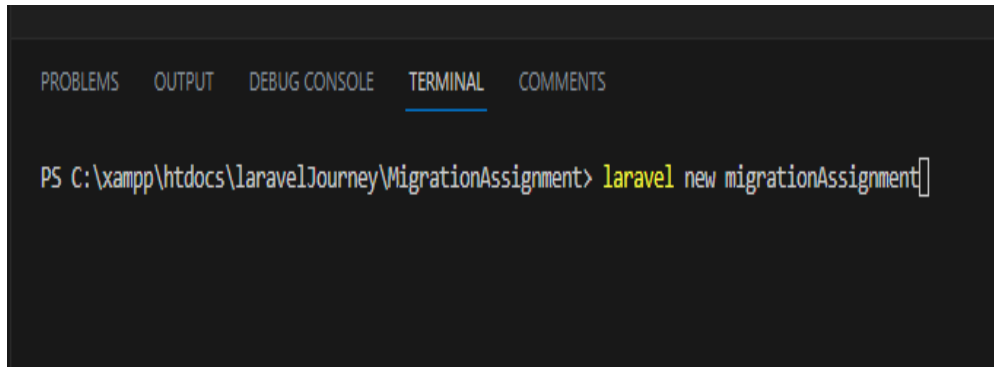


Module-16 Assignment

Task 1 : Create a new Laravel project named "MigrationAssignment" using the Laravel command-line interface.

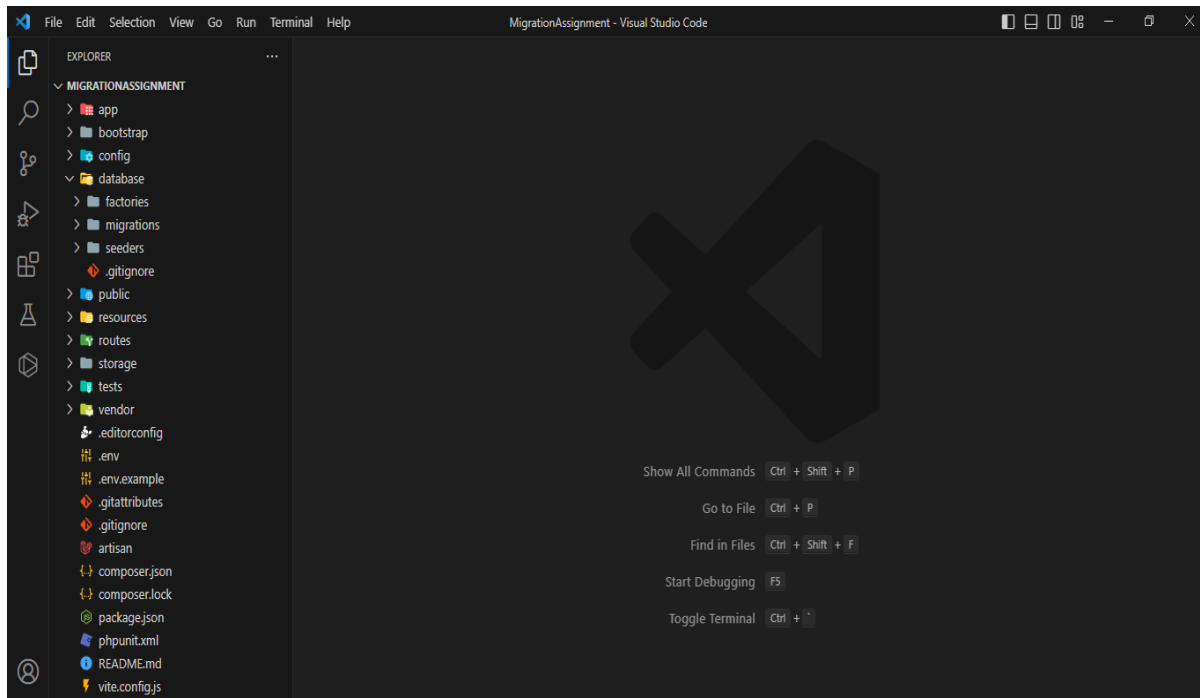
First I command this “laravel new migrationAssignment”



```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  COMMENTS

PS C:\xampp\htdocs\laravelJourney\MigrationAssignment> laravel new migrationAssignment
```

