



Jurusan Teknologi Informasi Politeknik Negeri Malang
Jobsheet-3: Migration, Seeder, DB Façade, Query Builder, Eloquent Orm
Mata Kuliah Pemrograman Web Lanjut
Maret 2024

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Kelas	:	TI – 2H

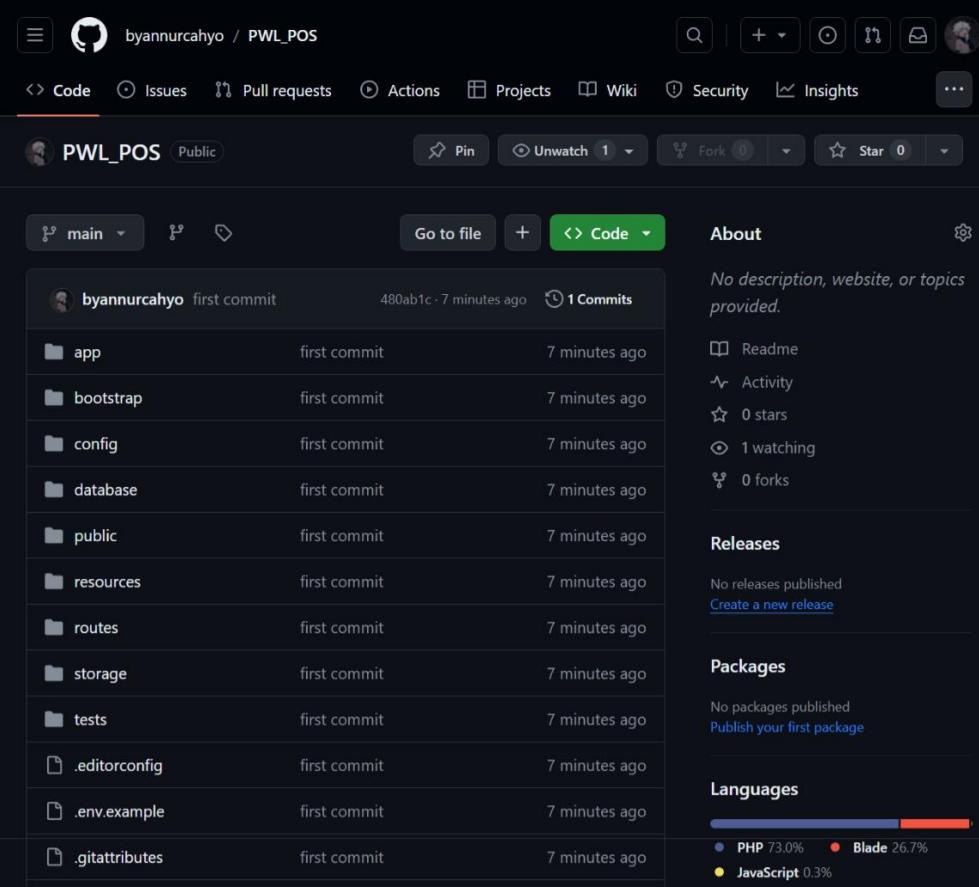
Tulislah Jawaban Pada Kolom Yang tersedia di bawah ini :

LEMBAR JAWABAN JOBSHEET-3

Soal No	Jawaban
A.	Pengaturan Database 
	<pre>1 .env 2 APP_NAME=Laravel 3 APP_ENV=local 4 APP_KEY=base64:0Tse3jqThJEnFZgaZ/I4whrusdd+njz/lTOsvzgozuE= 5 APP_DEBUG=true 6 APP_URL=http://localhost 7 8 LOG_CHANNEL=stack 9 LOG_DEPRECATIONS_CHANNEL=null 10 LOG_LEVEL=debug 11 12 DB_CONNECTION=mysql 13 DB_HOST=127.0.0.1 14 DB_PORT=3306 15 DB_DATABASE=PWL_POS 16 DB_USERNAME=root 17 DB_PASSWORD=</pre>



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B.	Migration
1.	<pre>PS C:\laragon\www\PWL_POS> php artisan make:migration create_m_level_table --create=m_level [INFO] Migration [C:\laragon\www\PWL_POS\database\migrations\2024_03_09_101544_create_m_level_table.php] created successfully. PS C:\laragon\www\PWL_POS></pre> <pre>12 public function up(): void 13 { 14 Schema::create('m_level', function (Blueprint \$table) { 15 \$table->id('level_id'); 16 \$table->string('level_kode', 10)->unique(); 17 \$table->string('level_nama', 100); 18 \$table->timestamps(); 19 }); 20 }</pre>

