

CS210 - Assignment 3

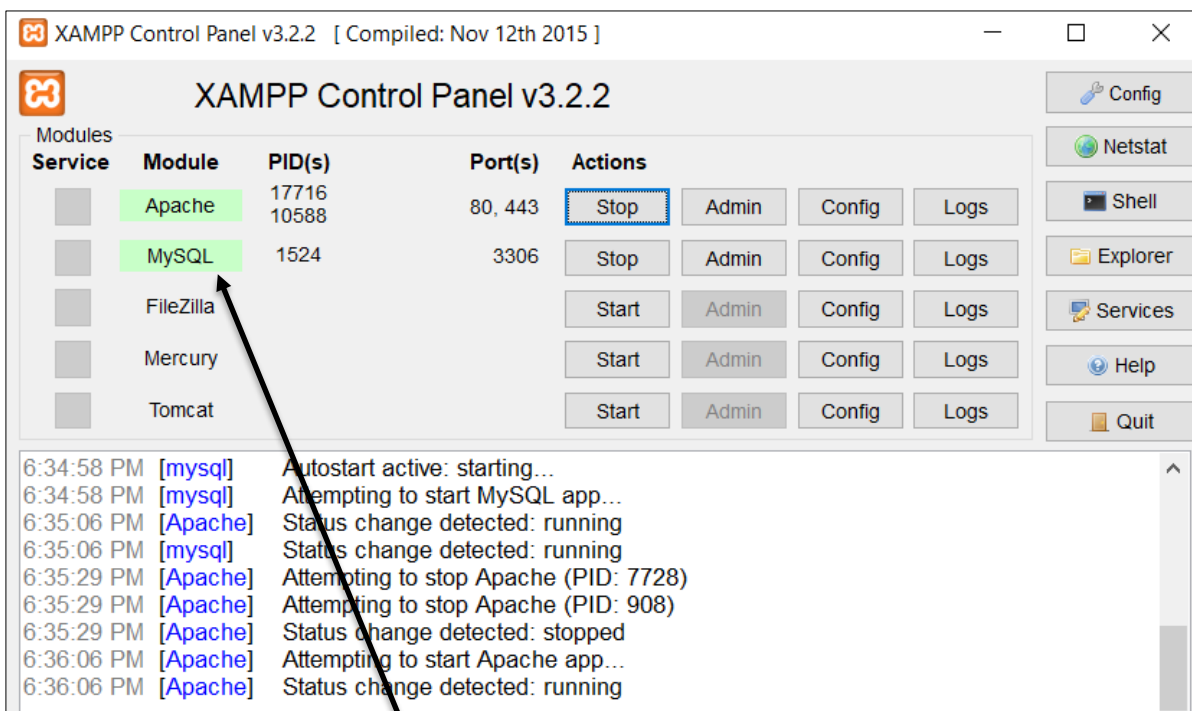
Creating MySQL databases locally

Note

In this assignment, I assume that you have already installed XAMPP on your computer (as was explained by assignment 2)