And then a laravel file created by



Task 2: Within the project, create a new migration file named "create_products_table" that will be responsible for creating a table called "products" in the database. The "products" table should have the following columns:

id: an auto-incrementing integer and primary key.
name: a string column to store the product name.
price: a decimal column to store the product price.
description: a text column to store the product description.
created_at: a timestamp column to store the creation date and time.
updated_at: a timestamp column to store the last update date and time.

First I made database name "products" by .env database name and then a table created by this command "create_products_table" and after I command "php artisan migrate". Then its create a table call "create_products_table".

This is the .env file where I created a database called products

```
10
11 DB_CONNECTION=mysql
12 DB_HOST=127.0.0.1
13 DB_PORT=3306
14 DB_DATABASE=products
15 DB_USERNAME=root
16 DB_PASSWORD=
17
```

Table that I created

```
PS C:\xampp\htdocs\laravelJourney\MigrationAssignment> php artisan make:migration create_products_table[]
```

Then a migration file added in migration file

```
✓ MIGRATIONASSIGNMENT
├── bootstrap
├── config
├── database
├── factories
├── migrations
│   ├── 2014_10_12_000000_create_users_table.php
│   ├── 2014_10_12_100000_create_password_reset_tokens_table.php
│   ├── 2019_08_19_000000_create_failed_jobs_table.php
│   ├── 2019_12_14_000001_create_personal_access_tokens_table.php
│   └── 2023_06_04_113631_create_products_table.php
├── seeders
├── .gitignore
└── public
```

Then I found a schema for creating table where I add require columns

```
12 public function up(): void
13 {
14     Schema::create('products', function (Blueprint $table) {
15         $table->id();
16         $table->string('name');
17         $table->decimal('price');
18         $table->text('description');
19         $table->timestamp('created_at')->useCurrent();
20         $table->timestamp('updated_at')->useCurrent()->useCurrentOnUpdate();
21     });
22 }
23
```

Task 3 : After creating the migration file, run the migration to create the "products" table in the database.

After that I run migration by the command “php artisan migration” and it migrated with all those column with a table. Here is a screenshot of mysql database called products table bellow.

```
PS C:\xampp\htdocs\laravelJourney\MigrationAssignment> php artisan migrate
```

INFO Preparing database.

```
Creating migration table ..... 1,106ms DONE
```

INFO Running migrations.

```
2019_12_14_000001_create_personal_access_tokens_table ..... 1,220ms DONE
```

```
2023_06_04_222006_create_products_table ..... 462ms DONE
```

```
PS C:\xampp\htdocs\laravelJourney\MigrationAssignment>
```

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.2362 seconds.)

```
SELECT * FROM `products`
```

☐ Profiling [[Edit inline](#)] [[Edit](#)] [[Explain SQL](#)] [[Create PHP code](#)] [[Refresh](#)]

id	name	price	description	created_at	updated_at
----	------	-------	-------------	------------	------------

Query results operations

 Create view

Server: 127.0.0.1 - Database: product - Table: product

[Browse](#)
[Structure](#)
[SQL](#)
[Search](#)
[Insert](#)
[Export](#)
[Import](#)
[Privileges](#)
[Operations](#)
[Triggers](#)

[Table structure](#)
[Relation view](#)

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
<input type="checkbox"/>	1 id	bigint(20)		UNSIGNED	No	None		AUTO_INCREMENT	Change Drop More
<input type="checkbox"/>	2 name	varchar(255)	utf8mb4_unicode_ci		No	None			Change Drop More
<input type="checkbox"/>	3 price	decimal(8,2)			No	None			Change Drop More
<input type="checkbox"/>	4 description	text	utf8mb4_unicode_ci		No	None			Change Drop More
<input type="checkbox"/>	5 created_at	timestamp			No	current_timestamp()			Change Drop More
<input type="checkbox"/>	6 updated_at	timestamp			No	current_timestamp()		ON UPDATE CURRENT_TIMESTAMP()	Change Drop More