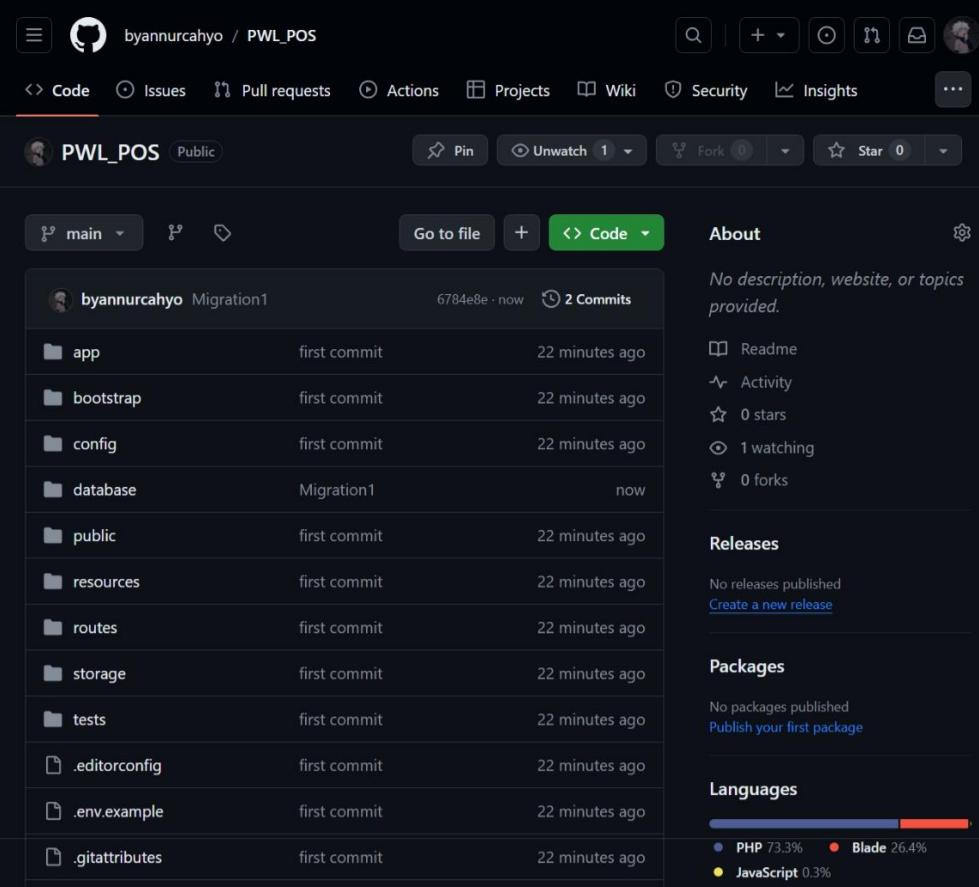


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	<pre>PS C:\laragon\www\PWL_POS> php artisan migrate INFO Preparing database. Creating migration table 13ms DONE INFO Running migrations. 2014_10_12_00000_create_users_table 28ms DONE 2014_10_12_100000_create_password_reset_tokens_table 7ms DONE 2019_08_19_000000_create_failed_jobs_table 21ms DONE 2019_12_14_000001_create_personal_access_tokens_table 31ms DONE 2024_03_09_101544_create_m_level_table 28ms DONE PS C:\laragon\www\PWL_POS></pre>																																								
	<table border="1"><thead><tr><th>Table</th><th>Action</th><th>Rows</th><th>Type</th><th>Collation</th></tr></thead><tbody><tr><td>failed_jobs</td><td> </td><td>0</td><td>InnoDB</td><td>utf8mb4_unicode_ci</td></tr><tr><td>migrations</td><td> </td><td>5</td><td>InnoDB</td><td>utf8mb4_unicode_ci</td></tr><tr><td>m_level</td><td> </td><td>0</td><td>InnoDB</td><td>utf8mb4_unicode_ci</td></tr><tr><td>password_reset_tokens</td><td> </td><td>0</td><td>InnoDB</td><td>utf8mb4_unicode_ci</td></tr><tr><td>personal_access_tokens</td><td> </td><td>0</td><td>InnoDB</td><td>utf8mb4_unicode_ci</td></tr><tr><td>users</td><td> </td><td>0</td><td>InnoDB</td><td>utf8mb4_unicode_ci</td></tr><tr><td>6 tables</td><td>Sum</td><td>5</td><td>InnoDB</td><td>utf8mb4_0900_ai</td></tr></tbody></table>	Table	Action	Rows	Type	Collation	failed_jobs		0	InnoDB	utf8mb4_unicode_ci	migrations		5	InnoDB	utf8mb4_unicode_ci	m_level		0	InnoDB	utf8mb4_unicode_ci	password_reset_tokens		0	InnoDB	utf8mb4_unicode_ci	personal_access_tokens		0	InnoDB	utf8mb4_unicode_ci	users		0	InnoDB	utf8mb4_unicode_ci	6 tables	Sum	5	InnoDB	utf8mb4_0900_ai
Table	Action	Rows	Type	Collation																																					
failed_jobs		0	InnoDB	utf8mb4_unicode_ci																																					
migrations		5	InnoDB	utf8mb4_unicode_ci																																					
m_level		0	InnoDB	utf8mb4_unicode_ci																																					
password_reset_tokens		0	InnoDB	utf8mb4_unicode_ci																																					
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users		0	InnoDB	utf8mb4_unicode_ci																																					
6 tables	Sum	5	InnoDB	utf8mb4_0900_ai																																					
	<pre>PS C:\laragon\www\PWL_POS> php artisan make:migration create_m_kategori_table --create=m_kategori INFO Migration [C:\laragon\www\PWL_POS\database\migrations\2024_03_09_102119_create_m_kategori_table.php] created successfully. PS C:\laragon\www\PWL_POS></pre>																																								
	<pre>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 }</pre>																																								
	<pre>PS C:\laragon\www\PWL_POS> php artisan migrate INFO Running migrations. 2024_03_09_102119_create_m_kategori_table 28ms DONE PS C:\laragon\www\PWL_POS></pre>																																								



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Table		Action	Rows	Type	Collation
failed_jobs			0	InnoDB	utf8mb4_unicode_
migrations			6	InnoDB	utf8mb4_unicode_
m_kategori			0	InnoDB	utf8mb4_unicode_
m_level			0	InnoDB	utf8mb4_unicode_
password_reset_tokens			0	InnoDB	utf8mb4_unicode_
personal_access_tokens			0	InnoDB	utf8mb4_unicode_
users			0	InnoDB	utf8mb4_unicode_
7 tables		Sum	6	InnoDB	utf8mb4_0900_ai
					
2.	<pre>PS C:\laragon\www\PWL_POS> php artisan make:migration create_m_user_table --table=m_user [INFO] Migration [C:\laragon\www\PWL_POS\database\migrations\2024_03_09_102932_create_m_user_table.php] created successfully. PS C:\laragon\www\PWL_POS></pre>				



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```
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 data tidak duplikat
18             $table->string('nama', 100);
19             $table->string('password');
20             $table->timestamps();
21
22             // Mendefinisikan Foreignkey pada kolom level_id mengacu pada kolom level_id pada 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     }
```

```
PS C:\laragon\www\PWL_POS> php artisan migrate
[INFO] Running migrations.
2024_03_09_102932_create_m_user_table ..... 70ms DONE
PS C:\laragon\www\PWL_POS>
```

Table	Action	Rows	Type	Collation
failed_jobs	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_unicode_ci
migrations	Browse Structure Search Insert Empty Drop	7	InnoDB	utf8mb4_unicode_ci
m_kategori	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_unicode_ci
m_level	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_unicode_ci
m_user	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_unicode_ci
password_reset_tokens	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_unicode_ci
personal_access_tokens	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_unicode_ci
users	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_unicode_ci
8 tables	Sum	7	InnoDB	utf8mb4_0900_ai

