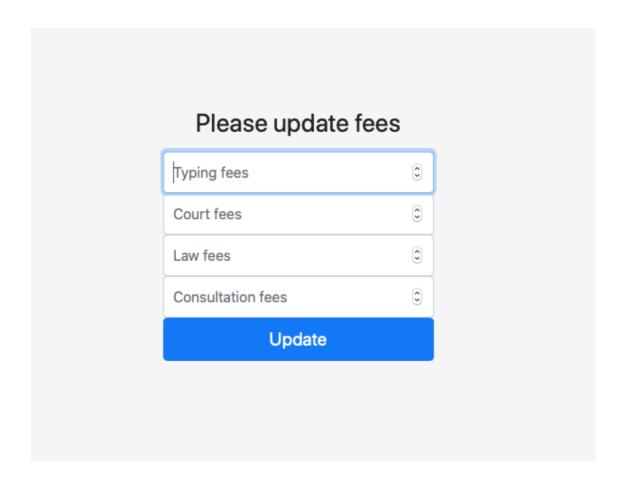
fees.php: View fees details of all the cases.



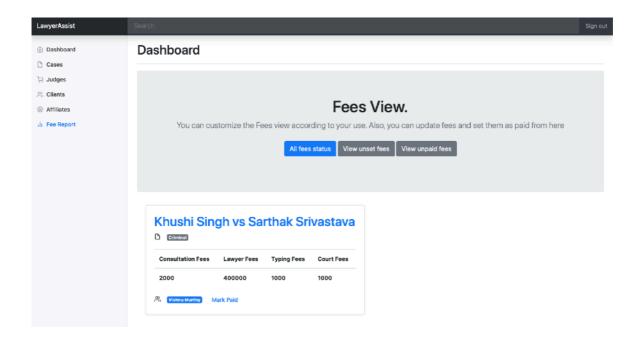
Unsettfees.php: View all the cases for which fee details have not been set.



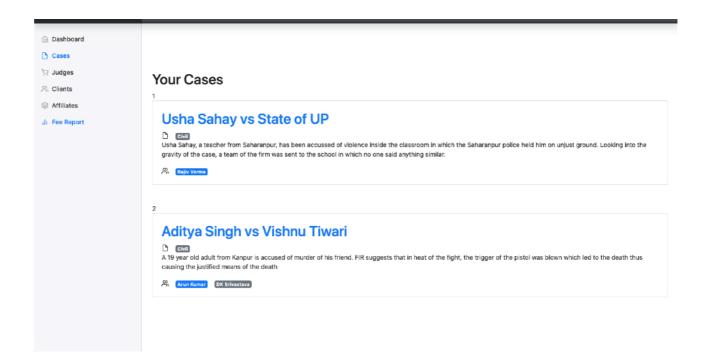
updatefees.php: Update fees of a case for which it is unset.



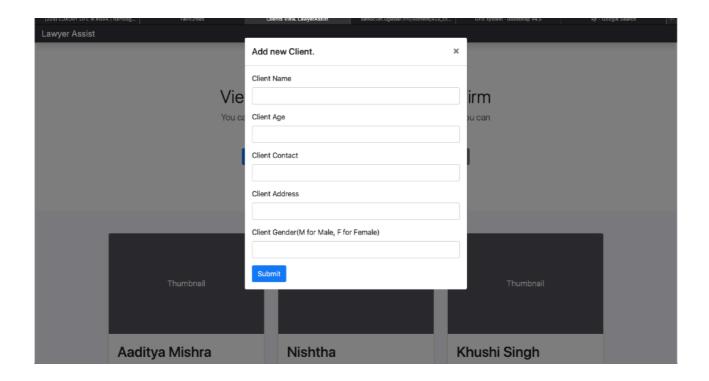
Unpaidfees.php: See all the fees which are unpaid(You can mark them paid also from the same page).



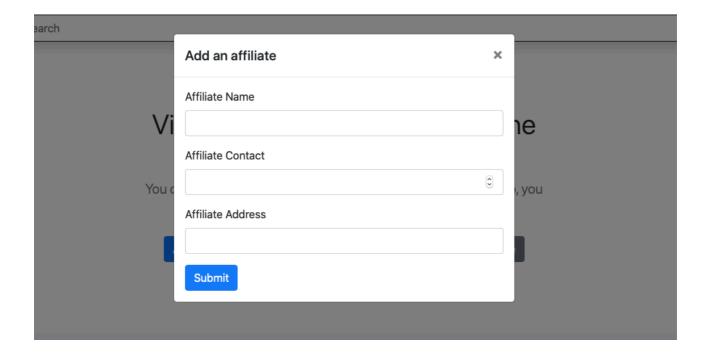
casetype.php: shows cases of a particular type. In the screenshot is shown all the cases of civil type



Add new client modal: To add a new client to the database.



Add new affiliate modal: To add a new affiliate to the database.



MY LEARNING THROUGH THE PROJECT.

I was doing SQL based development since past five years when I first started in Class 10th. But it was mostly confined to select statements and normal DML queries. This was the first time I really got to understand the type of the beast that SQL was in every sense. From sub queries to join, my mind was blown unleashing the full power of SQL. Also the project was a fun one because I understood some very key concepts of the subject while making a professional project to boast on my resume. This has been a very learning experience for me all throughout and this could not have been possible without my esteemed faculty, Prof Saravanakumar Kandaswamy. We were not at all sure about normalisation and all the other things, but the way he taught us these things made me not only understand these concepts, but also understand the need of it in the first place. Thanking him won't be enough but he has really helped all of us step up our game.