[↑](#)
☐ Check all
 With selected:
 [Browse](#)
[Change](#)
[Drop](#)
[Primary](#)
[Unique](#)
[Index](#)
[Spatial](#)
[Fulltext](#)

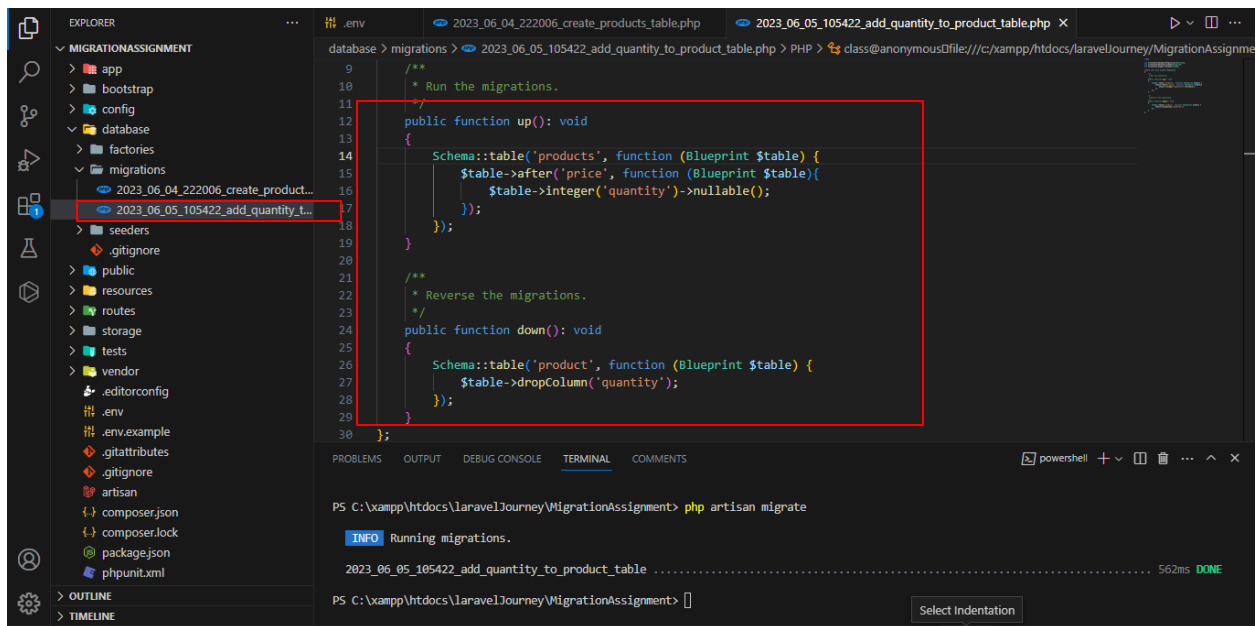
[Print](#)
[Propose table structure](#)
[Move columns](#)
[Normalize](#)

Add 1 column(s) after updated_at [Go](#)

Task 4. Modify the existing migration file "create_products_table" to add a new column called "quantity" to the "products" table. The "quantity" column should be an integer column and allow null values.

For add a column first i add a new column called "quantity" to the "products" table.