```
12     public function up(): void
13     {
14         Schema::create('m_barang', function (Blueprint $table) {
15             $table->id('barang_id');
16             $table->unsignedBigInteger('kategori_id')->index();
17             $table->string('barang_kode', 10);
18             $table->string('barang_nama', 100);
19             $table->integer('harga_beli');
20             $table->integer('harga_jual');
21             $table->timestamps();
22
23             $table->foreign('kategori_id')->references('kategori_id')->on('m_kategori');
24         });
25     }
```



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	<pre>12 public function up(): void 13 { 14 Schema::create('t_penjualan', function (Blueprint \$table) { 15 \$table->id('penjualan_id'); 16 \$table->unsignedBigInteger('user_id')->index(); 17 \$table->string('pembeli', 50); 18 \$table->string('penjualan_kode', 20); 19 \$table->dateTime('penjualan_tanggal'); 20 \$table->timestamps(); 21 22 \$table->foreign('user_id')->references('user_id')->on('m_user'); 23 }); 24 }</pre>
	<pre>12 public function up(): void 13 { 14 Schema::create('t_stok', function (Blueprint \$table) { 15 \$table->id('t_stok_id'); 16 \$table->unsignedBigInteger('barang_id')->index(); 17 \$table->unsignedBigInteger('user_id')->index(); 18 \$table->dateTime('stok_tanggal'); 19 \$table->integer('stok_jumlah'); 20 \$table->timestamps(); 21 22 \$table->foreign('barang_id')->references('barang_id')->on('m_barang'); 23 \$table->foreign('user_id')->references('user_id')->on('m_user'); 24 }); 25 }</pre>
	<pre>12 public function up(): void 13 { 14 Schema::create('t_penjualan_detail', function (Blueprint \$table) { 15 \$table->id('detail_id'); 16 \$table->unsignedBigInteger('penjualan_id')->index(); 17 \$table->unsignedBigInteger('barang_id')->index(); 18 \$table->integer('harga'); 19 \$table->integer('jumlah'); 20 \$table->timestamps(); 21 22 \$table->foreign('penjualan_id')->references('penjualan_id')->on('t_penjualan'); 23 \$table->foreign('barang_id')->references('barang_id')->on('m_barang'); 24 }); 25 }</pre>
	<pre>PS C:\laragon\www\PWL_POS> php artisan migrate INFO Running migrations. 2024_03_09_104218_create_m_barang_table 64ms DONE 2024_03_09_104356_create_t_penjualan_table 49ms DONE 2024_03_09_104414_create_t_stok_table 79ms DONE 2024_03_09_104455_create_t_penjualan_detail_table 85ms DONE PS C:\laragon\www\PWL_POS></pre>



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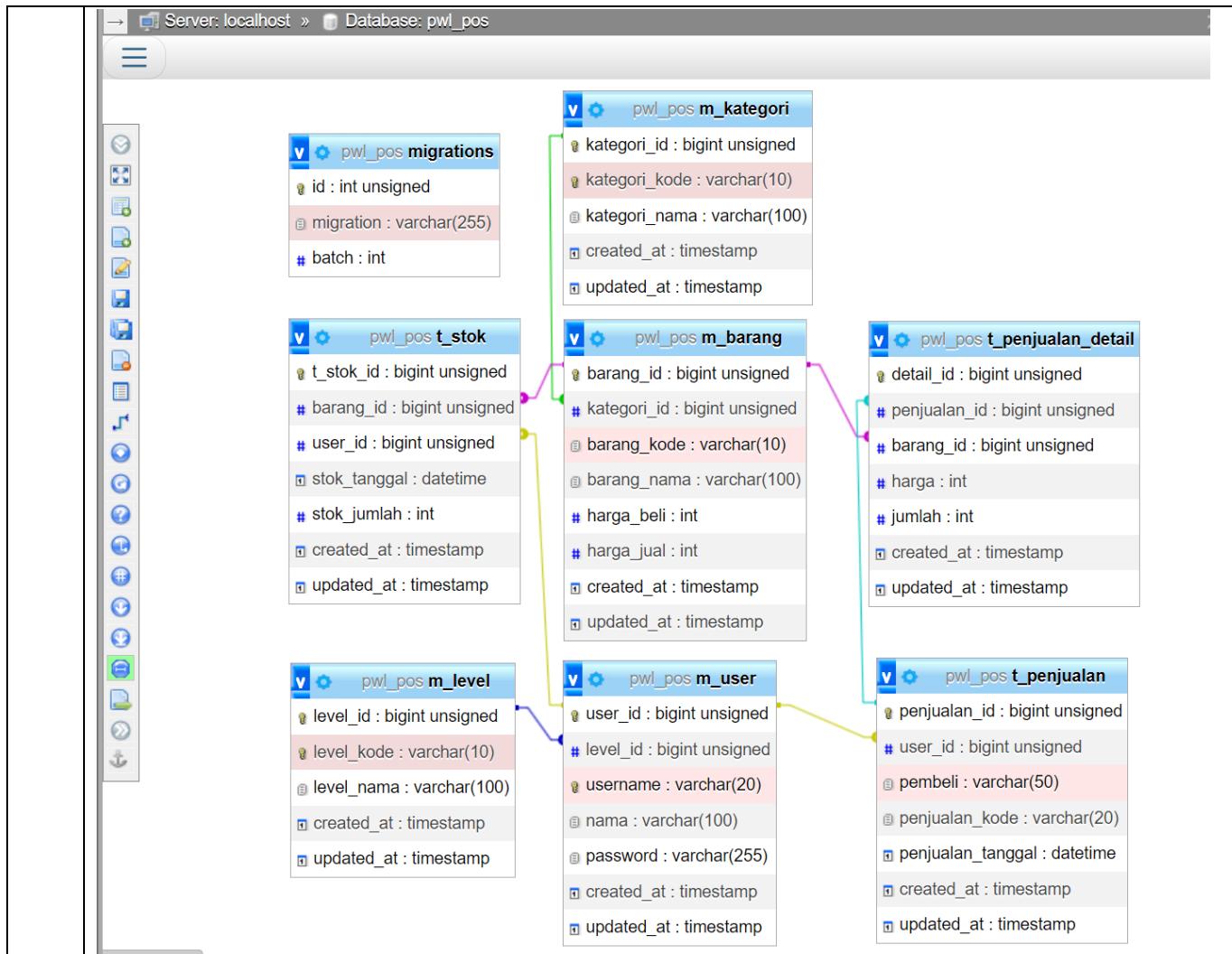
Table	Action	Rows	Type	Collation
failed_jobs		0	InnoDB	utf8mb4_unicode_
migrations		11	InnoDB	utf8mb4_unicode_
m_barang		0	InnoDB	utf8mb4_unicode_
m_kategori		0	InnoDB	utf8mb4_unicode_
m_level		0	InnoDB	utf8mb4_unicode_
m_user		0	InnoDB	utf8mb4_unicode_
password_reset_tokens		0	InnoDB	utf8mb4_unicode_
personal_access_tokens		0	InnoDB	utf8mb4_unicode_
t_penjualan		0	InnoDB	utf8mb4_unicode_
t_penjualan_detail		0	InnoDB	utf8mb4_unicode_
t_stok		0	InnoDB	utf8mb4_unicode_
users		0	InnoDB	utf8mb4_unicode_

PS C:\laragon\www\PWL_POS> php artisan migrate
INFO Running migrations.
2024_03_09_104218_create_m_barang_table 64ms DONE
2024_03_09_104356_create_t_penjualan_table 49ms DONE
2024_03_09_104414_create_t_stok_table 79ms DONE
2024_03_09_104455_create_t_penjualan_detail_table 85ms DONE

Table	Action	Rows	Type	Collation
failed_jobs		0	InnoDB	utf8mb4_unicode_
migrations		11	InnoDB	utf8mb4_unicode_
m_barang		0	InnoDB	utf8mb4_unicode_
m_kategori		0	InnoDB	utf8mb4_unicode_
m_level		0	InnoDB	utf8mb4_unicode_
m_user		0	InnoDB	utf8mb4_unicode_
password_reset_tokens		0	InnoDB	utf8mb4_unicode_
personal_access_tokens		0	InnoDB	utf8mb4_unicode_
t_penjualan		0	InnoDB	utf8mb4_unicode_
t_penjualan_detail		0	InnoDB	utf8mb4_unicode_
t_stok		0	InnoDB	utf8mb4_unicode_
users		0	InnoDB	utf8mb4_unicode_

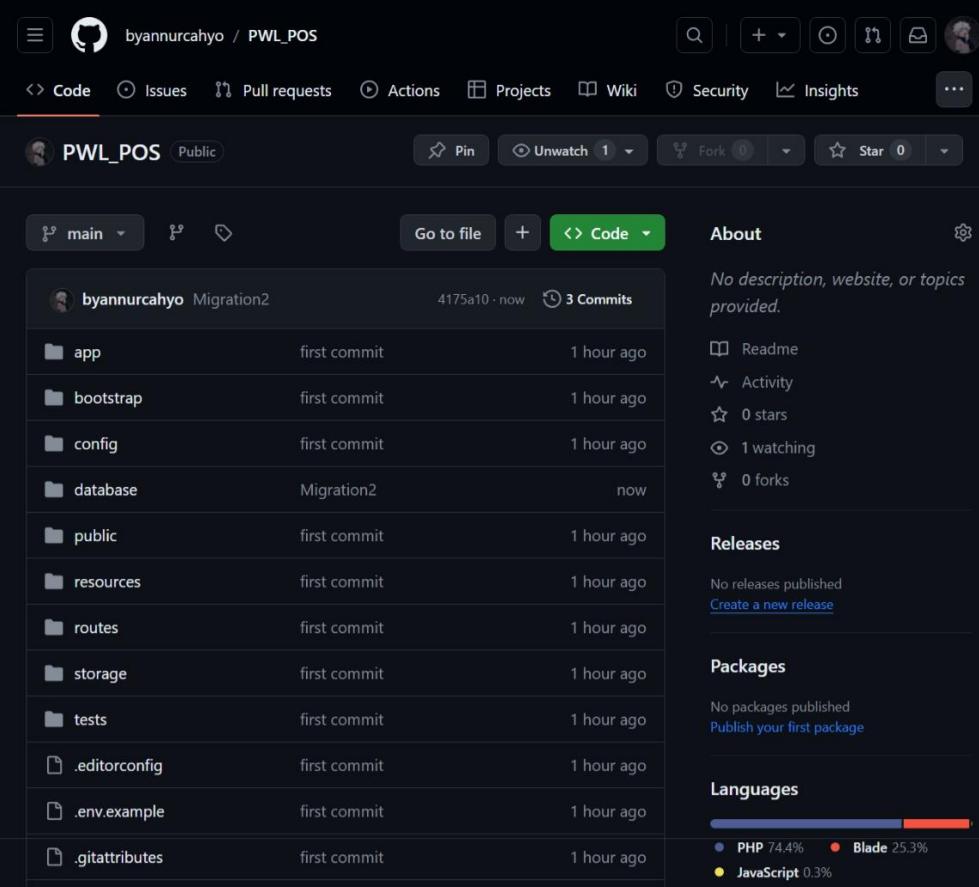


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C.	Seeder
	<pre>PS C:\laragon\www\PWL_POS> php artisan make:seeder LevelSeeder [INFO] Seeder [C:\laragon\www\PWL_POS\database\seeders\LevelSeeder.php] created successfully. PS C:\laragon\www\PWL_POS></pre>
	<pre>14 public function run(): void 15 { 16 \$data = [17 ['level_id' => 1, 'level_kode' =>'ADM', 'level_nama' => 'Admin'], 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 } </pre>
	<pre>PS C:\laragon\www\PWL_POS> php artisan db:seed --class=LevelSeeder [INFO] Seeding database. PS C:\laragon\www\PWL_POS></pre>



