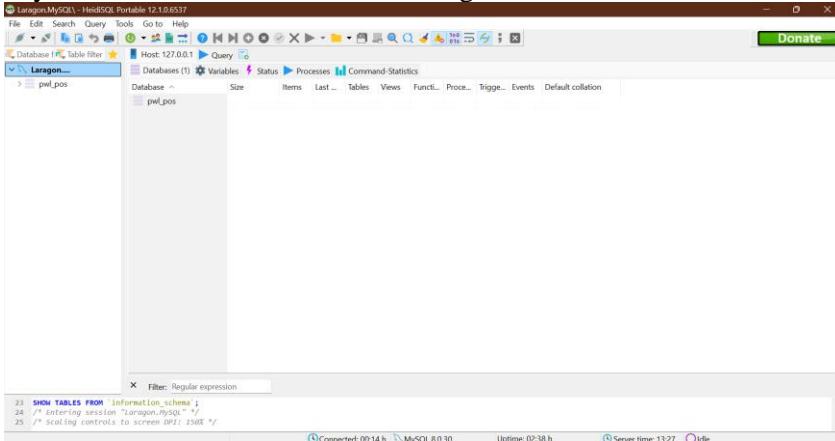
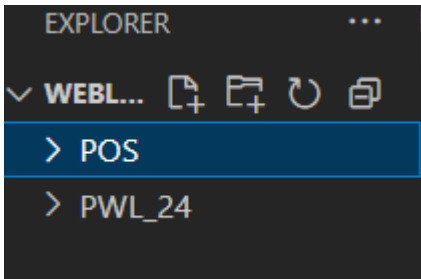




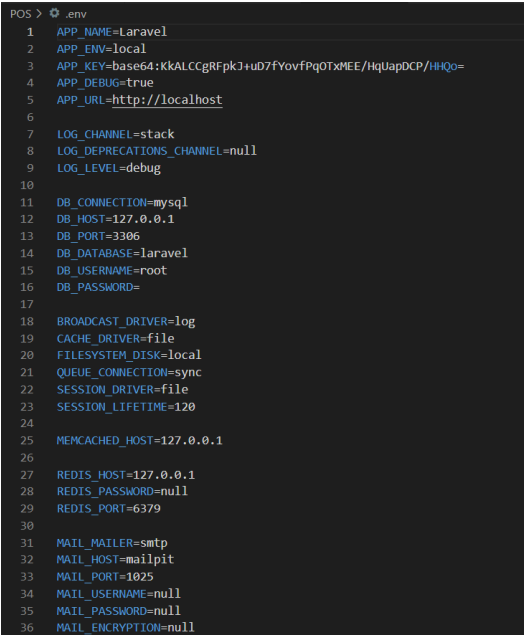
Mata Kuliah : Pemrograman Web Lanjut (PWL)
Program Studi : D4 – Teknik Informatika
Semester : 4

Kelas : Teknik Informatika
NIM : 2341720029
Nama : Sesy Tana Lina Rahmatin
Jobsheet Ke- : 3

Laporan Jobsheet

	Praktikum 1 - pengaturan database:
1.	<p>Saya telah membuat database baru dengan nama PWL_POS</p> 
2.	



3.	 <pre>POS > .env 1 APP_NAME=Laravel 2 APP_ENV=local 3 APP_KEY=base64:KkALCCgRFpkJ+uD7fYovfPqOTxMEE/HqUapDCP/HHQo= 4 APP_DEBUG=true 5 APP_URL=http://localhost 6 7 LOG_CHANNEL=stack 8 LOG_DEPRECATIONS_CHANNEL=null 9 LOG_LEVEL=debug 10 11 DB_CONNECTION=mysql 12 DB_HOST=127.0.0.1 13 DB_PORT=3306 14 DB_DATABASE=laravel 15 DB_USERNAME=root 16 DB_PASSWORD= 17 18 BROADCAST_DRIVER=log 19 CACHE_DRIVER=file 20 FILESYSTEM_DISK=local 21 QUEUE_CONNECTION=sync 22 SESSION_DRIVER=file 23 SESSION_LIFETIME=120 24 25 MEMCACHED_HOST=127.0.0.1 26 27 REDIS_HOST=127.0.0.1 28 REDIS_PASSWORD=null 29 REDIS_PORT=6379 30 31 MAIL_MAILER=smtp 32 MAIL_HOST=mailpit 33 MAIL_PORT=1025 34 MAIL_USERNAME=null 35 MAIL_PASSWORD=null 36 MAIL_ENCRYPTION=null</pre>
4.	saya sudah mengecek konfigurasi APP_KEY dan sudah bernilai jadi tidak usah generate menggunakan php artisan.
5.	 <pre>POS > .env 1 APP_NAME=Laravel 2 APP_ENV=local 3 APP_KEY=base64:KkALCCgRFpkJ+uD7fYovfPqOTxMEE/HqUapDCP/HHQo= 4 APP_DEBUG=true 5 APP_URL=http://localhost 6 7 LOG_CHANNEL=stack 8 LOG_DEPRECATIONS_CHANNEL=null 9 LOG_LEVEL=debug 10 11 DB_CONNECTION=mysql 12 DB_HOST=127.0.0.1 13 DB_PORT=3306 14 DB_DATABASE=pwl_post 15 DB_USERNAME=root 16 DB_PASSWORD=</pre>
Praktikum 2.1 - Pembuatan file migrasi tanpa relasi	
1.	 <pre>▼ 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</pre>



3.

```
POS > database > migrations > 2025_02_22_065544_create_m_level_table.php
1  <?php
2
3  use Illuminate\Database\Migrations\Migration;
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::create('m_level', function (Blueprint $table) {
15             $table->id();
16             $table->timestamps();
17         });
18     }
19
20     /**
21      * Reverse the migrations.
22      */
23     public function down(): void
24     {
25         Schema::dropIfExists('m_level');
26     }
27 };
```

4.

```
public function up(): void
{
    Schema::create('m_level', function (Blueprint $table) {
        $table->id();
        $table->string('level_kode', 10)->unique();
        $table->string('level_nama', 100);
        $table->timestamps();
    });
}
```

5.

```
C:\laragon\www\WebLanjutan\POS(main -> origin)
λ php artisan migrate

INFO Preparing database.

Creating migration table ..... 413ms DONE

INFO Running migrations.

2014_10_12_000000_create_users_table ..... 173ms DONE
2014_10_12_100000_create_password_reset_tokens_table ..... 26ms DONE
2019_08_19_000000_create_failed_jobs_table ..... 107ms DONE
2019_12_14_000001_create_personal_access_tokens_table ..... 67ms DONE
2025_02_22_065544_create_m_level_table ..... 39ms DONE
```



6.

Host: 127.0.0.1 Database: pwl_pos Table: m_kategori Data Query

Basic Options Indexes (2) Foreign keys (0) Check constraints (0) Partitions CREATE code ALTER code

Name: m_kategori

Comment:

#	Name	Datatype	Length/Set	Unsigned	Allow NU...	Zerofill	Default	Comment	Collation	Expression	Virtuali
1	kategori_id	BIGINT	20	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	AUTO INCREM...				
2	kategori_kode	VARCHAR	10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No default		utf8mb4_unicode_ci		
3	kategori_nama	VARCHAR	100	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No default		utf8mb4_unicode_ci		
4	created_at	TIMESTAMP		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NULL				
5	updated_at	TIMESTAMP		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NULL				

Help Discard Save

Filter: Regular expression

8.

```
C:\laragon\www\Weblanjutlana\POS(main -> origin)
λ php artisan make:migration create_m_kategori_table --create=m_kategori

INFO Migration [C:\laragon\www\Weblanjutlana\POS\database\Migrations\2025_02_22_072835_create_m_kategori_table.php] created successfully.

migrations
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
2025_02_22_065544_create_m_level_table.php
2025_02_22_072835_create_m_kategori_table.php

POS > database > migrations > 2025_02_22_072835_create_m_kategori_table.php
1 <?php
2
3 use Illuminate\Database\Migrations\Migration;
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::create('m_kategori', function (Blueprint $table) {
15             $table->id('kategori_id');
16             $table->string('kategori_kode', 10)->unique();
17             $table->string('kategori_nama', 100);
18             $table->timestamps();
19         });
20     }
21 }
22
23 /**
24  * Reverse the migrations.
25  */
26 public function down(): void
27 {
28     Schema::dropIfExists('m_kategori');
29 }
30 };
```

9.