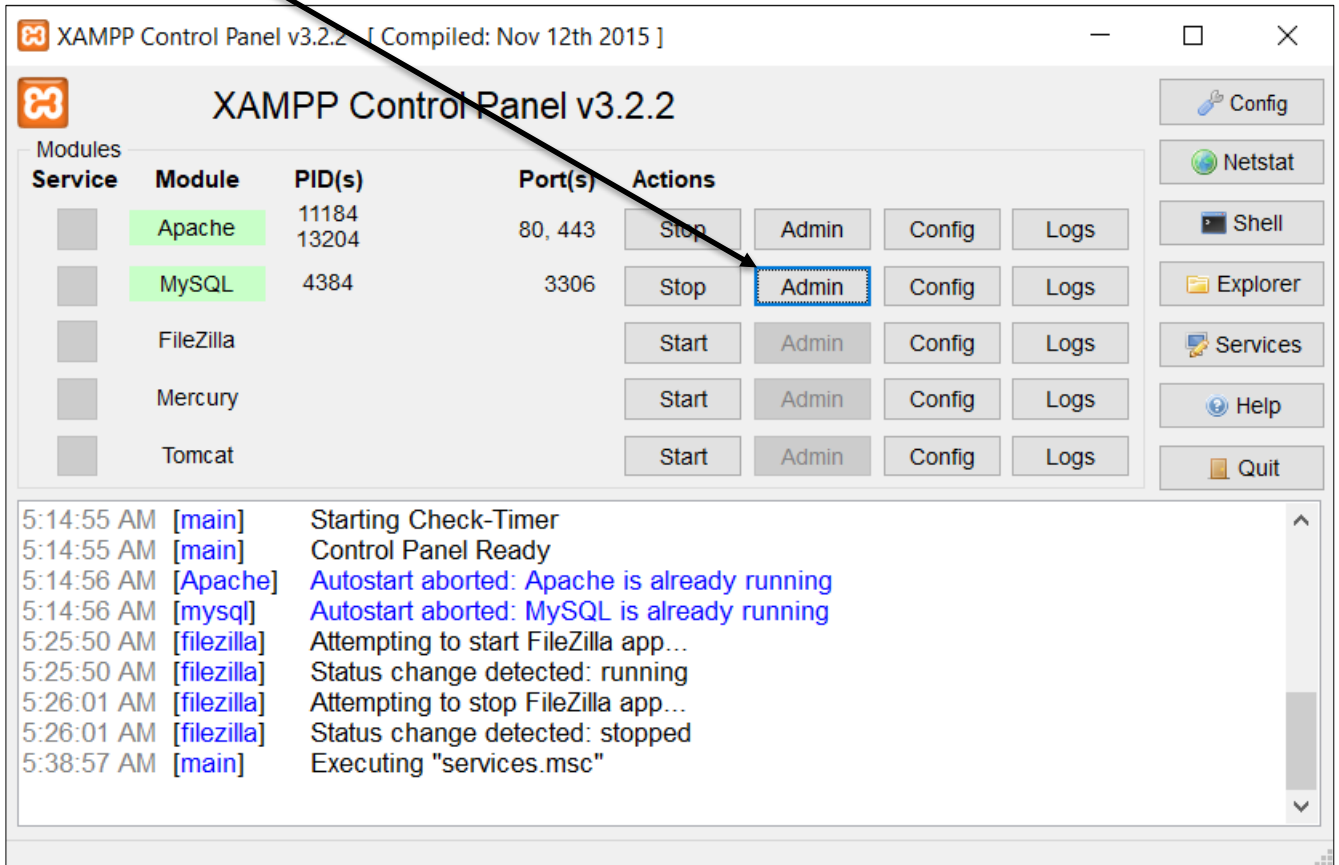
1. Creating MySQL database

Run XAMPP Control Panel

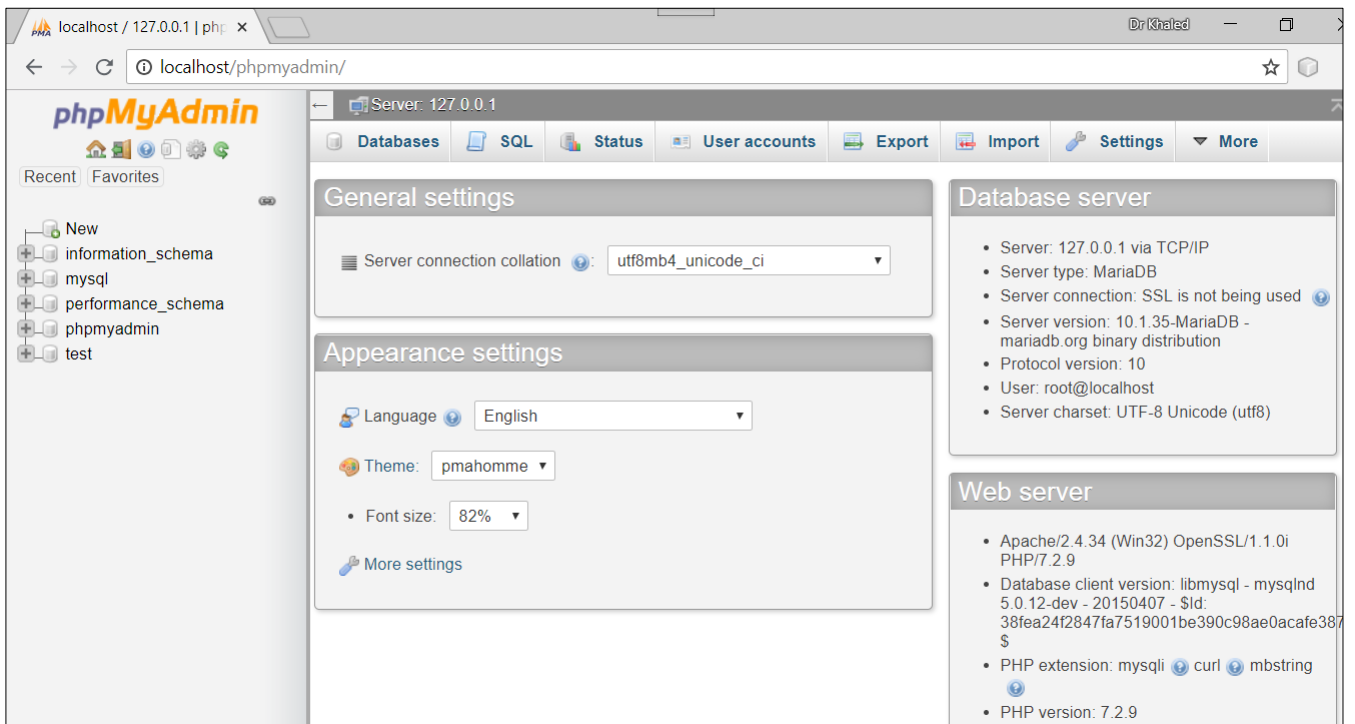


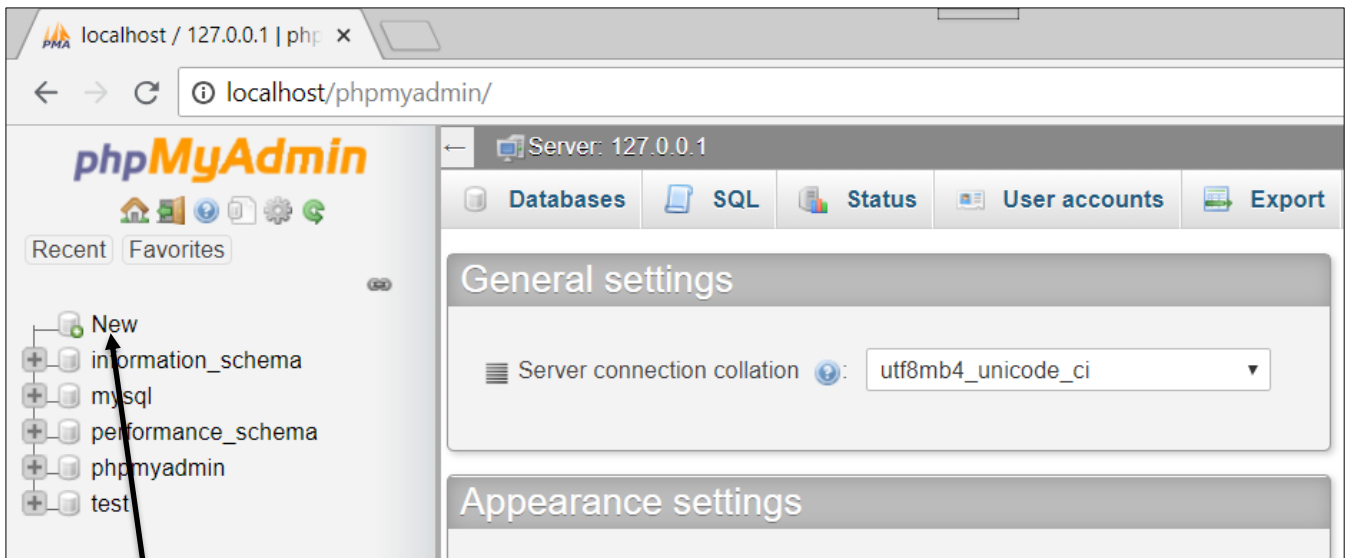
Make sure that MySQL is started (as mentioned by assignment 2)