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	<table border="1"><thead><tr><th></th><th>level_id</th><th>level_kode</th><th>level_nama</th><th>created_at</th><th>updated_at</th></tr></thead><tbody><tr><td><input type="checkbox"/> </td><td>1</td><td>ADM</td><td>Admin</td><td>NULL</td><td>NULL</td></tr><tr><td><input type="checkbox"/> </td><td>2</td><td>MNG</td><td>Manager</td><td>NULL</td><td>NULL</td></tr><tr><td><input type="checkbox"/> </td><td>3</td><td>STF</td><td>Staff/Kasir</td><td>NULL</td><td>NULL</td></tr></tbody></table>		level_id	level_kode	level_nama	created_at	updated_at	<input type="checkbox"/>	1	ADM	Admin	NULL	NULL	<input type="checkbox"/>	2	MNG	Manager	NULL	NULL	<input type="checkbox"/>	3	STF	Staff/Kasir	NULL	NULL
	level_id	level_kode	level_nama	created_at	updated_at																				
<input type="checkbox"/>	1	ADM	Admin	NULL	NULL																				
<input type="checkbox"/>	2	MNG	Manager	NULL	NULL																				
<input type="checkbox"/>	3	STF	Staff/Kasir	NULL	NULL																				
	PS C:\laragon\www\PWL_POS> php artisan make:seeder UserSeeder INFO Seeder [C:\laragon\www\PWL_POS\database\seeders\UserSeeder.php] created successfully. PS C:\laragon\www\PWL_POS>																								
	<pre>15 public function run(): void 16 { 17 \$data = [18 [19 'user_id' => 1, 20 'level_id' => 1, 21 'username' => 'admin', 22 'nama' => 'Administrator', 23 'password' => Hash::make('12345'), //classs untuk mengenkripsi password 24], 25 [26 'user_id' => 2, 27 'level_id' => 2, 28 'username' => 'manager', 29 'nama' => 'Manager', 30 'password' => Hash::make('12345'), 31], 32 [33 'user_id' => 3, 34 'level_id' => 3, 35 'username' => 'staff', 36 'nama' => 'Staff/Kasir', 37 'password' => Hash::make('12345'), 38], 39]; 40 DB::table('m_user')->insert(\$data); 41 } </pre>																								
	PS C:\laragon\www\PWL_POS> php artisan db:seed --class=UserSeeder INFO Seeding database. PS C:\laragon\www\PWL_POS>																								
	<table border="1"><thead><tr><th></th><th>user_id</th><th>level_id</th><th>username</th><th>nama</th><th>password</th></tr></thead><tbody><tr><td><input type="checkbox"/> </td><td>1</td><td>1</td><td>admin</td><td>Administrator</td><td>\$2y\$12\$hCPr1RcJe8mdl8ACWV0ie5V5LftS289ysUaxchEV</td></tr><tr><td><input type="checkbox"/> </td><td>2</td><td>2</td><td>manager</td><td>Manager</td><td>\$2y\$12\$FZ8Y/ALw8WzIRjb3F5a.duAjLhwVazbUHZTM6OvCsI</td></tr><tr><td><input type="checkbox"/> </td><td>3</td><td>3</td><td>staff</td><td>Staff/Kasir</td><td>\$2y\$12\$Sd7jULqQ4ufNBTzDv/zKNeJvI84Ne2uIODc4n9x5EY</td></tr></tbody></table>		user_id	level_id	username	nama	password	<input type="checkbox"/>	1	1	admin	Administrator	\$2y\$12\$hCPr1RcJe8mdl8ACWV0ie5V5LftS289ysUaxchEV	<input type="checkbox"/>	2	2	manager	Manager	\$2y\$12\$FZ8Y/ALw8WzIRjb3F5a.duAjLhwVazbUHZTM6OvCsI	<input type="checkbox"/>	3	3	staff	Staff/Kasir	\$2y\$12\$Sd7jULqQ4ufNBTzDv/zKNeJvI84Ne2uIODc4n9x5EY
	user_id	level_id	username	nama	password																				
<input type="checkbox"/>	1	1	admin	Administrator	\$2y\$12\$hCPr1RcJe8mdl8ACWV0ie5V5LftS289ysUaxchEV																				
<input type="checkbox"/>	2	2	manager	Manager	\$2y\$12\$FZ8Y/ALw8WzIRjb3F5a.duAjLhwVazbUHZTM6OvCsI																				
<input type="checkbox"/>	3	3	staff	Staff/Kasir	\$2y\$12\$Sd7jULqQ4ufNBTzDv/zKNeJvI84Ne2uIODc4n9x5EY																				



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Kategori Data							
	kategori_id	kategori.kode	kategori.nama	created_at	updated_at		
	Actions						
<input type="checkbox"/>	 Edit Copy Delete	1	AT	Alat Tulis	2024-03-12 13:53:32	2024-03-12 13:53:32	
<input type="checkbox"/>	 Edit Copy Delete	2	SBK	Sembako	2024-03-12 13:53:32	2024-03-12 13:53:32	
<input type="checkbox"/>	 Edit Copy Delete	3	MKN	Makanan	2024-03-12 13:53:32	2024-03-12 13:53:32	
<input type="checkbox"/>	 Edit Copy Delete	4	MNM	Minuman	2024-03-12 13:53:32	2024-03-12 13:53:32	
<input type="checkbox"/>	 Edit Copy Delete	5	OBT	Obat-obatan	2024-03-12 13:53:32	2024-03-12 13:53:32	
Detail Barang							
	barang_id	kategori_id	barang.kode	barang.nama	harga_beli	harga_jual	created_at
	Actions						
 Edit Copy Delete	1	1	PNS	Pensil	3000	5000	2024-03-12 13:53:49
 Edit Copy Delete	2	1	PLP	Pulpen	5000	7000	2024-03-12 13:53:49
 Edit Copy Delete	3	2	GL	Gula	8000	10000	2024-03-12 13:53:49
 Edit Copy Delete	4	2	BRS	Beras	10000	15000	2024-03-12 13:53:49
 Edit Copy Delete	5	3	RT	Roti	5000	8000	2024-03-12 13:53:49