Telah saya commit digithub



WebanjudLina / POS /

linarahmatin pembuatan migrasi level dan kategori jobsheet 3 bbba3fb · 4 minutes ago History

Name	Last commit message	Last commit date
..		
app	Menambahkan controller,view,router jobsheet 2	2 hours ago
bootstrap	First Commit	3 hours ago
config	First Commit	3 hours ago
database	pembuatan migrasi level dan kategori jobsheet 3	4 minutes ago
public	First Commit	3 hours ago
resources	Menambahkan controller,view,router jobsheet 2	2 hours ago

Praktikum 2.2 - Pembuatan file migrasi dengan relasi

1.

```
C:\laragon\www\WebanjudLina\POS(main -> origin)
λ php artisan make:migration create_m_user_table --table=m_user

INFO Migration [C:\laragon\www\WebanjudLina\POS\database\Migrations\2025_02_22_074640_create_m_user_table.php] created successfully.
```

2.

```
POS > database > migrations > 2025_02_22_074640_create_m_user_table.php
1  <?php
2
3  use Illuminate\Database\Migrations\Migration;
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::create('m_user', function (Blueprint $table) {
15               $table->id('user_id');
16               $table->unsignedBigInteger('level_id')->index(); // indexing untuk ForeignKey
17               $table->string('username', 20)->unique(); // unique untuk memastikan tidak ada username yang sama
18               $table->string('nama', 100);
19               $table->string('password');
20               $table->timestamps();
21
22               // Mendefinisikan Foreign Key pada kolom level_id mengacu pada kolom level_id di tabel m_level
23               $table->foreign('level_id')->references('level_id')->on('m_level');
24           });
25       }
26
27       /**
28        * Reverse the migrations.
29        */
30       public function down(): void
31       {
32           Schema::dropIfExists('m_user');
33       }
34   };
```

3.

Kode sudah saya simpan dan jalankan

```
C:\laragon\www\WebanjudLina\POS(main -> origin)
λ php artisan migrate

INFO Running migrations.

2025_02_22_074640_create_m_user_table ..... 440ms DONE
```



Basic Options Indexes (3) Foreign keys (1) Check constraints (0) Partitions CREATE code ALTER code

Name: m_user

Comment:

Columns:

#	Name	Datatype	Length/Set	Unsigned	Allow NU...	Zerofill	Default	Comment	Collation	Expression	Virt
1	user_id	BIGINT	20	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	AUTO_INCREM...				
2	level_id	BIGINT	20	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No default				
3	username	VARCHAR	20	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No default		utf8mb4_unicode_ci		
4	nama	VARCHAR	100	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No default		utf8mb4_unicode_ci		
5	password	VARCHAR	255	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No default		utf8mb4_unicode_ci		
6	created_at	TIMESTAMP		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NULL				
7	updated_at	TIMESTAMP		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NULL				

4. Saya telah membuat table database dengan migration untuk table-table yang memiliki foreign key

```
C:\laragon\www\WebJanjutina\POS(main -> origin)
λ php artisan make:migration create_m_barang_table --create=m_barang
INFO Migration [C:\laragon\www\WebJanjutina\POS\database\migrations\2025_02_22_081122_create_m_barang_table.php] created successfully.

C:\laragon\www\WebJanjutina\POS(main -> origin)
λ php artisan make:migration create_t_stok_table --create=t_stok
INFO Migration [C:\laragon\www\WebJanjutina\POS\database\migrations\2025_02_22_081139_create_t_stok_table.php] created successfully.

C:\laragon\www\WebJanjutina\POS(main -> origin)
λ php artisan make:migration create_t_penjualan_table --create=t_penjualan
INFO Migration [C:\laragon\www\WebJanjutina\POS\database\migrations\2025_02_22_081202_create_t_penjualan_table.php] created successfully.

C:\laragon\www\WebJanjutina\POS(main -> origin)
λ php artisan make:migration create_t_penjualan_detail_table --create=t_penjualan_detail
INFO Migration [C:\laragon\www\WebJanjutina\POS\database\migrations\2025_02_22_081218_create_t_penjualan_detail_table.php] created successfully.
```

2025_02_22_074640_create_m_user_table.php	U
2025_02_22_081122_create_m_barang_table.php	U
2025_02_22_081139_create_t_stok_table.php	U
2025_02_22_081202_create_t_penjualan_table.php	U
2025_02_22_081218_create_t_penjualan_detail_table.php	U

```
C:\laragon\www\WebJanjutina\POS(main -> origin)
λ php artisan migrate
INFO Running migrations.

2025_02_22_081122_create_m_barang_table ..... 321ms DONE
2025_02_22_081139_create_t_stok_table ..... 153ms DONE
2025_02_22_081202_create_t_penjualan_table ..... 101ms DONE
2025_02_22_081218_create_t_penjualan_detail_table ..... 148ms DONE
```



POS > database > migrations > 2025_02_22_081122_create_m_barang_table.php

```
1 <?php
2
3 use Illuminate\Database\Migrations\Migration;
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::create('m_barang', function (Blueprint $table) {
15             $table->id('barang_id'); // Primary Key
16             $table->unsignedBigInteger('kategori_id'); // Foreign Key ke m_kategori
17             $table->string('barang_kode', 10)->unique();
18             $table->string('barang_nama', 100);
19             $table->integer('harga_beli');
20             $table->integer('harga_jual');
21             $table->timestamps();
22
23             // Definisi Foreign Key
24             $table->foreign('kategori_id')->references('kategori_id')->on('m_kategori')->onDelete('cascade');
25         });
26     }
27
28     /**
29      * Reverse the migrations.
30      */
31     public function down(): void
32     {
33         Schema::dropIfExists('m_barang');
34     }
35 };
```

POS > database > migrations > 2025_02_22_081139_create_t_stok_table.php

```
1 <?php
2
3 use Illuminate\Database\Migrations\Migration;
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::create('t_stok', function (Blueprint $table) {
15             $table->id('stok_id'); // Primary Key
16             $table->unsignedBigInteger('barang_id'); // Foreign Key ke m_barang
17             $table->unsignedBigInteger('user_id'); // Foreign Key ke m_user
18             $table->datetime('stok_tanggal');
19             $table->integer('stok_jumlah');
20             $table->timestamps();
21
22             // Definisi Foreign Key
23             $table->foreign('barang_id')->references('barang_id')->on('m_barang')->onDelete('cascade');
24             $table->foreign('user_id')->references('user_id')->on('m_user')->onDelete('cascade');
25         });
26     }
27
28     /**
29      * Reverse the migrations.
30      */
31     public function down(): void
32     {
33         Schema::dropIfExists('t_stok');
34     }
35 };
```



POS > database > migrations > 2025_02_22_081202_create_t_penjualan_table.php

```
1 <?php
2
3 use Illuminate\Database\Migrations\Migration;
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::create('t_penjualan', function (Blueprint $table) {
15             $table->id('penjualan_id'); // Primary Key
16             $table->unsignedBigInteger('user_id'); // Foreign Key ke m_user
17             $table->string('pembeli', 50);
18             $table->string('penjualan_kode', 20)->unique();
19             $table->datetime('penjualan_tanggal');
20             $table->timestamps();
21
22             // Definisi Foreign Key
23             $table->foreign('user_id')->references('user_id')->on('m_user')->onDelete('cascade');
24         });
25     }
26
27     /**
28      * Reverse the migrations.
29      */
30     public function down(): void
31     {
32         Schema::dropIfExists('t_penjualan');
33     }
34 };
35
```