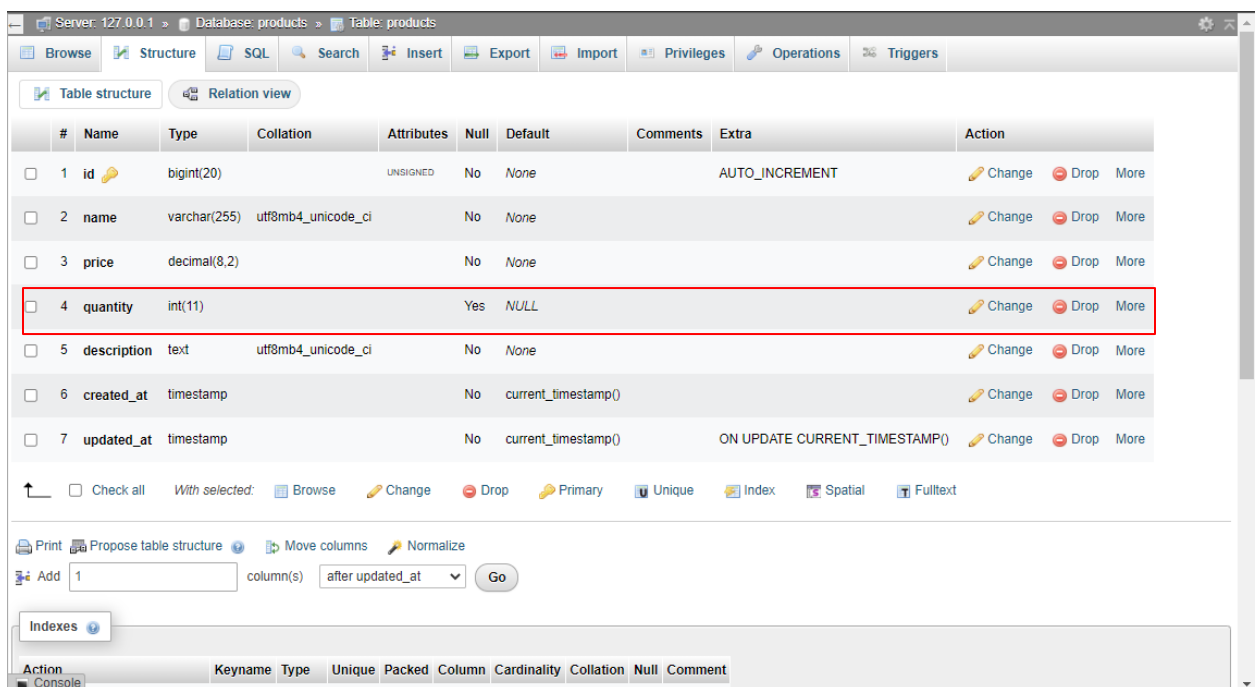
ScreenShots:



The screenshot shows an IDE with a file explorer on the left and a code editor on the right. The file explorer shows a project structure with a 'migrations' folder. The code editor displays a migration file named '2023_06_05_105422_add_quantity_to_product_table.php'. The code is as follows:

```
9  /**
10  * Run the migrations.
11  */
12  public function up(): void
13  {
14      Schema::table('products', function (Blueprint $table) {
15          $table->after('price', function (Blueprint $table) {
16              $table->integer('quantity')->nullable();
17          });
18      });
19  }
20
21  /**
22   * Reverse the migrations.
23   */
24  public function down(): void
25  {
26      Schema::table('product', function (Blueprint $table) {
27          $table->dropColumn('quantity');
28      });
29  }
30  };
```

The terminal at the bottom shows the command 'php artisan migrate' being executed, followed by the output 'Running migrations.' and '2023_06_05_105422_add_quantity_to_product_table 562ms DONE'.