 Edit Copy Delete	6	3	BSK	Biskuit	2000	4000	2024-03-12 13:53:49
 Edit Copy Delete	7	4	TH	Teh	2000	5000	2024-03-12 13:53:49
 Edit Copy Delete	8	4	AM	Air Mineral	3000	5000	2024-03-12 13:53:49
 Edit Copy Delete	9	5	PRCM	Paracetamol	5000	8000	2024-03-12 13:53:49
 Edit Copy Delete	10	5	TML	Tramadol	5000000	6000000	2024-03-12 13:53:49
Stok Data							
	t_stok_id	barang_id	user_id	stok_tanggal	stok_jumlah	created_at	updated_at
	Actions						
<input type="checkbox"/>	 Edit Copy Delete	1	1	2024-03-12 13:53:57	100	2024-03-12 13:53:57	2024-03-12 13:53:57
<input type="checkbox"/>	 Edit Copy Delete	2	2	2024-03-12 13:53:57	100	2024-03-12 13:53:57	2024-03-12 13:53:57
<input type="checkbox"/>	 Edit Copy Delete	3	3	2024-03-12 13:53:57	80	2024-03-12 13:53:57	2024-03-12 13:53:57
<input type="checkbox"/>	 Edit Copy Delete	4	4	2024-03-12 13:53:57	80	2024-03-12 13:53:57	2024-03-12 13:53:57
<input type="checkbox"/>	 Edit Copy Delete	5	5	2024-03-12 13:53:57	30	2024-03-12 13:53:57	2024-03-12 13:53:57
<input type="checkbox"/>	 Edit Copy Delete	6	6	2024-03-12 13:53:57	50	2024-03-12 13:53:57	2024-03-12 13:53:57
<input type="checkbox"/>	 Edit Copy Delete	7	7	2024-03-12 13:53:57	50	2024-03-12 13:53:57	2024-03-12 13:53:57
<input type="checkbox"/>	 Edit Copy Delete	8	8	2024-03-12 13:53:57	80	2024-03-12 13:53:57	2024-03-12 13:53:57
<input type="checkbox"/>	 Edit Copy Delete	9	9	2024-03-12 13:53:57	110	2024-03-12 13:53:57	2024-03-12 13:53:57
<input type="checkbox"/>	 Edit Copy Delete	10	10	2024-03-12 13:53:57	100	2024-03-12 13:53:57	2024-03-12 13:53:57



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	← ↑ →	penjualan_id	user_id	pembeli	penjualan_kode	penjualan_tanggal	created_at	updated_at
	<input type="checkbox"/> Edit Copy Delete	1	1	Customer 1	P1	2024-03-12 13:54:07	2024-03-12 13:54:07	2024-03-12 13:54:07
	<input type="checkbox"/> Edit Copy Delete	2	2	Customer 2	P2	2024-03-12 13:54:07	2024-03-12 13:54:07	2024-03-12 13:54:07
	<input type="checkbox"/> Edit Copy Delete	3	3	Customer 3	P3	2024-03-12 13:54:07	2024-03-12 13:54:07	2024-03-12 13:54:07
	<input type="checkbox"/> Edit Copy Delete	4	1	Customer 4	P4	2024-03-12 13:54:07	2024-03-12 13:54:07	2024-03-12 13:54:07
	<input type="checkbox"/> Edit Copy Delete	5	2	Customer 5	P5	2024-03-12 13:54:07	2024-03-12 13:54:07	2024-03-12 13:54:07
	<input type="checkbox"/> Edit Copy Delete	6	3	Customer 6	P6	2024-03-12 13:54:07	2024-03-12 13:54:07	2024-03-12 13:54:07
	<input type="checkbox"/> Edit Copy Delete	7	1	Customer 7	P7	2024-03-12 13:54:07	2024-03-12 13:54:07	2024-03-12 13:54:07
	<input type="checkbox"/> Edit Copy Delete	8	2	Customer 8	P8	2024-03-12 13:54:07	2024-03-12 13:54:07	2024-03-12 13:54:07
	<input type="checkbox"/> Edit Copy Delete	9	3	Customer 9	P9	2024-03-12 13:54:07	2024-03-12 13:54:07	2024-03-12 13:54:07
	<input type="checkbox"/> Edit Copy Delete	10	1	Customer 10	P10	2024-03-12 13:54:07	2024-03-12 13:54:07	2024-03-12 13:54:07

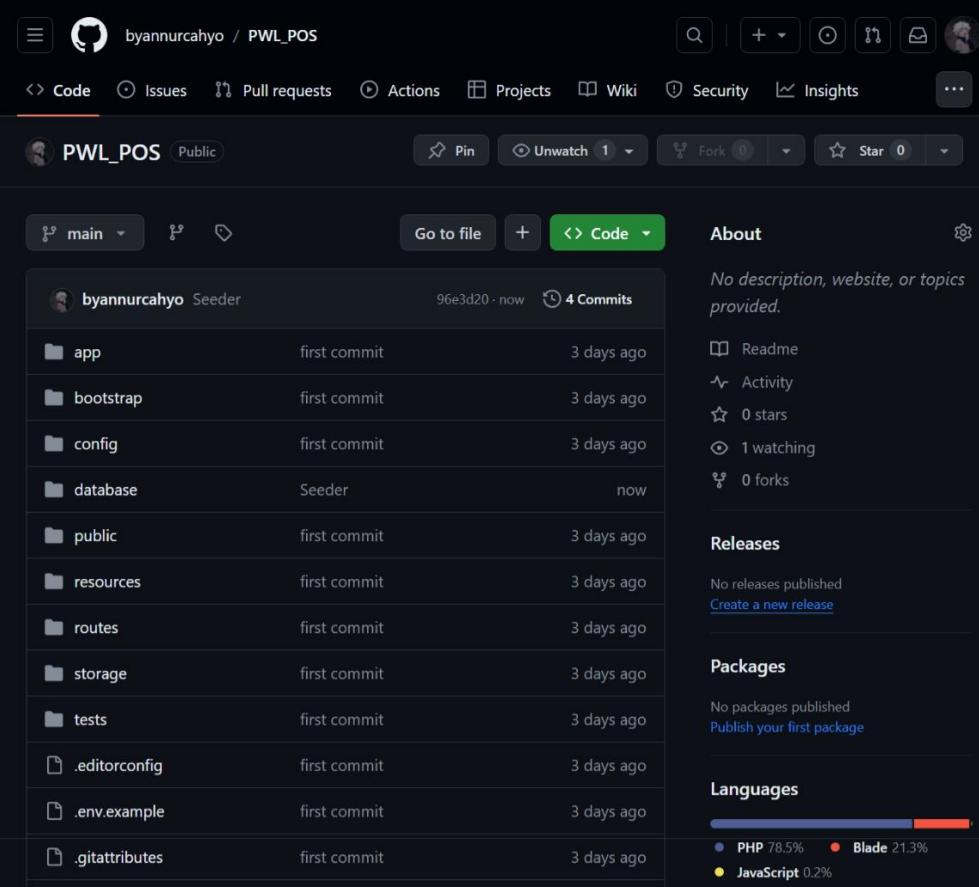


Jurusan Teknologi Informasi Politeknik Negeri Malang
Jobsheet-3: Migration, Seeder, DB Façade, Query Builder, Eloquent Orm
Mata Kuliah Pemrograman Web Lanjut
Maret 2024

	detail_id	penjualan_id	barang_id	harga	jumlah	created_at	updated_at
 	1	1	1	5000	2	2024-03-12 13:54:16	2024-03-12 13:54:16
 	2	1	2	7000	1	2024-03-12 13:54:16	2024-03-12 13:54:16
 	3	1	3	8000	3	2024-03-12 13:54:16	2024-03-12 13:54:16
 	4	2	2	7000	1	2024-03-12 13:54:16	2024-03-12 13:54:16
 	5	2	4	15000	2	2024-03-12 13:54:16	2024-03-12 13:54:16
 	6	2	5	8000	1	2024-03-12 13:54:16	2024-03-12 13:54:16
 	7	3	8	5000	2	2024-03-12 13:54:16	2024-03-12 13:54:16
 	8	3	9	8000	1	2024-03-12 13:54:16	2024-03-12 13:54:16
 	9	3	1	5000	3	2024-03-12 13:54:16	2024-03-12 13:54:16
 	10	4	2	7000	2	2024-03-12 13:54:16	2024-03-12 13:54:16
 	11	4	3	10000	4	2024-03-12 13:54:16	2024-03-12 13:54:16
 	12	4	4	15000	1	2024-03-12 13:54:16	2024-03-12 13:54:16
 	13	5	5	8000	2	2024-03-12 13:54:16	2024-03-12 13:54:16
 	14	5	6	4000	3	2024-03-12 13:54:16	2024-03-12 13:54:16
 	15	5	7	5000	1	2024-03-12 13:54:16	2024-03-12 13:54:16
 	16	6	8	5000	2	2024-03-12 13:54:16	2024-03-12 13:54:16
 	17	6	9	8000	1	2024-03-12 13:54:16	2024-03-12 13:54:16
 	18	6	10	8000	1	2024-03-12 13:54:16	2024-03-12 13:54:16
 	19	7	7	5000	4	2024-03-12 13:54:16	2024-03-12 13:54:16
 	20	7	6	4000	3	2024-03-12 13:54:16	2024-03-12 13:54:16
 	21	7	3	8000	2	2024-03-12 13:54:16	2024-03-12 13:54:16
 	22	8	10	8000	3	2024-03-12 13:54:16	2024-03-12 13:54:16
 	23	8	5	8000	2	2024-03-12 13:54:16	2024-03-12 13:54:16