POS > database > migrations > 2025_02_22_081218_create_t_penjualan_detail_table.php

```
1 <?php
2
3 use Illuminate\Database\Migrations\Migration;
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::create('t_penjualan_detail', function (Blueprint $table) {
15             $table->id('detail_id'); // Primary Key
16             $table->unsignedBigInteger('penjualan_id'); // Foreign Key ke t_penjualan
17             $table->unsignedBigInteger('barang_id'); // Foreign Key ke m_barang
18             $table->integer('harga');
19             $table->integer('jumlah');
20             $table->timestamps();
21
22             // Definisi Foreign Key
23             $table->foreign('penjualan_id')->references('penjualan_id')->on('t_penjualan')->onDelete('cascade');
24             $table->foreign('barang_id')->references('barang_id')->on('m_barang')->onDelete('cascade');
25         });
26     }
27
28     /**
29      * Reverse the migrations.
30      */
31     public function down(): void
32     {
33         Schema::dropIfExists('t_penjualan_detail');
34     }
35 };
36
```

columns: + Add ✖ Remove ▲ Up ▼ Down

	#	Name	Datatype	Length/Set	Unsigned	Allow NU...	Zerofill	Default	Comment	Collation
	1	barang_id	BIGINT	20	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	AUTO_INCREM...		
	2	kategori_id	BIGINT	20	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No default		
	3	barang_kode	VARCHAR	10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No default		utf8mb4_unicode_ci
	4	barang_nama	VARCHAR	100	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No default		utf8mb4_unicode_ci
	5	harga_beli	INT	10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No default		
	6	harga_jual	INT	10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No default		
	7	created_at	TIMESTAMP		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NULL		
	8	updated_at	TIMESTAMP		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NULL		



Columns: + Add ✖ Remove ▲ Up ▼ Down								
#	Name	Datatype	Length/Set	Unsigned	Allow NU...	Zerofill	Default	Comment
1	stok_id	BIGINT	20	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	AUTO_INCREMENT...	
2	barang_id	BIGINT	20	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No default	
3	user_id	BIGINT	20	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No default	
4	stok_tanggal	DATETIME		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No default	
5	stok_jumlah	INT	10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No default	
6	created_at	TIMESTAMP		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NULL	
7	updated_at	TIMESTAMP		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NULL	

Columns: + Add ✖ Remove ▲ Up ▼ Down								
#	Name	Datatype	Length/Set	Unsigned	Allow NU...	Zerofill	Default	
1	detail_id	BIGINT	20	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	AUTO_INCREMENT...	
2	penjualan_id	BIGINT	20	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No default	
3	barang_id	BIGINT	20	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No default	
4	harga	INT	10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No default	
5	jumlah	INT	10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No default	
6	created_at	TIMESTAMP		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NULL	
7	updated_at	TIMESTAMP		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NULL	

Columns: + Add ✖ Remove ▲ Up ▼ Down									
#	Name	Datatype	Length/Set	Unsigned	Allow NU...	Zerofill	Default	Comment	Collation
1	penjualan_id	BIGINT	20	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	AUTO_INCREMENT...		
2	user_id	BIGINT	20	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No default		
3	pembeli	VARCHAR	50	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No default		utf8mb4_unicode_ci
4	penjualan_kode	VARCHAR	20	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No default		utf8mb4_unicode_ci
5	penjualan_tan...	DATETIME		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No default		
6	created_at	TIMESTAMP		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NULL		
7	updated_at	TIMESTAMP		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NULL		

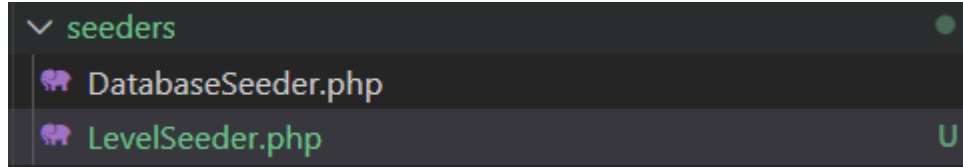
6.

WeblanjutLina / POS /			Add file ▼ ⋮	
linarahmatin pembuatan file migrasi dengan relasi		b78feed · 1 minute ago		History
Name	Last commit message		Last commit date	
..				
app	Menambahkan controller,view,router jobsheet 2		3 hours ago	
bootstrap	First Commit		4 hours ago	
config	First Commit		4 hours ago	
database	pembuatan file migrasi dengan relasi		1 minute ago	
public	First Commit		4 hours ago	
resources	Menambahkan controller,view,router jobsheet 2		3 hours ago	

Praktikum 3 – Membuat file seeder



1.



2.

```
POS C:\laragon\www\WeblanjutiLina\POS\database\seeders\LevelSeeder.php • Untracked
1  <?php
2
3  namespace Database\Seeders;
4
5  use Illuminate\Database\Console\Seeds\WithoutModelEvents;
6  use Illuminate\Database\Seeder;
7  use Illuminate\Support\Facades\DB;
8
9  class LevelSeeder extends Seeder
10 {
11     /**
12      * Run the database seeds.
13      */
14     public function run(): void
15     {
16         $data = [
17             ['level_id' => 1, 'level_kode' => 'ADM', 'level_nama' => 'Administrator'],
18             ['level_id' => 2, 'level_kode' => 'MNG', 'level_nama' => 'Manager'],
19             ['level_id' => 3, 'level_kode' => 'STF', 'level_nama' => 'Staff/Kasir'],
20         ];
21         DB::table('m_level')->insert($data);
22     }
23 }
```

3.

```
C:\laragon\www\WeblanjutiLina\POS(main -> origin)
λ php artisan db:seed --class=LevelSeeder

INFO Seeding database.
```

4.

pwl_pos.m_level: 3 rows total (approximately)

level_id	level_kode	level_nama	created_at	updated_at
1	ADM	Administrator	(NULL)	(NULL)
2	MNG	Manager	(NULL)	(NULL)
3	STF	Staff/Kasir	(NULL)	(NULL)

5.

```
C:\laragon\www\WeblanjutiLina\POS(main -> origin)
λ php artisan make:seeder UserSeeder

INFO Seeder [C:\laragon\www\WeblanjutiLina\POS\database\seeders\UserSeeder.php] created successfully.
```



6.

```
class UserSeeder extends Seeder
{
    public function run(): void
    {
        $data = [
            [
                'user_id' => 1,
                'level_id' => 1,
                'username' => 'admin',
                'nama' => 'Administrator',
                'password' => Hash::make('12345'), // class untuk mengenkripsi/hash password
            ],
            [
                'user_id' => 2,
                'level_id' => 2,
                'username' => 'manager',
                'nama' => 'Manager',
                'password' => Hash::make('12345'),
            ],
            [
                'user_id' => 3,
                'level_id' => 3,
                'username' => 'staff',
                'nama' => 'Staff/Kasir',
                'password' => Hash::make('12345'),
            ],
        ],
        DB::table('m_user')->insert($data);
    }
}
```

7.

```
C:\laragon\www\WeblanjutLina\POS(main -> origin)
λ php artisan db:seed --class=UserSeeder

INFO Seeding database.
```

8.

pwl_pos.m_user: 3 rows total (approximately) » Next

user_id	level_id	username	nama	password	created_at	updated_at
1	1	admin	Administrator	\$2y\$12\$gGncfyO4tzqFryluq08w5OFl...	(NULL)	(NULL)
2	2	manager	Manager	\$2y\$12\$485KaZp//ma4idKyuMnY7O...	(NULL)	(NULL)
3	3	staff	Staff/Kasir	\$2y\$12\$338wRkCuUum5K.5bkNB23...	(NULL)	(NULL)