Click on the **Admin** button to the right of MySQL:

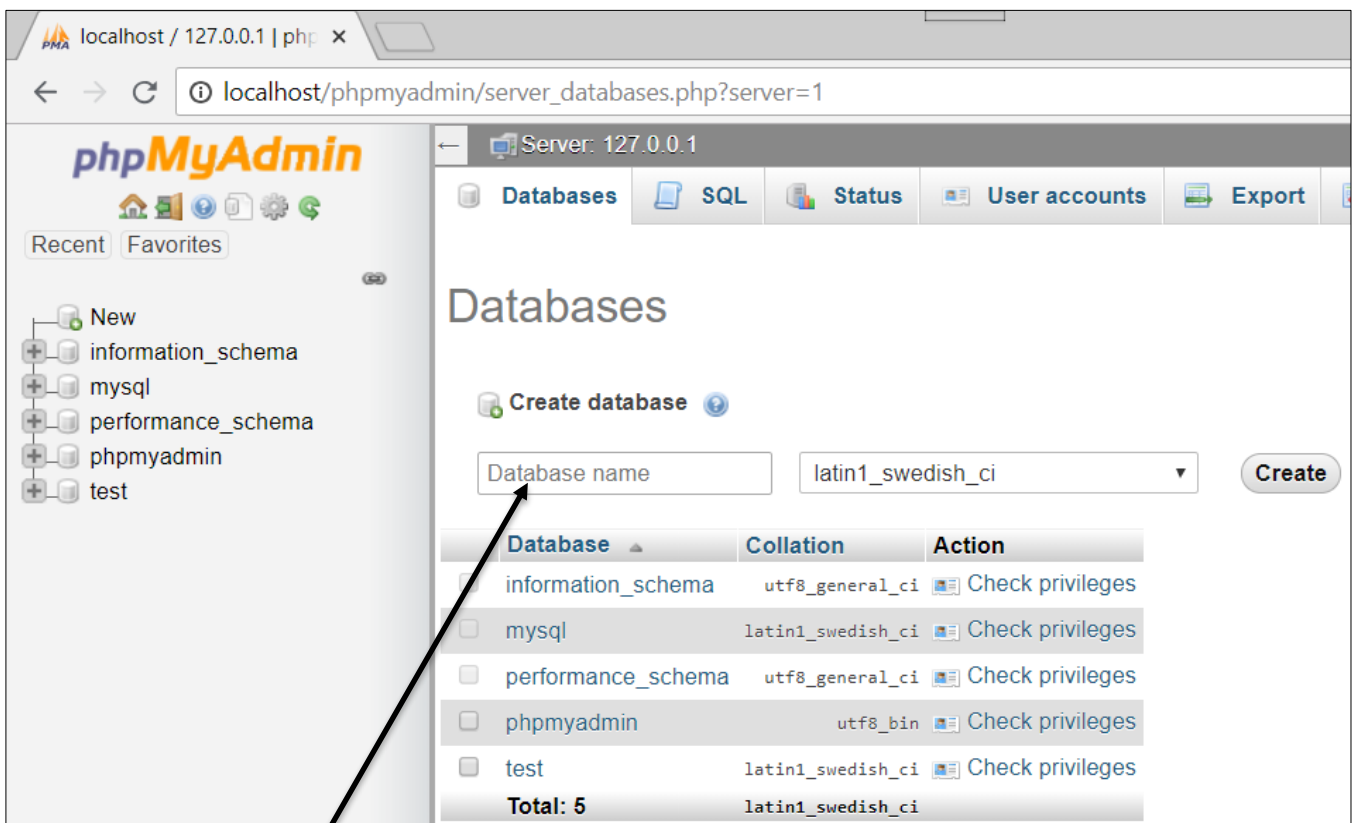


The following webpage will be opened:

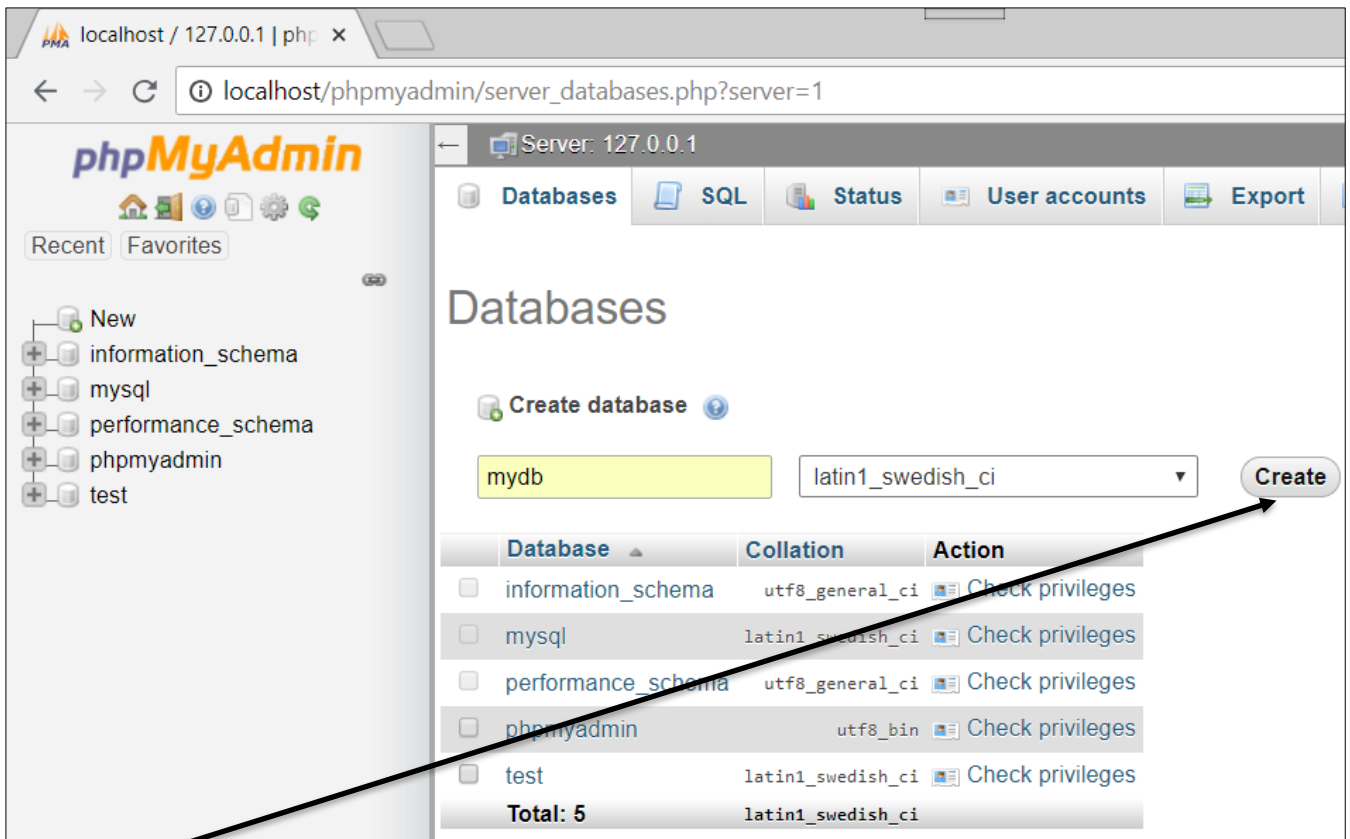




Click **New** to create new database

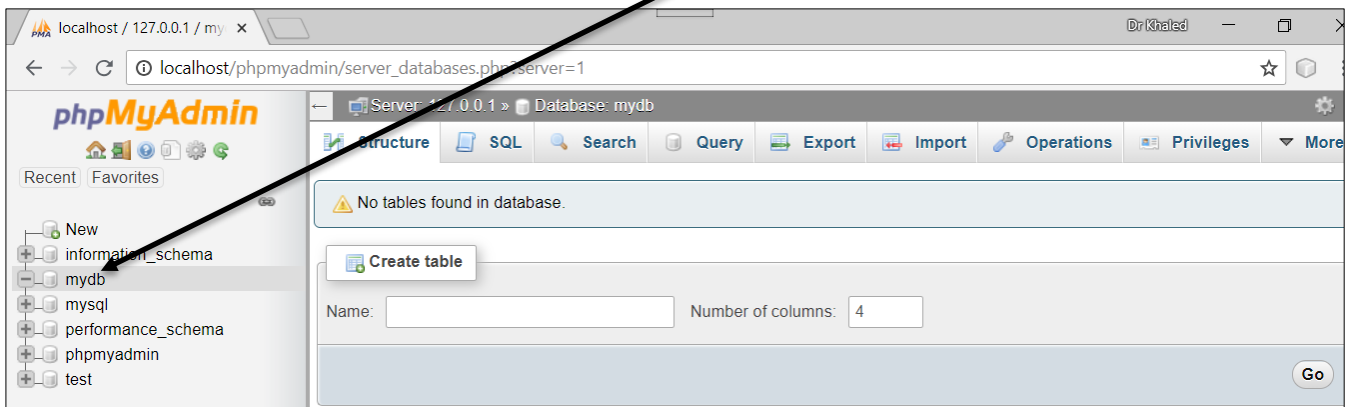


Write the database name



Click Create

The new database will be created as shown below:



2. Creating new table inside the MySQL database

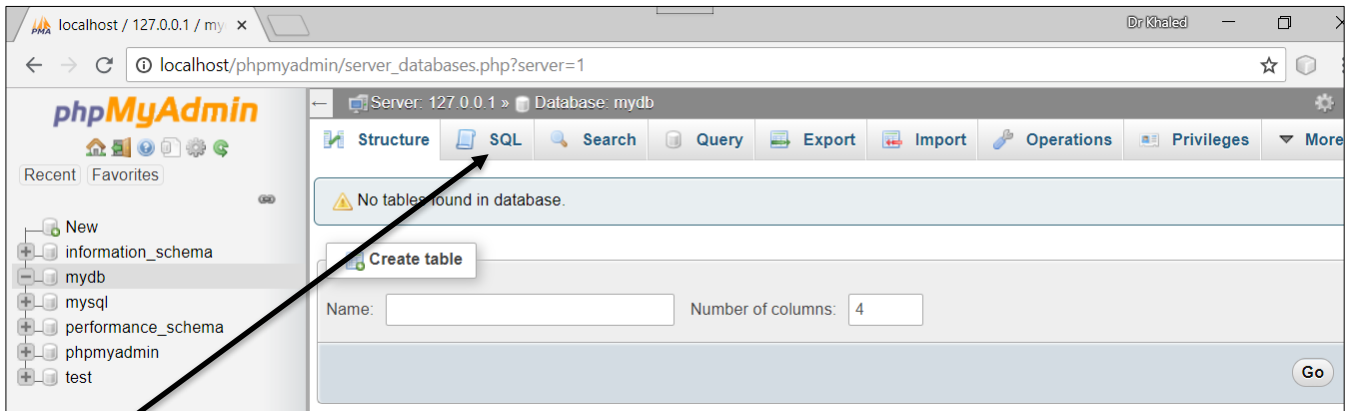
Assume that you want to create the following table, called *Students*, inside your MySQL database:

Id	Major	Minor
19432	Computer Science	Statistics
73462	Math	
54362		
87421	Physics	Math

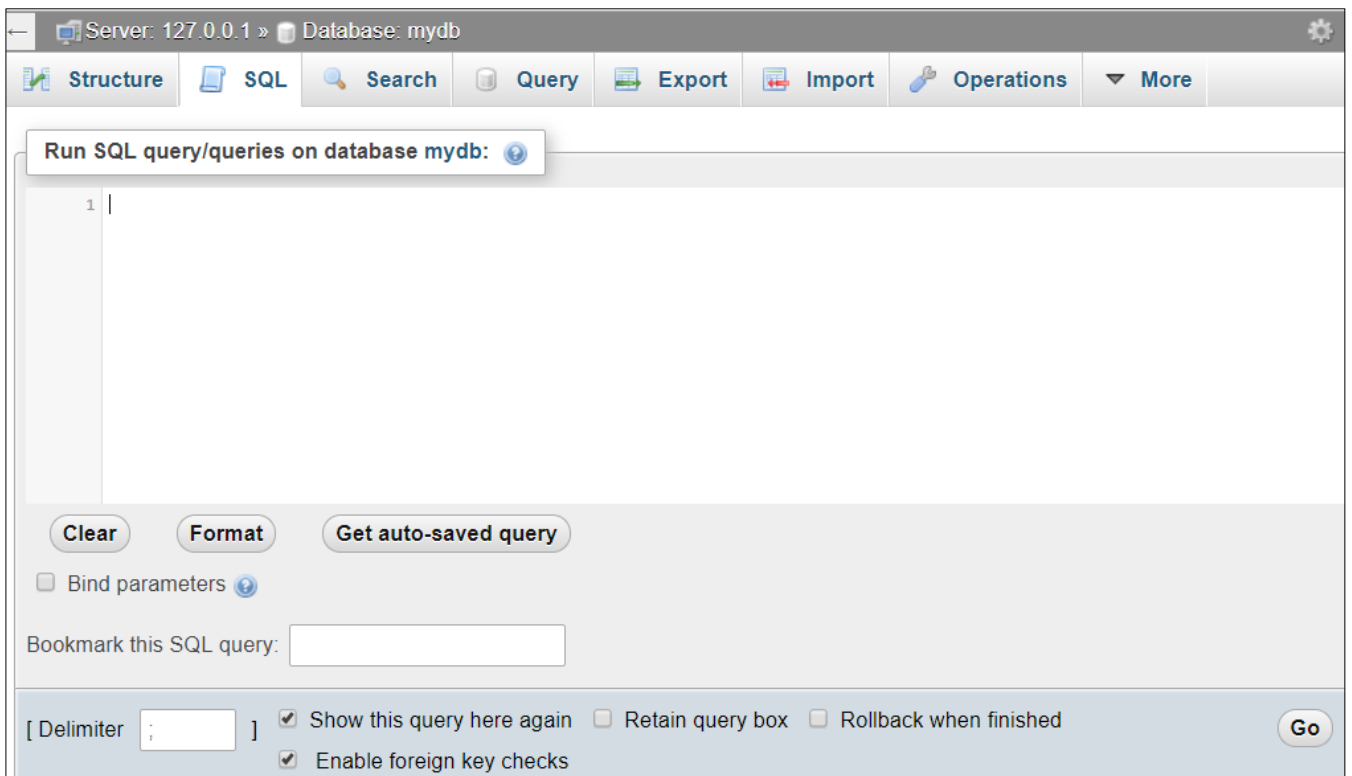
And assume that the primary key of the table is the **Id** column