 	24	8	1	5000	1	2024-03-12 13:54:16	2024-03-12 13:54:16
 	25	9	8	5000	3	2024-03-12 13:54:16	2024-03-12 13:54:16



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Jobsheet-3: Migration, Seeder, DB Façade, Query Builder, Eloquent Orm
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D.	DB Facade <pre>PS C:\laragon\www\PWL_POS> php artisan make:controller LevelController INFO Controller [C:\laragon\www\PWL_POS\app\Http\Controllers\LevelController.php] created successfully. PS C:\laragon\www\PWL_POS></pre>
	<pre>17 Route::get('/', function () { 18 return view('welcome'); 19 }); 20 21 Route::get('/level', [LevelController::class, 'index']);</pre>
	<pre>8 class LevelController extends Controller 9 { 10 public function index() { 11 DB::insert('insert into m_level(level_kode, level_nama, created_at) values(?, ?, ?) 12 13 return 'Insert data baru berhasil'; 14 } 15 }</pre>



Jurusan Teknologi Informasi Politeknik Negeri Malang
Jobsheet-3: Migration, Seeder, DB Façade, Query Builder, Eloquent Orm
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	<p>Insert data baru berhasil</p> <table border="1"><thead><tr><th></th><th>level_id</th><th>level_kode</th><th>level_nama</th><th>created_at</th><th>updated_at</th></tr></thead><tbody><tr><td><input type="checkbox"/></td><td>1</td><td>ADM</td><td>Admin</td><td>NULL</td><td>NULL</td></tr><tr><td><input type="checkbox"/></td><td>2</td><td>MNG</td><td>Manager</td><td>NULL</td><td>NULL</td></tr><tr><td><input type="checkbox"/></td><td>3</td><td>STF</td><td>Staff/Kasir</td><td>NULL</td><td>NULL</td></tr><tr><td><input type="checkbox"/></td><td>4</td><td>CUS</td><td>Pelanggan</td><td>2024-03-12 14:14:14</td><td>NULL</td></tr></tbody></table>		level_id	level_kode	level_nama	created_at	updated_at	<input type="checkbox"/>	1	ADM	Admin	NULL	NULL	<input type="checkbox"/>	2	MNG	Manager	NULL	NULL	<input type="checkbox"/>	3	STF	Staff/Kasir	NULL	NULL	<input type="checkbox"/>	4	CUS	Pelanggan	2024-03-12 14:14:14	NULL
	level_id	level_kode	level_nama	created_at	updated_at																										
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<input type="checkbox"/>	2	MNG	Manager	NULL	NULL																										
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<input type="checkbox"/>	4	CUS	Pelanggan	2024-03-12 14:14:14	NULL																										
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	<p>Update data berhasil. Jumlah data yang diupdate: 1 baris</p> <table border="1"><thead><tr><th></th><th>level_id</th><th>level_kode</th><th>level_nama</th><th>created_at</th><th>updated_at</th></tr></thead><tbody><tr><td><input type="checkbox"/></td><td>1</td><td>ADM</td><td>Admin</td><td>NULL</td><td>NULL</td></tr><tr><td><input type="checkbox"/></td><td>2</td><td>MNG</td><td>Manager</td><td>NULL</td><td>NULL</td></tr><tr><td><input type="checkbox"/></td><td>3</td><td>STF</td><td>Staff/Kasir</td><td>NULL</td><td>NULL</td></tr><tr><td><input type="checkbox"/></td><td>4</td><td>CUS</td><td>Customer</td><td>2024-03-12 14:14:14</td><td>NULL</td></tr></tbody></table>		level_id	level_kode	level_nama	created_at	updated_at	<input type="checkbox"/>	1	ADM	Admin	NULL	NULL	<input type="checkbox"/>	2	MNG	Manager	NULL	NULL	<input type="checkbox"/>	3	STF	Staff/Kasir	NULL	NULL	<input type="checkbox"/>	4	CUS	Customer	2024-03-12 14:14:14	NULL
	level_id	level_kode	level_nama	created_at	updated_at																										
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Jurusan Teknologi Informasi Politeknik Negeri Malang
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	← T →	level_id	level_kode	level_nama	created_at	updated_at
<input type="checkbox"/>	Edit Copy Delete	1	ADM	Admin	NULL	NULL
<input type="checkbox"/>	Edit Copy Delete	2	MNG	Manager	NULL	NULL
<input type="checkbox"/>	Edit Copy Delete	3	STF	Staff/Kasir	NULL	NULL

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

The screenshot shows a GitHub repository page for 'PWL_POS' (Public). The repository has 5 commits by 'byannurcahyo'. The commit history includes: DBFacade (now), app (DBFacade now), bootstrap (first commit 3 days ago), config (first commit 3 days ago), database (Seeder 34 minutes ago), public (first commit 3 days ago), resources (DBFacade now), routes (DBFacade now), storage (first commit 3 days ago), tests (first commit 3 days ago), .editorconfig (first commit 3 days ago), .env.example (first commit 3 days ago), and .gitattributes (first commit 3 days ago). The repository has 0 stars, 1 watching, and 0 forks. It also lists 'About', 'Releases', 'Packages', and 'Languages' sections.