9.

```
C:\laragon\www\WeblanjutiLina\POS(main -> origin)
php artisan make:seeder MKategoriSeeder

[INFO] Seeder [C:\laragon\www\WeblanjutiLina\POS\database\seeders\MKategoriSeeder.php] created successfully.

C:\laragon\www\WeblanjutiLina\POS(main -> origin)
php artisan make:seeder MBarangSeeder

[INFO] Seeder [C:\laragon\www\WeblanjutiLina\POS\database\seeders\MBarangSeeder.php] created successfully.

C:\laragon\www\WeblanjutiLina\POS(main -> origin)
php artisan make:seeder TStokSeeder

[INFO] Seeder [C:\laragon\www\WeblanjutiLina\POS\database\seeders\TStokSeeder.php] created successfully.

C:\laragon\www\WeblanjutiLina\POS(main -> origin)
php artisan make:seeder TPenjualanSeeder

[INFO] Seeder [C:\laragon\www\WeblanjutiLina\POS\database\seeders\TPenjualanSeeder.php] created successfully.

C:\laragon\www\WeblanjutiLina\POS(main -> origin)
php artisan make:seeder TPenjualanDetailSeeder

[INFO] Seeder [C:\laragon\www\WeblanjutiLina\POS\database\seeders\TPenjualanDetailSeeder.php] created successfully.
```

10

```
LevelSeeder.php
MBarangSeeder.php
MKategoriSeeder.php
TPenjualanDetailSeeder.php
TPenjualanSeeder.php
TStokSeeder.php
UserSeeder.php
```

pwl_pos.m_barang: 10 rows total (approximately)

barang_id	kategori_id	barang_kode	barang_nama	harga_beli	harga_jual	created_at	updated_at
1	1	B001	Kopi	5.000	7.000	(NULL)	(NULL)
2	1	B002	Teh	4.000	6.000	(NULL)	(NULL)
3	2	B003	Sabun Mandi	8.000	12.000	(NULL)	(NULL)
4	2	B004	Shampoo	10.000	15.000	(NULL)	(NULL)
5	3	B005	Detergen	12.000	18.000	(NULL)	(NULL)
6	3	B006	Pembersih Lantai	9.000	13.000	(NULL)	(NULL)
7	4	B007	Susu Formula	25.000	35.000	(NULL)	(NULL)
8	4	B008	Popok Bayi	50.000	70.000	(NULL)	(NULL)
9	5	B009	Smartphone	2.000.000	2.500.000	(NULL)	(NULL)
10	5	B010	Laptop	6.000.000	7.500.000	(NULL)	(NULL)

pwl_pos.m_kategori: 5 rows total (approximately)

kategori_id	kategori_kode	kategori_nama	created_at	updated_at
1	FNB	Food & Beverage	(NULL)	(NULL)
2	BEAUTY	Beauty & Health	(NULL)	(NULL)
3	HOME	Home Care	(NULL)	(NULL)
4	BABY	Baby & Kid	(NULL)	(NULL)
5	ELEC	Electronics	(NULL)	(NULL)



pwl_pos.t_stok: 10 rows total (approximately)

stok_id	barang_id	user_id	stok_tanggal	stok_jumlah	created_at	updated_at
1	1	1	2025-02-22 09:31:48	49	(NULL)	(NULL)
2	2	1	2025-02-22 09:31:48	25	(NULL)	(NULL)
3	3	1	2025-02-22 09:31:48	15	(NULL)	(NULL)
4	4	1	2025-02-22 09:31:48	17	(NULL)	(NULL)
5	5	1	2025-02-22 09:31:48	17	(NULL)	(NULL)
6	6	1	2025-02-22 09:31:48	18	(NULL)	(NULL)
7	7	1	2025-02-22 09:31:48	28	(NULL)	(NULL)
8	8	1	2025-02-22 09:31:48	27	(NULL)	(NULL)
9	9	1	2025-02-22 09:31:48	29	(NULL)	(NULL)
10	10	1	2025-02-22 09:31:48	30	(NULL)	(NULL)

pwl_pos.t_penjualan: 10 rows total (approximately)

>> Next

penjualan_id	user_id	pembeli	penjualan_kode	penjualan_tanggal	created_at	updated_at
1	1	Customer 1	TRX001	2025-02-22 09:32:23	(NULL)	(NULL)
2	1	Customer 2	TRX002	2025-02-22 09:32:23	(NULL)	(NULL)
3	1	Customer 3	TRX003	2025-02-22 09:32:23	(NULL)	(NULL)
4	1	Customer 4	TRX004	2025-02-22 09:32:23	(NULL)	(NULL)
5	1	Customer 5	TRX005	2025-02-22 09:32:23	(NULL)	(NULL)
6	1	Customer 6	TRX006	2025-02-22 09:32:23	(NULL)	(NULL)
7	1	Customer 7	TRX007	2025-02-22 09:32:23	(NULL)	(NULL)
8	1	Customer 8	TRX008	2025-02-22 09:32:23	(NULL)	(NULL)
9	1	Customer 9	TRX009	2025-02-22 09:32:23	(NULL)	(NULL)
10	1	Customer 10	TRX010	2025-02-22 09:32:23	(NULL)	(NULL)

pwl_pos.t_penjualan_detail: 30 rows total (approximately)

detail_id	penjualan_id	barang_id	harga	jumlah	created_at	updated_at
1	1	2	2.673.534	5	(NULL)	(NULL)
2	1	4	6.462.119	2	(NULL)	(NULL)
3	1	10	5.930.819	4	(NULL)	(NULL)
4	2	7	6.134.891	1	(NULL)	(NULL)
5	2	8	2.366.781	2	(NULL)	(NULL)
6	2	6	222.006	2	(NULL)	(NULL)
7	3	6	6.521.676	1	(NULL)	(NULL)
8	3	1	2.667.514	3	(NULL)	(NULL)
9	3	10	425.067	1	(NULL)	(NULL)
10	4	2	6.874.089	2	(NULL)	(NULL)
11	4	2	2.264.611	3	(NULL)	(NULL)
12	4	5	2.340.177	5	(NULL)	(NULL)
13	5	4	3.258.729	3	(NULL)	(NULL)
14	5	9	1.564.983	4	(NULL)	(NULL)
15	5	6	7.479.814	4	(NULL)	(NULL)
16	6	3	5.429.286	4	(NULL)	(NULL)
17	6	8	3.234.045	4	(NULL)	(NULL)
18	6	7	560.332	5	(NULL)	(NULL)
19	7	1	2.784.241	4	(NULL)	(NULL)
20	7	2	517.528	5	(NULL)	(NULL)
21	7	6	3.455.199	1	(NULL)	(NULL)
22	8	7	4.228.756	5	(NULL)	(NULL)
23	8	3	2.072.749	4	(NULL)	(NULL)
24	8	3	5.486.771	3	(NULL)	(NULL)
25	8	4	4.884.747	5	(NULL)	(NULL)



```
C:\laragon\www\WeblanjutiLina\POS(main -> origin)
λ php artisan db:seed --class=MKategoriSeeder

INFO Seeding database.

C:\laragon\www\WeblanjutiLina\POS(main -> origin)
λ php artisan db:seed --class=MBarangSeeder

INFO Seeding database.

C:\laragon\www\WeblanjutiLina\POS(main -> origin)
λ php artisan db:seed --class=TStokSeeder

INFO Seeding database.

C:\laragon\www\WeblanjutiLina\POS(main -> origin)
λ php artisan db:seed --class=TPenjualanSeeder

INFO Seeding database.

C:\laragon\www\WeblanjutiLina\POS(main -> origin)
λ php artisan db:seed --class=TPenjualanDetailSeeder

INFO Seeding database.
```

11.