2.1 Creating new table using MySQL statement

You can write single SQL statement to create the table

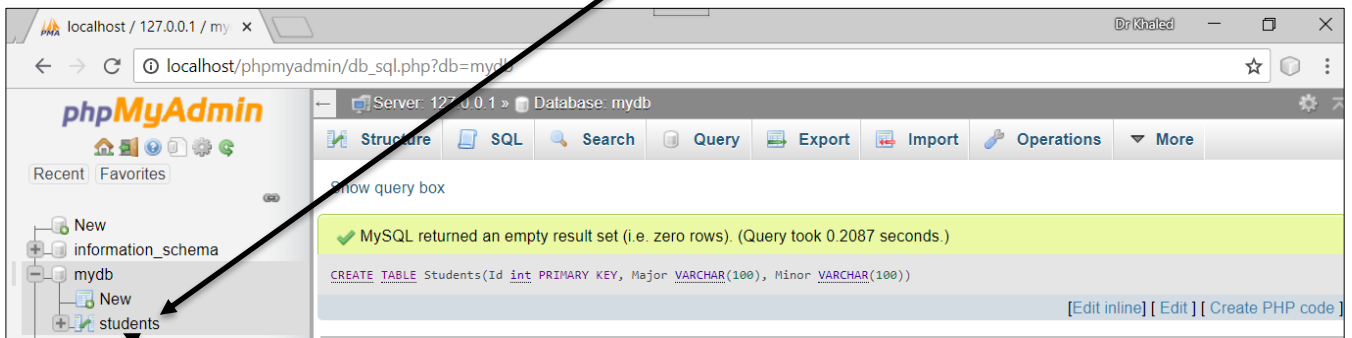


Click SQL

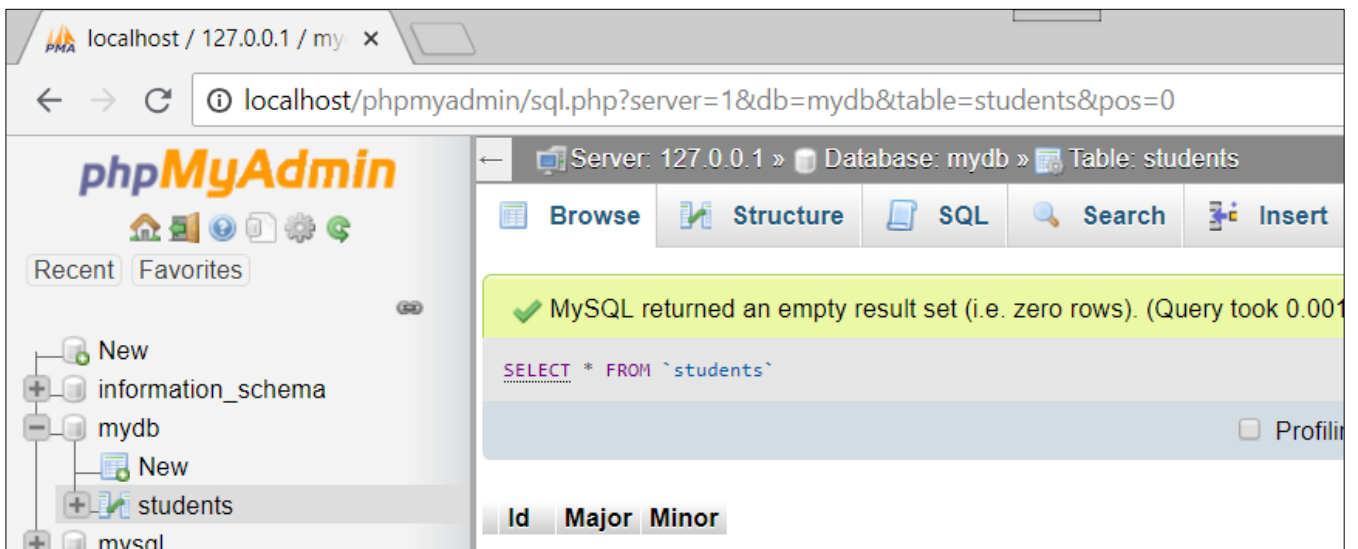


Write the suitable SQL statement to create the table then click **Go**

The new table will be created as shown below:



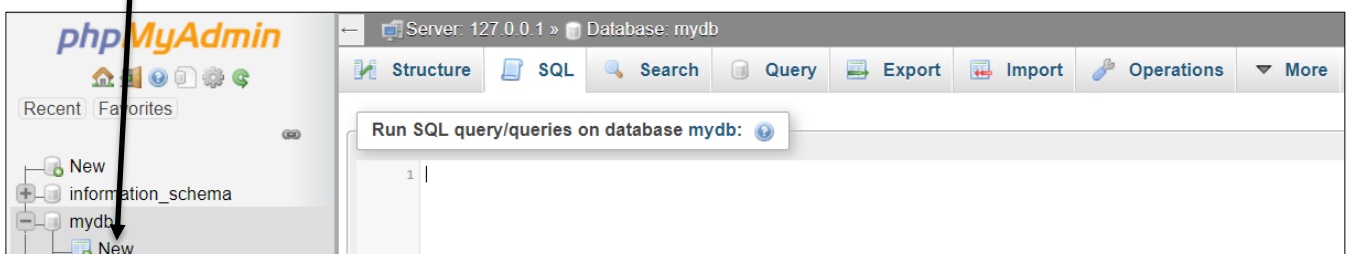
Click on the table to open it



2.2 Creating table using Wizard

If you do NOT want to write SQL statement to create the table, you can create it using Wizard.

Click **New** under your database name to create a new table



The following webpage will be opened:

Server: 127.0.0.1 » Database: mydb

Structure SQL Search Query Export Import Operations More

Table name: Add column(s)

Name	Type	Length/Values	Default	Collation	Attributes
<input type="text"/> Pick from Central Columns	INT	<input type="text"/>	None	<input type="text"/>	<input type="text"/>
<input type="text"/> Pick from Central Columns	INT	<input type="text"/>	None	<input type="text"/>	<input type="text"/>
<input type="text"/> Pick from Central Columns	INT	<input type="text"/>	None	<input type="text"/>	<input type="text"/>
<input type="text"/> Pick from Central Columns	INT	<input type="text"/>	None	<input type="text"/>	<input type="text"/>

Specify the table name and the initial number of columns

Server: 127.0.0.1 » Database: mydb

Structure SQL Search Query Export Import Operations More

Table name: Add column(s)

Name	Type	Length/Values	Default	Collation	Attributes
<input type="text"/> Pick from Central Columns	INT	<input type="text"/>	None	<input type="text"/>	<input type="text"/>
<input type="text"/> Pick from Central Columns	INT	<input type="text"/>	None	<input type="text"/>	<input type="text"/>
<input type="text"/> Pick from Central Columns	INT	<input type="text"/>	None	<input type="text"/>	<input type="text"/>
<input type="text"/> Pick from Central Columns	INT	<input type="text"/>	None	<input type="text"/>	<input type="text"/>