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E.	Query Builder
	<pre>PS C:\laragon\www\PWL_POS> php artisan make:controller KategoriController [INFO] Controller [C:\laragon\www\PWL_POS\app\Http\Controllers\KategoriController.php] created successfully. PS C:\laragon\www\PWL_POS></pre>
	<pre>22 Route::get('/level', [LevelController::class, 'index']); 23 Route::get('/kategori', [KategoriController::class, 'index']);</pre>
	<pre>8 class KategoriController extends Controller 9 { 10 public function index() { 11 \$data = [12 'kategori_kode' => 'SNK', 13 'kategori_nama' => 'Snack/Makanan Ringan', 14 'created_at' => now(), 15]; 16 DB::table('m_kategori')->insert(\$data); 17 return 'Insert data baru berhasil'; 18 } 19 }</pre>
	
	
	<pre>10 public function index() { 11 // \$data = [12 // 'kategori_kode' => 'SNK', 13 // 'kategori_nama' => 'Snack/Makanan Ringan', 14 // 'created_at' => now(), 15 //]; 16 // DB::table('m_kategori')->insert(\$data); 17 // return 'Insert data baru berhasil'; 18 19 \$row = DB::table('m_kategori')->where('kategori_kode', 'SNK')->update(['kategori_nama' => 'Snack/Makanan Ringan']); 20 return 'Update data berhasil. Jumlah data yang diupdate: ' . \$row; 21 }</pre>
	

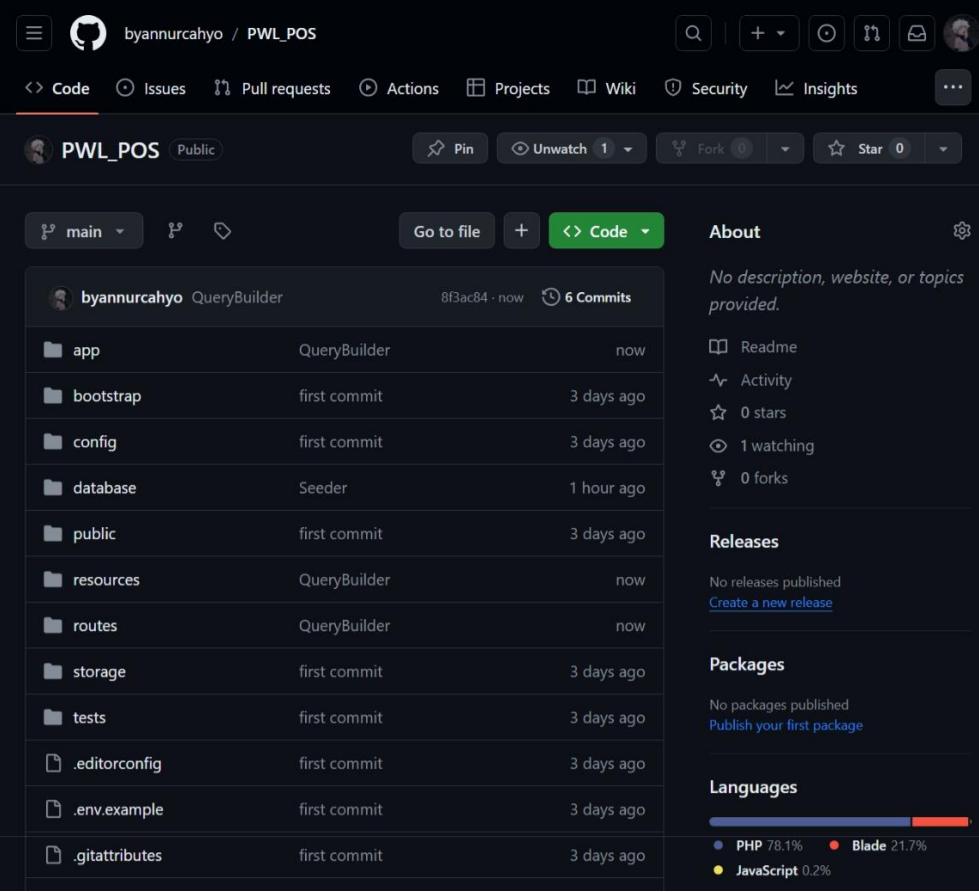


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Jobsheet-3: Migration, Seeder, DB Façade, Query Builder, Eloquent Orm
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	<table border="1"><thead><tr><th></th><th>← T →</th><th>kategori_id</th><th>kategori_kode</th><th>kategori_nama</th><th>created_at</th><th>updated_at</th></tr></thead><tbody><tr><td><input type="checkbox"/></td><td>Edit Copy Delete</td><td>1</td><td>AT</td><td>Alat Tulis</td><td>2024-03-12 13:53:32</td><td>2024-03-12 13:53:32</td></tr><tr><td><input type="checkbox"/></td><td>Edit Copy Delete</td><td>2</td><td>SBK</td><td>Sembako</td><td>2024-03-12 13:53:32</td><td>2024-03-12 13:53:32</td></tr><tr><td><input type="checkbox"/></td><td>Edit Copy Delete</td><td>3</td><td>MKN</td><td>Makanan</td><td>2024-03-12 13:53:32</td><td>2024-03-12 13:53:32</td></tr><tr><td><input type="checkbox"/></td><td>Edit Copy Delete</td><td>4</td><td>MNM</td><td>Minuman</td><td>2024-03-12 13:53:32</td><td>2024-03-12 13:53:32</td></tr><tr><td><input type="checkbox"/></td><td>Edit Copy Delete</td><td>5</td><td>OBT</td><td>Obat-obatan</td><td>2024-03-12 13:53:32</td><td>2024-03-12 13:53:32</td></tr><tr><td><input type="checkbox"/></td><td>Edit Copy Delete</td><td>6</td><td>SNK</td><td>Camilan</td><td>2024-03-12 14:56:29</td><td>NULL</td></tr></tbody></table>		← T →	kategori_id	kategori_kode	kategori_nama	created_at	updated_at	<input type="checkbox"/>	Edit Copy Delete	1	AT	Alat Tulis	2024-03-12 13:53:32	2024-03-12 13:53:32	<input type="checkbox"/>	Edit Copy Delete	2	SBK	Sembako	2024-03-12 13:53:32	2024-03-12 13:53:32	<input type="checkbox"/>	Edit Copy Delete	3	MKN	Makanan	2024-03-12 13:53:32	2024-03-12 13:53:32	<input type="checkbox"/>	Edit Copy Delete	4	MNM	Minuman	2024-03-12 13:53:32	2024-03-12 13:53:32	<input type="checkbox"/>	Edit Copy Delete	5	OBT	Obat-obatan	2024-03-12 13:53:32	2024-03-12 13:53:32	<input type="checkbox"/>	Edit Copy Delete	6	SNK	Camilan	2024-03-12 14:56:29	NULL
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F.	Eloquent Orm
	<pre>PS C:\laragon\www\PWL_POS> php artisan make:model UserModel INFO Model [C:\laragon\www\PWL_POS\app\Models\UserModel.php] created successfully. PS C:\laragon\www\PWL_POS></pre>
	<pre>8 class UserModel extends Model 9 { 10 use HasFactory; 11 12 protected \$table = 'm_user'; // Mendefinisikan nama tabel yang digunakan 13 protected \$primaryKey = 'user_id'; // Mendefinisikan primary key dari tabel yang digunakan 14 }</pre>
	<pre>23 Route::get('/level', [LevelController::class, 'index']); 24 Route::get('/kategori', [KategoriController::class, 'index']); 25 Route::get('/user', [UserController::class, 'index']);</pre>



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```
7  use App\Models\UserModel;
8
9  class UserController extends Controller
10 {
11     public function index() {
12         $user = userModel::all();
13         return view('user', ['data' => $user]);
14     }
15 }
```

```
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</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>
```