Name	Last commit message	Last commit date
..		
app	Menambahkan controller,view,router jobsheet 2	4 hours ago
bootstrap	First Commit	5 hours ago
config	First Commit	5 hours ago
database	Membuat File Seeder	now

Praktikum 4 – Implementasi DB Facade

1.

```
C:\laragon\www\WeblanjutiLina\POS(main -> origin)
λ php artisan make:controller LevelController

INFO Controller [C:\laragon\www\WeblanjutiLina\POS\app\Http\Controllers\LevelController.php] created successfully.
```



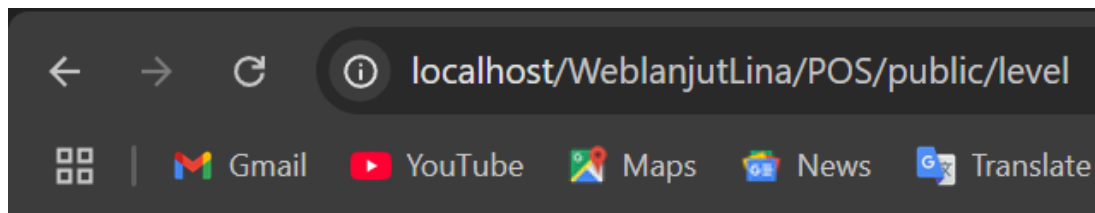
2.

```
use Illuminate\Support\Facades\Route;  
use App\Http\Controllers\HomeController;  
use App\Http\Controllers\ProductController;  
use App\Http\Controllers\UserController;  
use App\Http\Controllers\SalesController;  
use App\Http\Controllers\LevelController;  
  
Route::get('/level', [LevelController::class, 'index']);
```

3.

```
POS > app > Http > Controllers > LevelController.php  
1  <?php  
2  
3  namespace App\Http\Controllers;  
4  
5  use Illuminate\Http\Request;  
6  use Illuminate\Support\Facades\DB;  
7  
8  class LevelController extends Controller  
9  {  
10     public function index() {  
11         DB::insert('insert into m_level(level_kode, level_nama, created_at) values(?, ?, ?)', ['CUS', 'Pelanggan', 1  
12     }  
13     return 'Insert data baru berhasil';  
14 }  
15 }
```

4.



Insert data baru berhasil

pwl_pos.m_level: 4 rows total (approximately)

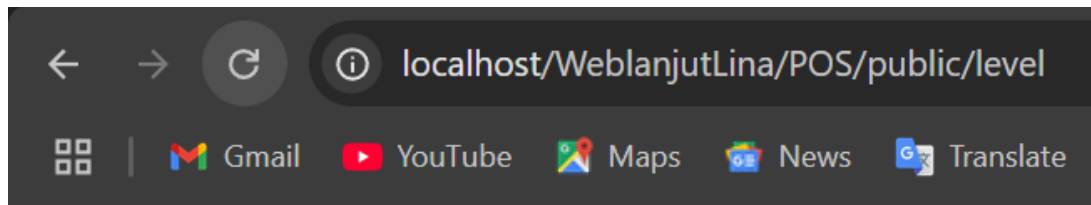
level_id	level_kode	level_nama	created_at	updated_at
1	ADM	Administrator	(NULL)	(NULL)
2	MNG	Manager	(NULL)	(NULL)
3	STF	Staff/Kasir	(NULL)	(NULL)
4	CUS	Pelanggan	2025-02-22 09:55:47	(NULL)



5.

```
POS > app > Http > Controllers > LevelController.php
1  <?php
2
3  namespace App\Http\Controllers;
4
5  use Illuminate\Http\Request;
6  use Illuminate\Support\Facades\DB;
7
8  class LevelController extends Controller
9  {
10     public function index() {
11         // DB::insert('insert into m_level(level_kode, level_nama, created_at) values(?, ?, ?)', ['CUS', 'Pelanggan
12         // return 'Insert data baru berhasil';
13
14         $row = DB::update('update m_level set level_nama = ? where level_kode = ?', ['Customer', 'CUS']);
15         return 'Update data berhasil. Jumlah data yang diupdate: ' . $row . ' baris';
16     }
17 }
18 }
```

6.



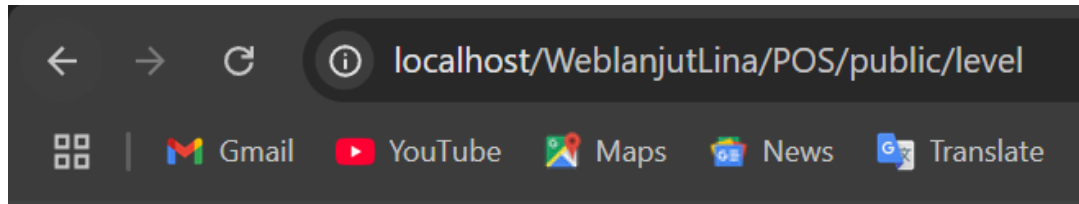
Update data berhasil. Jumlah data yang diupdate: 1 baris

pwl_pos.m_level: 4 rows total (approximately)

level_id	level_kode	level_nama	created_at	updated_at
1	ADM	Administrator	(NULL)	(NULL)
2	MNG	Manager	(NULL)	(NULL)
3	STF	Staff/Kasir	(NULL)	(NULL)
4	CUS	Customer	2025-02-22 09:55:47	(NULL)

7.

```
POS > app > Http > Controllers > LevelController.php
1  <?php
2
3  namespace App\Http\Controllers;
4
5  use Illuminate\Http\Request;
6  use Illuminate\Support\Facades\DB;
7
8  class LevelController extends Controller
9  {
10     public function index() {
11         // langkah 5
12         // DB::insert('insert into m_level(level_kode, level_nama, created_at) values(?, ?, ?)', ['CUS', 'Pelanggan
13         // return 'Insert data baru berhasil';
14
15         // langkah 6
16         // $row = DB::update('update m_level set level_nama = ? where level_kode = ?', ['Customer', 'CUS']);
17         // return 'Update data berhasil. Jumlah data yang diupdate: ' . $row . ' baris';
18
19         // langkah 7
20         $row = DB::delete('delete from m_level where level_kode = ?', ['CUS']);
21         return 'Delete data berhasil. Jumlah data yang dihapus: ' . $row . ' baris';
22     }
23 }
24 }
```

Delete data berhasil. Jumlah data yang dihapus: 1 baris

pwl_pos.m_level: 3 rows total (approximately)

level_id	level_kode	level_nama	created_at	updated_at
1	ADM	Administrator	(NULL)	(NULL)
2	MNG	Manager	(NULL)	(NULL)
3	STF	Staff/Kasir	(NULL)	(NULL)

8.

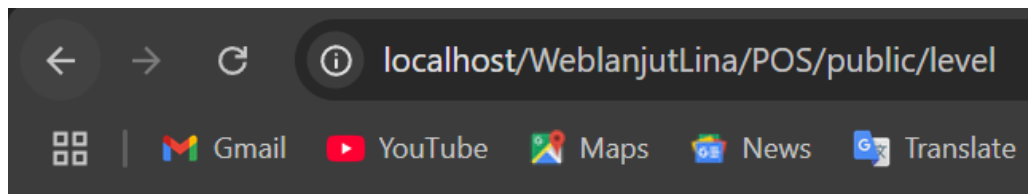
```
1 <?php
2
3 namespace App\Http\Controllers;
4
5 use Illuminate\Http\Request;
6 use Illuminate\Support\Facades\DB;
7
8 class LevelController extends Controller
9 {
10     public function index()
11     {
12         // langkah 5
13         // DB::insert('insert into m_level(level_kode, level_nama, created_at) values(?, ?, ?)', ['CUS', 'Pela
14         // return 'Insert data baru berhasil';
15
16         // langkah 6
17         // $row = DB::update('update m_level set level_nama = ? where level_kode = ?', ['Customer', 'CUS']);
18         // return 'Update data berhasil. Jumlah data yang diupdate: ' . $row . ' baris';
19
20         // langkah 7
21         // $row = DB::delete('delete from m_level where level_kode = ?', ['CUS']);
22         // return 'Delete data berhasil. Jumlah data yang dihapus: ' . $row . ' baris';
23
24         // langkah 8
25         $data = DB::select('select * from m_level');
26         return view('level', ['data' => $data]);
27
28     }
29 }
```



9.

```
POS > resources > views > level.blade.php
1  <!DOCTYPE html>
2  <html>
3  <head>
4  |   <title>Data Level Pengguna</title>
5  </head>
6  <body>
7  |   <h1>Data Level Pengguna</h1>
8  |   <table border="1" cellpadding="2" cellspacing="0">
9  |       <tr>
10 |           <th>ID</th>
11 |           <th>Kode Level</th>
12 |           <th>Nama Level</th>
13 |       </tr>
14 |       @foreach ($data as $d)
15 |           <tr>
16 |               <td>{{ $d->level_id }}</td>
17 |               <td>{{ $d->level_kode }}</td>
18 |               <td>{{ $d->level_nama }}</td>
19 |           </tr>
20 |       @endforeach
21 |   </table>
22 </body>
23 </html>
```

10.