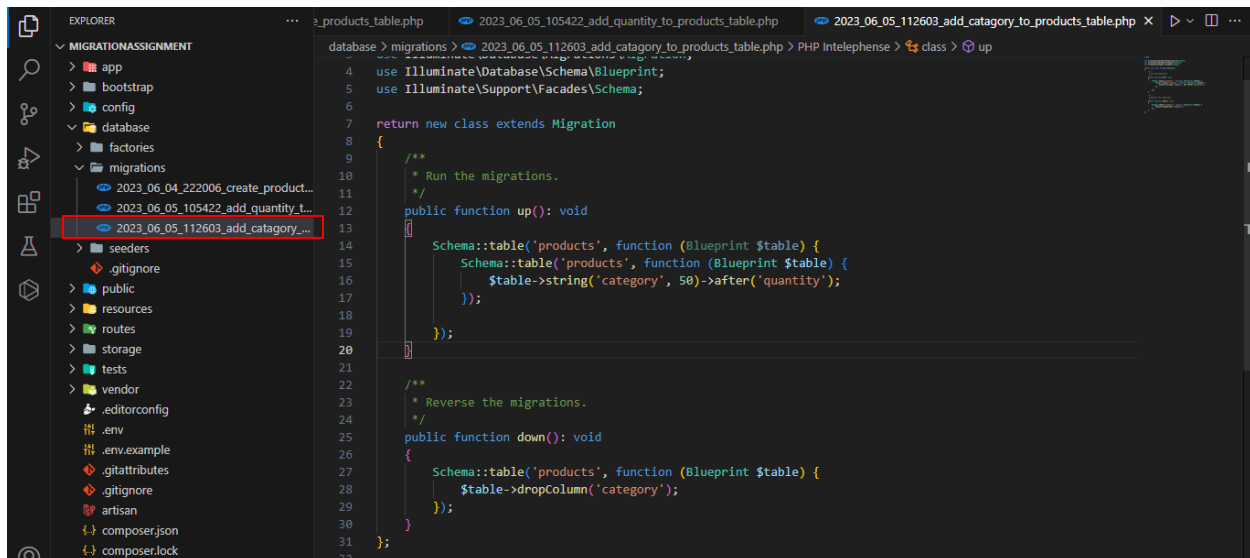
The screenshot shows a database management tool interface with a table structure view. The table is named 'products' and is located in the 'products' database. The table structure is as follows:

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	bigint(20)		UNSIGNED	No	None		AUTO_INCREMENT	Change Drop More
2	name	varchar(255)	utf8mb4_unicode_ci		No	None			Change Drop More
3	price	decimal(8,2)			No	None			Change Drop More
4	quantity	int(11)			Yes	NULL			Change Drop More
5	description	text	utf8mb4_unicode_ci		No	None			Change Drop More
6	created_at	timestamp			No	current_timestamp()			Change Drop More
7	updated_at	timestamp			No	current_timestamp()		ON UPDATE CURRENT_TIMESTAMP()	Change Drop More

The 'quantity' column is highlighted with a red box. Below the table structure, there is a section for 'Indexes' and a 'Console' section.

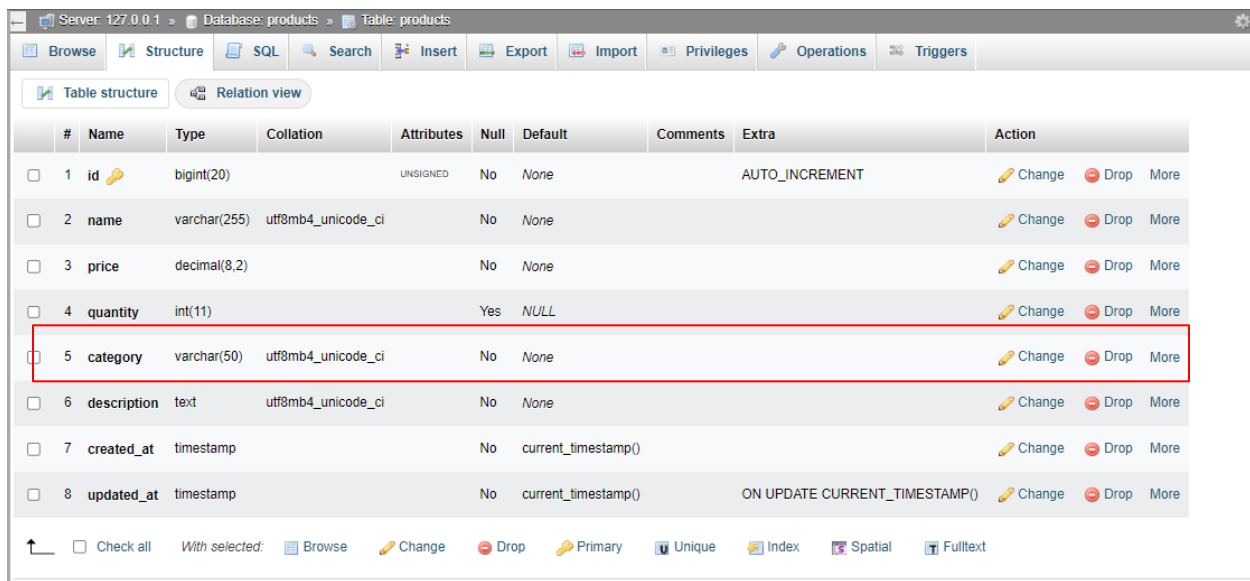
Task 5. Create a new migration file named "add_category_to_products_table" that will be responsible for adding a new column called "category" to the "products" table. The "category" column should be a string column with a maximum length of 50 characters.