After specifying the table name and the number of columns, you are required to enter the Name, the Type, and the Length of each column (field) in your table

The first field **Id**:

The field Name **Id**, and the field Type is **INT** (which is the default data type)

Name	Type	Length/Values	Default	Collation	Attributes	Null	Index
Id	INT		None			<input type="checkbox"/>	---

Since the Id field will be the primary key of the table
Click the dropdown list under the Index part

Index

PRIMARY

UNIQUE

INDEX

FULLTEXT

SPATIAL

Select **PRIMARY**

The following dialog box will be displayed:

Add index ✕

Index name: PRIMARY

Index choice: PRIMARY

+ Options

	Column	Size
⬆ ⬇ ⬇ ⬆	Id [int]	

Go
Cancel

Click **Go**

Now the Id field is set as the primary key of the table

The second field **Major**:

The field Name **Major**, and the field Type is **VARCHAR** (because this is a String value)

Click here to select the field data type

Since the Type of the Major field is **VARCHAR**, you should specify the length of the field (allowed number of characters) as shown below:

Name	Type	Length/Values	Default	Collation	Attributes	Null	Index
Id	INT		None			<input type="checkbox"/>	PRIMARY
Major	VARCHAR	100	None			<input type="checkbox"/>	---

The third field **Minor**:

The field Name **Minor**, and the field Type is VARCHAR (because this is a String value)
Again, since the Type of the Minor field is VARCHAR, you should specify the length of the field

Name	Type	Length/Values	Default	Collation	Attributes	Null	Index
Id	INT		None			<input type="checkbox"/>	PRIMARY
Major	VARCHAR	100	None			<input type="checkbox"/>	---
Minor	VARCHAR	100	None			<input type="checkbox"/>	---

Table comments: Collation: Storage Engine: InnoDB

PARTITION definition:

Partition by: (Expression or column list)

Partitions:

Preview SQL Save

Finally, click **Save**

If the table was created successfully, the following webpage will be displayed:

The screenshot shows the phpMyAdmin interface with the 'Table structure' view selected. The table has three columns: **Id** (int(11)), **Major** (varchar(100)), and **Minor** (varchar(100)). The 'Id' column is the primary key. The 'Indexes' section shows a single index named 'PRIMARY'.

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	Id	int(11)			No	None			Change Drop Primary Unique Index Spatial Fulltext Distinct values
2	Major	varchar(100)	utf8_unicode_ci		No	None			Change Drop Primary Unique Index Spatial Fulltext Distinct values
3	Minor	varchar(100)	utf8_unicode_ci		No	None			Change Drop Primary Unique Index Spatial Fulltext Distinct values

3. Inserting Records (rows) into the table

To start adding records (rows) to the table, click **Insert**

The screenshot shows the phpMyAdmin interface with the 'Insert' button in the top menu bar highlighted by a black arrow. The 'Table structure' view is still selected, showing the same table structure as before.

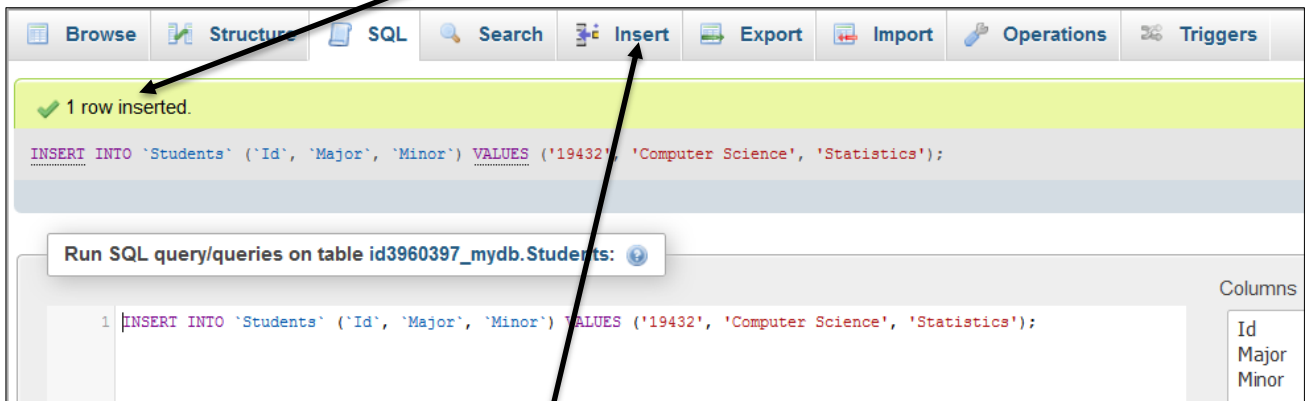
The following webpage will be displayed:

Column	Type	Function	Null	Value
Id	int(11)	<input type="text"/>	<input type="checkbox"/>	<input type="text" value="19432"/>
Major	varchar(100)	<input type="text"/>	<input type="checkbox"/>	<input type="text" value="Computer Science"/>
Minor	varchar(100)	<input type="text"/>	<input type="checkbox"/>	<input type="text" value="Statistics"/>

Go

Enter the field values of the new record then click **Go**

The following webpage will be displayed:

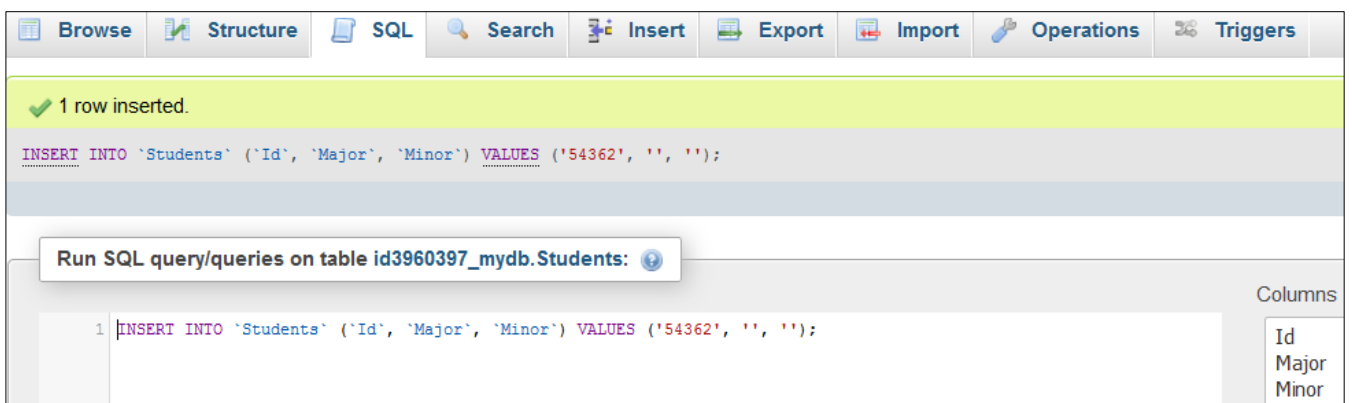


Again, to insert a new row, click **Insert**

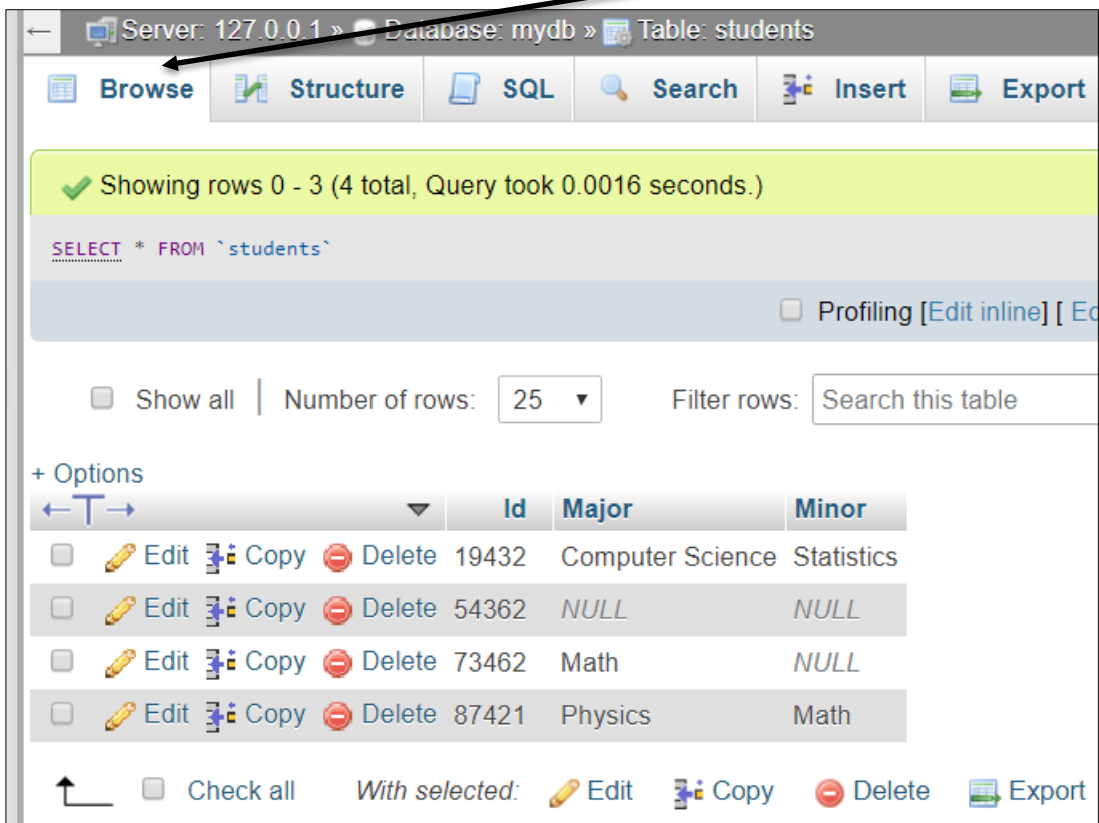
Column	Type	Function	Null	Value
Id	int(11)			73462
Major	varchar(100)			Math
Minor	varchar(100)			

Go

Again, enter the field values of the new record then click **Go**



Finally, to display data (records) in the table, click **Browse**



The screenshot shows a database management interface with the following components:

- Header:** Server: 127.0.0.1 » Database: mydb » Table: students
- Navigation Bar:** Browse (selected), Structure, SQL, Search, Insert, Export
- Status Bar:** Showing rows 0 - 3 (4 total, Query took 0.0016 seconds.)
- SQL Editor:** `SELECT * FROM `students``
- Options:**
 - ☐ Show all
 - Number of rows: 25
 - Filter rows: Search this table
- Table Data:**

	Id	Major	Minor
<input type="checkbox"/> Edit Copy Delete	19432	Computer Science	Statistics
<input type="checkbox"/> Edit Copy Delete	54362	NULL	NULL
<input type="checkbox"/> Edit Copy Delete	73462	Math	NULL
<input type="checkbox"/> Edit Copy Delete	87421	Physics	Math
- Footer:**
 - ☐ Check all
 - With selected: Edit Copy Delete Export