Data Level Pengguna

ID	Kode Level	Nama Level
1	ADM	Administrator
2	MNG	Manager
3	STF	Staff/Kasir



11.

WeblanjutLina / POS /			Add file ▾	⋮
linarahmatin Implementasi DB Facade jobsheet 3			c3084e5 · now	History
Name	Last commit message	Last commit date		
..				
app	Implementasi DB Facade jobsheet 3	now		
bootstrap	First Commit	6 hours ago		
config	First Commit	6 hours ago		
database	Membuat File Seeder	39 minutes ago		
public	First Commit	6 hours ago		
resources	Implementasi DB Facade jobsheet 3	now		

Praktikum 5 – Implementasi Query Builder

1.

```
C:\laragon\www\WeblanjutLina\POS(main -> origin)
λ php artisan make:controller KategoriController

INFO Controller [C:\laragon\www\WeblanjutLina\POS\app\Http\Controllers\KategoriController.php] created successfully.
```

2.

```
use App\Http\Controllers\KategoriController;
```

```
Route::get('/Kategori', [KategoriController::class, 'index']);
```

3.

```
<?php

namespace App\Http\Controllers;

use Illuminate\Http\Request;

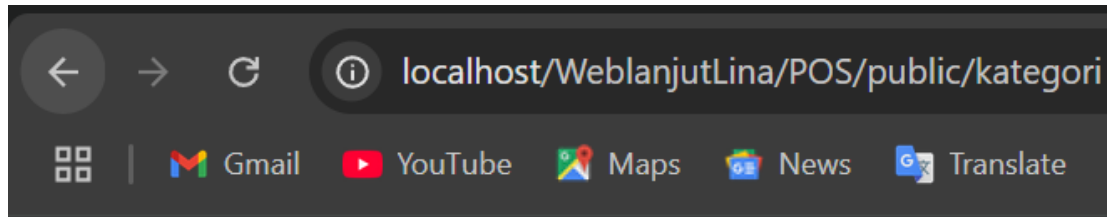
class KategoriController extends Controller
{
    public function index()
    {
        $data = [
            'kategori_kode' => 'SNK',
            'kategori_nama' => 'Snack/Makanan Ringan',
            'created_at' => now()
        ];

        DB::table('m_kategori')->insert($data);

        return 'Insert data baru berhasil';
    }
}
```



4.



Insert data baru berhasil

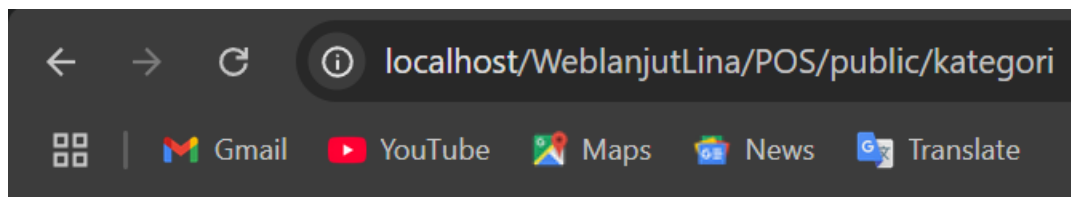
pwl_pos.m_kategori: 6 rows total (approximately)

kategori_id	kategori_kode	kategori_nama	created_at	updated_at
1	FNB	Food & Beverage	(NULL)	(NULL)
2	BEAUTY	Beauty & Health	(NULL)	(NULL)
3	HOME	Home Care	(NULL)	(NULL)
4	BABY	Baby & Kid	(NULL)	(NULL)
5	ELEC	Electronics	(NULL)	(NULL)
6	SNK	Snack/Makanan Ringan	2025-02-22 10:39:36	(NULL)

5.

```
// langkah 5
$row = DB::update('update m_level set level_nama = ? where level_kode = ?', ['Customer', 'CUS']);
return 'Update data berhasil. Jumlah data yang diupdate: ' . $row . ' baris';
```

6.



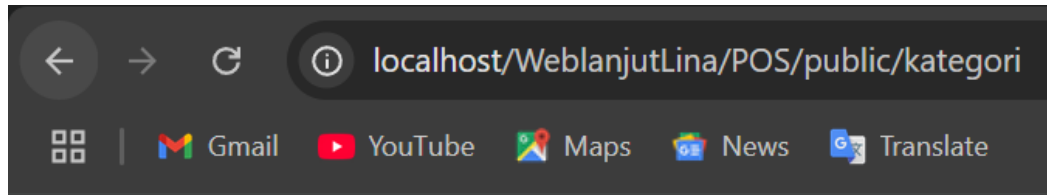
Update data berhasil. Jumlah data yang diupdate: 0 baris

pwl_pos.m_kategori: 6 rows total (approximately)

kategori_id	kategori_kode	kategori_nama	created_at	updated_at
1	FNB	Food & Beverage	(NULL)	(NULL)
2	BEAUTY	Beauty & Health	(NULL)	(NULL)
3	HOME	Home Care	(NULL)	(NULL)
4	BABY	Baby & Kid	(NULL)	(NULL)
5	ELEC	Electronics	(NULL)	(NULL)
6	SNK	Snack/Makanan Ringan	2025-02-22 10:39:36	(NULL)

7.

```
// langkah 7
$row = DB::delete('delete from m_level where level_kode = ?', ['CUS']);
return 'Delete data berhasil. Jumlah data yang dihapus: ' . $row . ' baris';
```



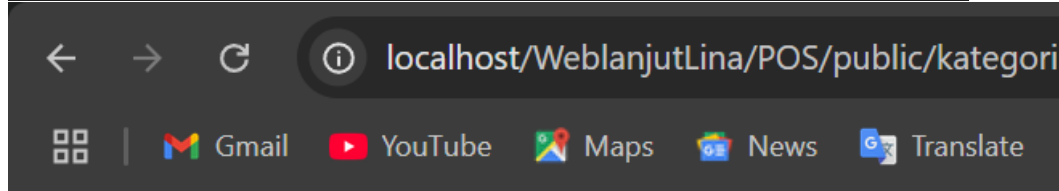
Delete data berhasil. Jumlah data yang dihapus: 0 baris

pwl_pos.m_kategori: 6 rows total (approximately)

kategori_id	kategori_kode	kategori_nama	created_at	updated_at
1	FNB	Food & Beverage	(NULL)	(NULL)
2	BEAUTY	Beauty & Health	(NULL)	(NULL)
3	HOME	Home Care	(NULL)	(NULL)
4	BABY	Baby & Kid	(NULL)	(NULL)
5	ELEC	Electronics	(NULL)	(NULL)
6	SNK	Snack/Makanan Ringan	2025-02-22 10:39:36	(NULL)

8.

```
// Langkah 8
$data = DB::select('select * from m_level');
return view('level', ['data' => $data]);
```