First I make a migration file and add a new column called "category" to products table after quantity



```
database > migrations > 2023_06_05_112603_add_category_to_products_table.php > PHP Intelephense > class > up
4 use Illuminate\Database\Schema\Blueprint;
5 use Illuminate\Support\Facades\Schema;
6
7 return new class extends Migration
8 {
9     /**
10      * Run the migrations.
11      */
12     public function up(): void
13     {
14         Schema::table('products', function (Blueprint $table) {
15             Schema::table('products', function (Blueprint $table) {
16                 $table->string('category', 50)->after('quantity');
17             });
18         });
19     }
20
21     /**
22      * Reverse the migrations.
23      */
24     public function down(): void
25     {
26         Schema::table('products', function (Blueprint $table) {
27             $table->dropColumn('category');
28         });
29     }
30 };
```

Task 6. After creating the new migration file, run the migration to add the "category" column to the "products" table.



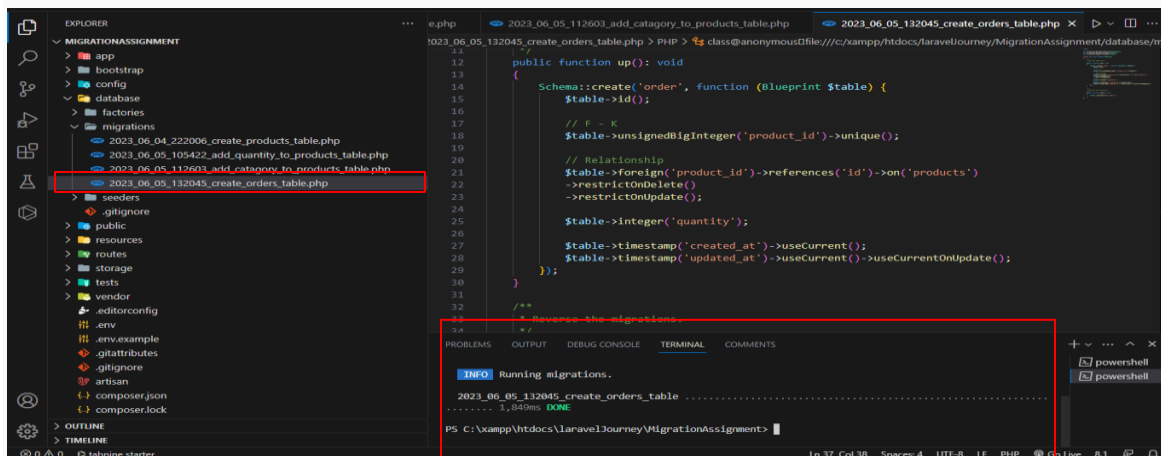
#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	bigint(20)		UNSIGNED	No	None		AUTO_INCREMENT	Change Drop More
2	name	varchar(255)	utf8mb4_unicode_ci		No	None			Change Drop More
3	price	decimal(8,2)			No	None			Change Drop More
4	quantity	int(11)			Yes	NULL			Change Drop More
5	category	varchar(50)	utf8mb4_unicode_ci		No	None			Change Drop More
6	description	text	utf8mb4_unicode_ci		No	None			Change Drop More
7	created_at	timestamp			No	current_timestamp()			Change Drop More
8	updated_at	timestamp			No	current_timestamp()		ON UPDATE CURRENT_TIMESTAMP()	Change Drop More