Data Level Pengguna

ID	Kode Level	Nama Level
1	ADM	Administrator
2	MNG	Manager
3	STF	Staff/Kasir

pwl_pos.m_kategori: 6 rows total (approximately)

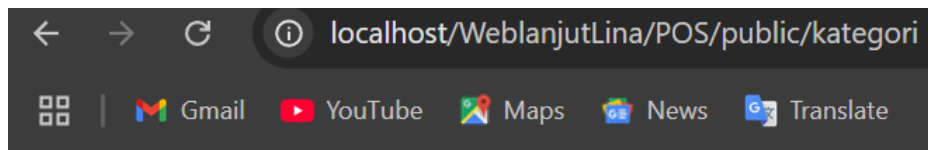
kategori_id	kategori_kode	kategori_nama	created_at	updated_at
1	FNB	Food & Beverage	(NULL)	(NULL)
2	BEAUTY	Beauty & Health	(NULL)	(NULL)
3	HOME	Home Care	(NULL)	(NULL)
4	BABY	Baby & Kid	(NULL)	(NULL)
5	ELEC	Electronics	(NULL)	(NULL)
6	SNK	Snack/Makanan Ringan	2025-02-22 10:39:36	(NULL)



9.

```
POS > resources > views > kategori.blade.php
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <title>Data Level Pengguna</title>
5  </head>
6  <body>
7      <h1>Data Level Pengguna</h1>
8      <table border="1" cellpadding="2" cellspacing="0">
9          <tr>
10             <th>ID</th>
11             <th>Kode Level</th>
12             <th>Nama Level</th>
13          </tr>
14          @foreach ($data as $d)
15              <tr>
16                  <td>{{ $d->level_id }}</td>
17                  <td>{{ $d->level_kode }}</td>
18                  <td>{{ $d->level_nama }}</td>
19              </tr>
20          @endforeach
21      </table>
22  </body>
23  </html>
```

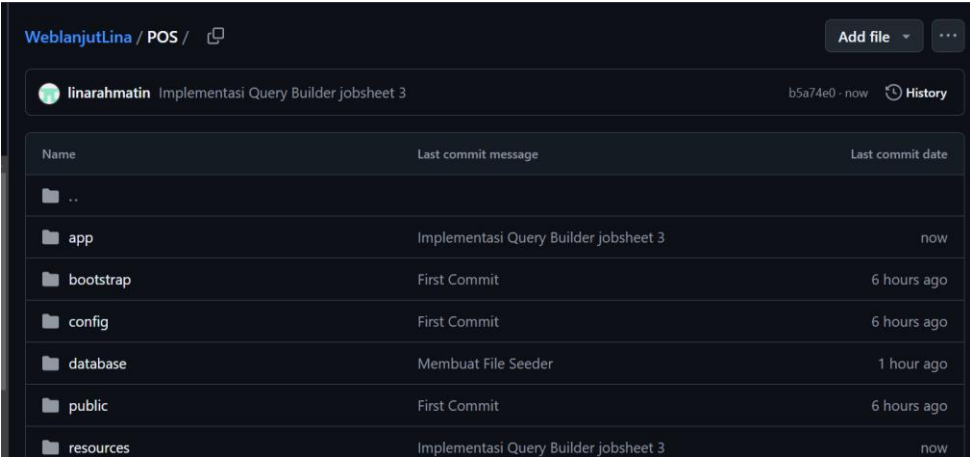
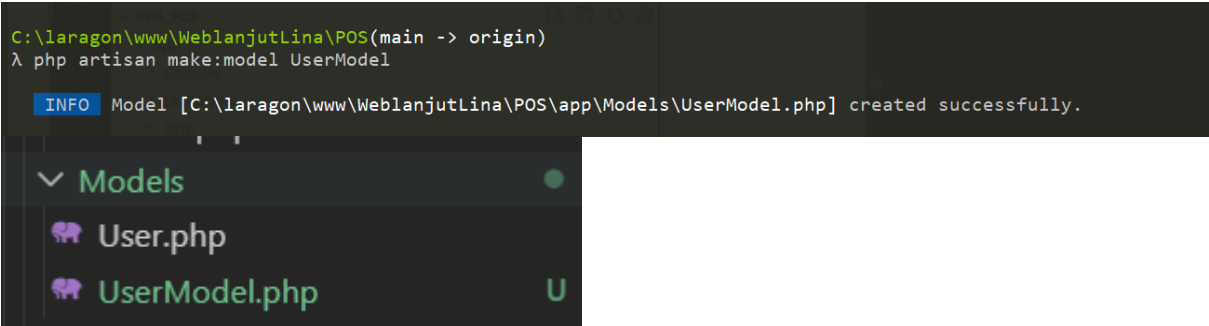
10.



Data Level Pengguna

ID	Kode Level	Nama Level
1	ADM	Administrator
2	MNG	Manager
3	STF	Staff/Kasir



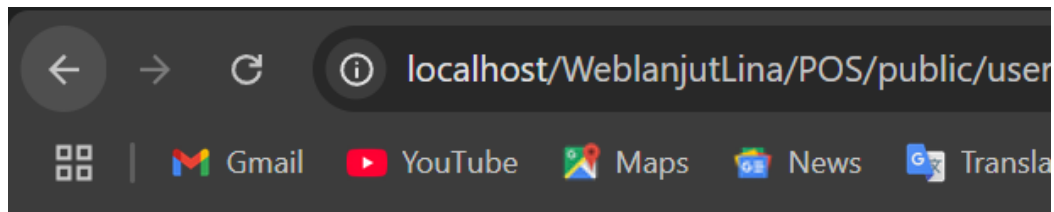
11.	
	Praktikum 6 – Implementasi Eloquent ORM
1.	
3..	<pre>protected \$table = 'm-user'; protected \$primaryKey = 'user_id';</pre>
4.	<pre>Route::get('/user', [UserController::class, 'index']);</pre>
5.	<pre>POS > app > Http > Controllers > UserController.php 1 <?php 2 3 namespace App\Http\Controllers; 4 5 use App\models\UserModel; 6 class UserController extends Controller 7 { 8 public function profile(\$id, \$name) { 9 10 \$user = UserModel::all(); 11 return view('user.profile', ['id' => \$id, 'name' => \$name]); 12 } 13 }</pre>



6.

```
POS > resources > views > user.blade.php
1  <!DOCTYPE html>
2  <html>
3  <head>
4  |   <title>Data User</title>
5  </head>
6  <body>
7  |   <h1>Data User</h1>
8  |   <table border="1" cellpadding="2" cellspacing="0">
9  |       <tr>
10 |           <th>ID</th>
11 |           <th>Username</th>
12 |           <th>Nama</th>
13 |           <th>ID Level Pengguna</th>
14 |       </tr>
15 |       @foreach ($data as $d)
16 |       <tr>
17 |           <td>{{ $d->user_id }}</td>
18 |           <td>{{ $d->username }}</td>
19 |           <td>{{ $d->nama }}</td>
20 |           <td>{{ $d->level_id }}</td>
21 |       </tr>
22 |       @endforeach
23 |   </table>
24 </body>
25 </html>
```

7.



Data User

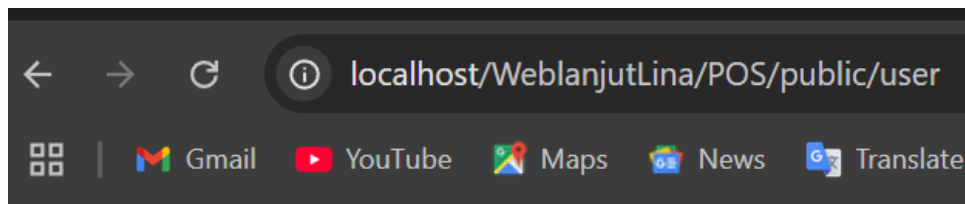
ID	Username	Nama	ID Level Pengguna
1	admin	Administrator	1
2	manager	Manager	2
3	staff	Staff/Kasir	3



8.

```
POS > app > Http > Controllers > UserController.php
1  <?php
2
3  namespace App\Http\Controllers;
4  use Illuminate\Http\Request;
5  use Illuminate\Support\Facades\Hash;
6
7  use App\Models\UserModel;
8
9  class UserController extends Controller
10 {
11     public function index()
12     {
13         $data = [
14             'username' => 'customer-1',
15             'nama' => 'Pelanggan',
16             'password' => Hash::make('12345'), // Perbaikan: tambahkan spasi setelah Hash::
17             'level_id' => 5
18         ];
19
20         UserModel::insert($data); // tambahkan data ke tabel m_user
21
22
23
24         $user = UserModel::all();
25         return view('user', [ 'data' => $user]);
26     }
27 }
```

9

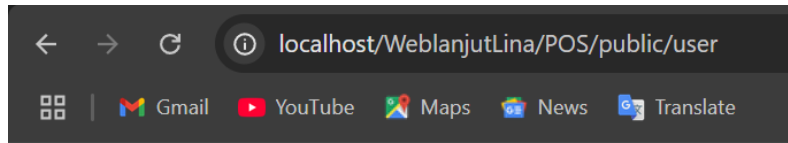


Data User

ID	Username	Nama	ID Level Pengguna
1	admin	Administrator	1
2	manager	Manager	2
3	staff	Staff/Kasir	3
6	customer-1	Pelanggan	5



11.



Data User

ID	Username	Nama	ID Level Pengguna
1	admin	Administrator	1
2	manager	Manager	2
3	staff	Staff/Kasir	3
6	customer-1	pelanggan pertama	5

12.



G. Penutup

1. Pada Praktikum 1 - Tahap 5, apakah fungsi dari APP_KEY pada file setting .env Laravel?
Jawab: APP_KEY berfungsi sebagai kunci enkripsi dalam Laravel, yang digunakan untuk mengenkripsi data seperti sesi, token, dan password yang tersimpan dalam aplikasi.
2. Pada Praktikum 1, bagaimana kita men-generate nilai untuk APP_KEY?
Jawab: dapat men-generate nilai APP_KEY dengan menjalankan perintah php artisan key:generate di terminal.
Perintah ini akan menghasilkan kunci enkripsi baru dan secara otomatis menyimpannya di file .env.
3. Pada Praktikum 2.1 - Tahap 1, secara default Laravel memiliki berapa file migrasi? dan untuk apa saja file migrasi tersebut?
Jawab: Jumlah dan fungsi file migrasi default Laravel
Secara default, Laravel memiliki tiga file migrasi:



	<ul style="list-style-type: none">• create_users_table.php → Untuk membuat tabel users• create_password_resets_table.php → Untuk membuat tabel reset password• create_failed_jobs_table.php → Untuk mencatat pekerjaan (jobs) yang gagal dalam queue system
4.	<p>Secara default, file migrasi terdapat kode \$table->timestamps();, apa tujuan/output dari fungsi tersebut?</p> <p>Jawab: Fungsi dari \$table->timestamps(); Kode ini akan secara otomatis membuat dua kolom, yaitu:</p> <ul style="list-style-type: none">• created_at → Menyimpan waktu ketika data dibuat• updated_at → Menyimpan waktu ketika data diperbarui
5.	<p>Pada File Migrasi, terdapat fungsi \$table->id(); Tipe data apa yang dihasilkan dari fungsi tersebut?</p> <p>Jawab: Tipe data yang dihasilkan oleh \$table->id(); Tipe data yang dihasilkan adalah bigint (big integer) dengan auto-increment dan berperan sebagai primary key.</p>
6.	<p>Apa bedanya hasil migrasi pada table m_level, antara menggunakan \$table->id(); dengan menggunakan \$table->id('level_id'); ?</p> <p>Jawab: Perbedaan \$table->id(); dengan \$table->id('level_id');</p> <ul style="list-style-type: none">• \$table->id(); → Membuat kolom id sebagai primary key secara default• \$table->id('level_id'); → Membuat kolom level_id sebagai primary key dengan nama yang telah ditentukan
7.	<p>Pada migration, Fungsi ->unique() digunakan untuk apa?</p> <p>Jawab: Fungsi dari ->unique() pada migration</p> <ul style="list-style-type: none">• Fungsi ->unique() digunakan untuk memastikan bahwa nilai dalam suatu kolom tidak boleh duplikat, atau dengan kata lain harus unik di dalam tabel.
8.	<p>Pada Praktikum 2.2 - Tahap 2, kenapa kolom level_id pada tabel m_user menggunakan \$table->unsignedBigInteger('level_id'), sedangkan kolom level_id pada tabel m_level menggunakan \$table->id('level_id') ?</p> <p>Jawab: Alasan penggunaan \$table->unsignedBigInteger('level_id') pada tabel m_user dan \$table->id('level_id') pada tabel m_level</p> <ul style="list-style-type: none">• Pada m_level, level_id dibuat menggunakan \$table->id('level_id');, yang berarti tipe datanya adalah bigint auto-increment sebagai primary key.• Pada m_user, level_id dibuat menggunakan \$table->unsignedBigInteger('level_id');, karena kolom ini akan menjadi foreign key yang merujuk ke level_id di tabel m_level.
9.	<p>Pada Praktikum 3 - Tahap 6, apa tujuan dari Class Hash? dan apa maksud dari kode program Hash::make('1234');?</p> <p>Jawab: Tujuan Class Hash dan maksud dari Hash::make('1234');</p> <ul style="list-style-type: none">• Class Hash digunakan untuk enkripsi data seperti password agar lebih aman.• Hash::make('1234'); berarti mengenkripsi string "1234" menggunakan algoritma hashing bcrypt, sehingga password tidak tersimpan dalam bentuk teks asli di database.
10.	<p>Pada Praktikum 4 - Tahap 3/5/7, pada query builder terdapat tanda tanya (?), apa kegunaan</p>



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	<p>dari tanda tanya (?) tersebut?</p> <p>Jawab: Kegunaan tanda tanya (?) dalam Query Builder</p> <p>Tanda tanya (?) digunakan sebagai parameter binding, yang berfungsi untuk mencegah SQL Injection dengan menggantikan nilai dalam query secara aman.</p>
11.	<p>Pada Praktikum 6 - Tahap 3, apa tujuan penulisan kode <code>protected \$table = 'm_user';</code> dan <code>protected \$primaryKey = 'user_id';</code> ?</p> <p>Jawab: Tujuan kode <code>protected \$table = 'm_user';</code> dan <code>protected \$primaryKey = 'user_id';</code></p> <ul style="list-style-type: none">• <code>protected \$table = 'm_user';</code> → Menentukan bahwa model ini terkait dengan tabel <code>m_user</code> dalam database.• <code>protected \$primaryKey = 'user_id';</code> → Menentukan bahwa primary key pada tabel <code>m_user</code> adalah <code>user_id</code>, bukan <code>id</code> (default Laravel).
12.	<p>Menurut kalian, lebih mudah menggunakan mana dalam melakukan operasi CRUD ke database (DB Façade / Query Builder / Eloquent ORM) ? jelaskan</p> <p>Jawab: Perbandingan DB Facade, Query Builder, dan Eloquent ORM dalam operasi CRUD</p> <ul style="list-style-type: none">• DB Facade → Menggunakan sintaks SQL secara langsung, lebih cepat tetapi kurang fleksibel dan lebih sulit untuk dibaca.• Query Builder → Menyediakan metode yang lebih mudah digunakan dibandingkan SQL murni, memungkinkan manipulasi query dengan lebih fleksibel.• Eloquent ORM → Mempermudah manipulasi data menggunakan konsep Object-Oriented, lebih readable dan efisien dalam pengelolaan relasi antar tabel.