Task 7:

Create a new migration file named "create_orders_table" that will be responsible for creating a table called "orders" in the database. The "orders" table should have the following columns:

- id: an auto-incrementing integer and primary key.
- product_id: an unsigned integer column to establish a foreign key relationship with the "id" column of the "products" table.
- quantity: an integer column to store the quantity of products ordered.
- created_at: a timestamp column to store the creation date and time.
- updated_at: a timestamp column to store the last update date and time.
- Task 8:
- After creating the migration file for the "orders" table, run the migration to create the "orders" table in the database.

Here is the Screenshot which have orders table and given all the requirements..



Here is Order table which have an unsigned integer column to establish a foreign key relationship with the "id" column of the "products" table.

The screenshot shows a database management tool interface with the 'order' table selected. The table structure is displayed in a table with the following columns:

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	bigint(20)		UNSIGNED	No	None		AUTO_INCREMENT	Change Drop More
2	product_id	bigint(20)		UNSIGNED	No	None			Change Drop More
3	quantity	int(11)			No	None			Change Drop More
4	created_at	timestamp			No	current_timestamp()			Change Drop More
5	updated_at	timestamp			No	current_timestamp()		ON UPDATE CURRENT_TIMESTAMP()	Change Drop More

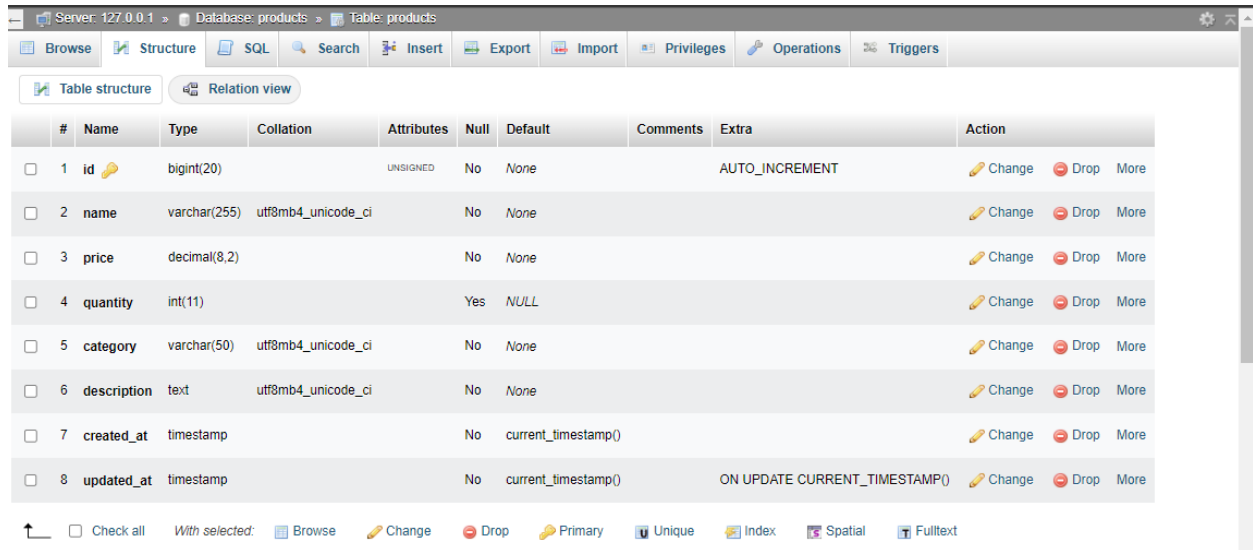
At the bottom of the interface, there are options to 'Check all', 'With selected', 'Browse', 'Change', 'Drop', 'Primary', 'Unique', 'Index', 'Spatial', and 'Fulltext'. There is also a 'Print' button and a 'Propose table structure' button. A 'Move columns' button is also present. A 'Normalize' button is also present. A 'Go' button is also present. A 'Add' button is also present. A 'column(s)' dropdown is also present. A 'after updated_at' dropdown is also present.

Task 8 :

After creating the migration file for the "orders" table, run the migration to create the "orders" table in the database.

Here is the all database:

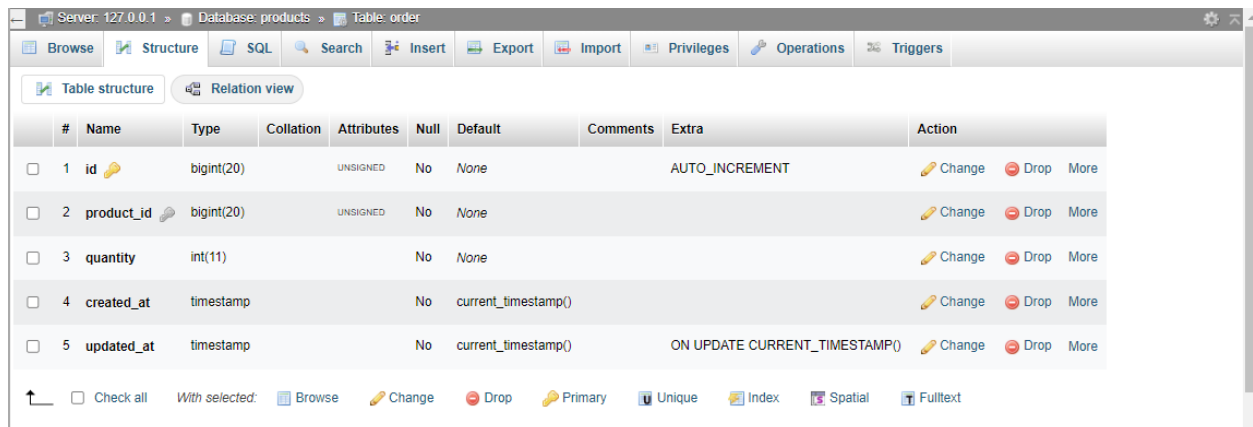
products table:



The screenshot shows the 'Table structure' view for the 'products' table. The table has 8 columns: id, name, price, quantity, category, description, created_at, and updated_at. The 'id' column is the primary key and is auto-incrementing. The 'price' column is a decimal with 8,2 precision. The 'quantity' column is an integer with a default value of NULL. The 'category' and 'description' columns are strings. The 'created_at' and 'updated_at' columns are timestamps with a default value of current_timestamp().

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	bigint(20)		UNSIGNED	No	None		AUTO_INCREMENT	Change Drop More
2	name	varchar(255)	utf8mb4_unicode_ci		No	None			Change Drop More
3	price	decimal(8,2)			No	None			Change Drop More
4	quantity	int(11)			Yes	NULL			Change Drop More
5	category	varchar(50)	utf8mb4_unicode_ci		No	None			Change Drop More
6	description	text	utf8mb4_unicode_ci		No	None			Change Drop More
7	created_at	timestamp			No	current_timestamp()			Change Drop More
8	updated_at	timestamp			No	current_timestamp()		ON UPDATE CURRENT_TIMESTAMP()	Change Drop More

Order table:



The screenshot shows the 'Table structure' view for the 'order' table. The table has 5 columns: id, product_id, quantity, created_at, and updated_at. The 'id' column is the primary key and is auto-incrementing. The 'product_id' column is a foreign key to the 'products' table. The 'quantity' column is an integer. The 'created_at' and 'updated_at' columns are timestamps with a default value of current_timestamp().

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	bigint(20)		UNSIGNED	No	None		AUTO_INCREMENT	Change Drop More
2	product_id	bigint(20)		UNSIGNED	No	None			Change Drop More
3	quantity	int(11)			No	None			Change Drop More
4	created_at	timestamp			No	current_timestamp()			Change Drop More
5	updated_at	timestamp			No	current_timestamp()		ON UPDATE CURRENT_TIMESTAMP()	Change Drop More