← → ⌂ ① 127.0.0.1:8000/user/ ☆

Data User

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



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```
10 class UserController extends Controller
11 {
12     public function index() {
13         $data = [
14             'username' => 'customer-1',
15             'nama' => 'Pelanggan',
16             'password' => Hash::make('12345'),
17             'level_id' => 4
18         ];
19         UserModel::insert($data);
20
21         $user = UserModel::all();
22         return view('user', ['data' => $user]);
23     }
24 }
```

← → ⌂ ① 127.0.0.1:8000/user/ ☆

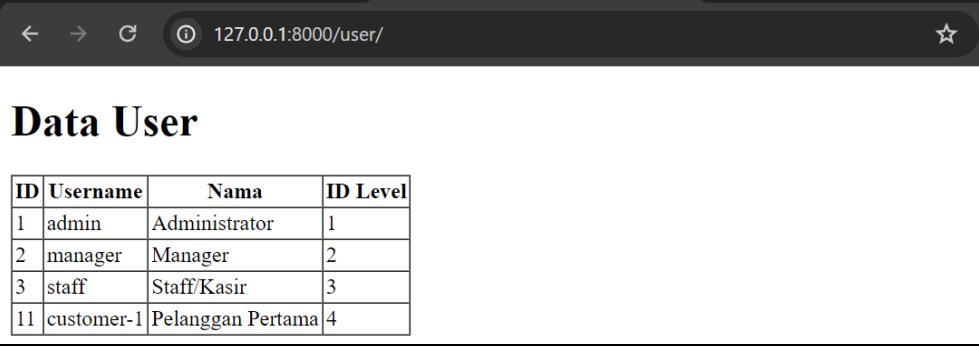
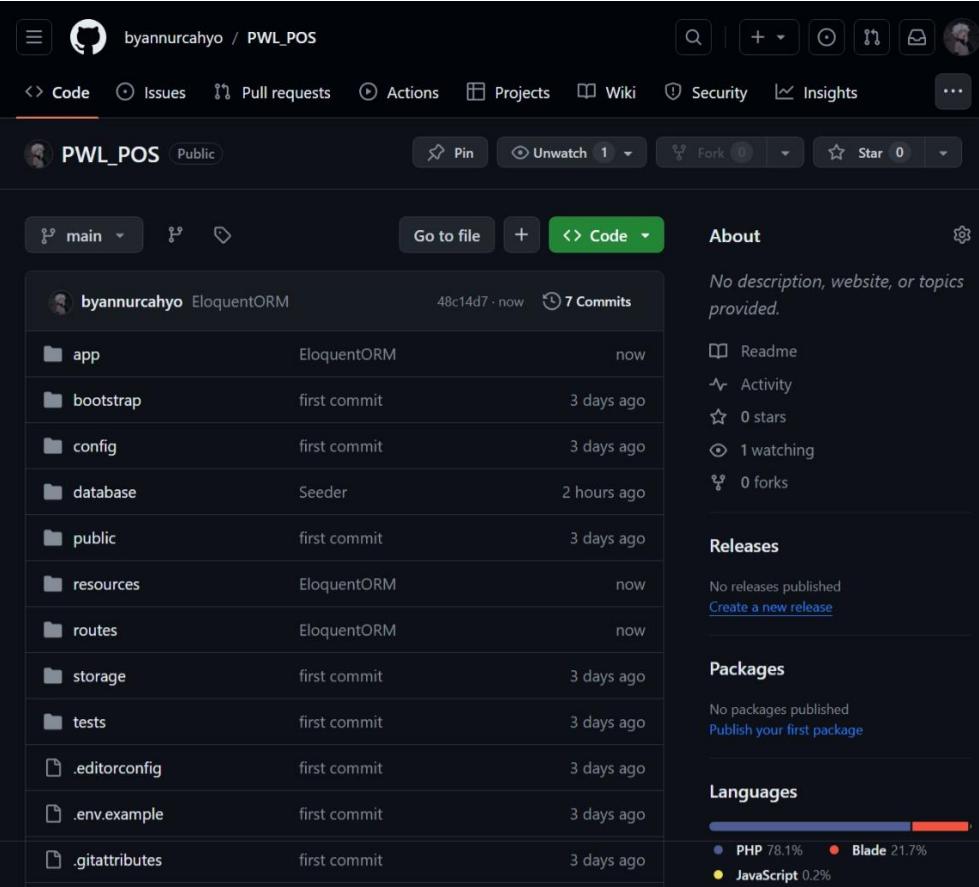
Data User

ID	Username	Nama	ID Level
1	admin	Administrator	1
2	manager	Manager	2
3	staff	Staff/Kasir	3
11	customer-1	Pelanggan	4

```
10 class UserController extends Controller
11 {
12     public function index() {
13         // $data = [
14         //     'username' => 'customer-1',
15         //     'nama' => 'Pelanggan',
16         //     'password' => Hash::make('12345'),
17         //     'level_id' => 4
18         // ];
19         // UserModel::insert($data);
20
21         // $user = UserModel::all();
22         // return view('user', ['data' => $user]);
23
24         // tambah data user dengan Eloquent Model
25         $data = [
26             'nama' => 'Pelanggan Pertama',
27         ];
28         UserModel::where('username', 'customer-1')->update($data); // update data user
29
30         // coba akss model userModel
31         $user = UserModel::all();
32         return view('user', ['data' => $user]);
33     }
34 }
```



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	 <table border="1"><thead><tr><th>ID</th><th>Username</th><th>Nama</th><th>ID Level</th></tr></thead><tbody><tr><td>1</td><td>admin</td><td>Administrator</td><td>1</td></tr><tr><td>2</td><td>manager</td><td>Manager</td><td>2</td></tr><tr><td>3</td><td>staff</td><td>Staff/Kasir</td><td>3</td></tr><tr><td>11</td><td>customer-1</td><td>Pelanggan Pertama</td><td>4</td></tr></tbody></table>	ID	Username	Nama	ID Level	1	admin	Administrator	1	2	manager	Manager	2	3	staff	Staff/Kasir	3	11	customer-1	Pelanggan Pertama	4
ID	Username	Nama	ID Level																		
1	admin	Administrator	1																		
2	manager	Manager	2																		
3	staff	Staff/Kasir	3																		
11	customer-1	Pelanggan Pertama	4																		
																					
G.	Penutup <ol style="list-style-type: none">Fungsi dari APP_KEY dalam file .env Laravel yaitu sebagai konfigurasi yang menyediakan kunci enkripsi yang digunakan untuk berbagai macam proses enkripsi, seperti enkripsi cookie, enkripsi sesi, dan hashing. Kunci ini berperan dalam menjaga keamanan data sensitif dalam aplikasi Laravel/Blade.Dengan menjalankan perintah "php artisan key:generate" pada terminal.																				



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3.	Terdapat 4 file default migrasi yang direktorinya berada di database/migrations antara lain: <ul style="list-style-type: none">• 2014_10_12_000000_create_users_table.php berfungsi untuk menyimpan informasi pengguna seperti nama, email, dan password• 2014_10_12_100000_create_password_resets_table.php berfungsi untuk menyimpan token reset password yang dikirimkan kepada pengguna yang lupa password• 2019_08_19_000000_create_failed_jobs_table.php berfungsi untuk menyimpan informasi tentang pekerjaan yang gagal dieksekusi oleh queue• 2019_08_19_000000_create_personal_access_tokens_table.php berfungsi untuk menyimpan informasi tentang token akses yang diberikan kepada pengguna untuk autentikasi API
4.	Output tersebut berfungsi untuk membuat dua kolom timestamp pada tabel yang dibuat, yaitu “created_at” yang mencatat waktu pembuatan record baru dan “updated_at” yang mencatat waktu pembaruan record.
5.	Tipe data yang dihasilkan adalah “BIGINT UNSIGNED AUTO_INCREMENT PRIMARY KEY” yang berfungsi untuk memberikan nilai integer unique dan bertambah otomatis setiap kali ada penambahan record baru ke dalam tabel.
6.	Perbedaan antara “\$table->id();” dengan “\$table->id('level_id');” dalam hasil migrasi pada tabel m_level adalah pada penamaan kolom primary key. “\$table->id();” secara otomatis menamai kolom primary key sebagai “id”, sedangkan “\$table->id('level_id');” memungkinkan untuk secara eksplisit menentukan nama kolom primary key sebagai “level_id”. Meskipun demikian, fungsinya sama yaitu menghasilkan kolom dengan tipe data “BIGINT UNSIGNED AUTO_INCREMENT PRIMARY KEY”.
7.	->unique() berfungsi untuk menetapkan konstrain unik pada kolom tertentu dalam tabel, memastikan bahwa setiap nilai dalam kolom tersebut adalah unik di antara semua baris dalam tabel.
8.	Kolom “level_id” pada tabel “m_user” menggunakan “\$table->unsignedBigInteger('level_id')” karena kolom ini merupakan foreign key yang merujuk ke kolom “level_id” di tabel “m_level”. Sedangkan kolom “level_id” pada tabel “m_level” menggunakan “\$table->id('level_id')” karena kolom ini merupakan primary key dari tabel tersebut yang secara otomatis bertambah nilainya.
9.	Class Hash digunakan untuk mengamankan informasi yang bersifat privat seperti password dengan melakukan hashing. “Hash::make('12345')” menghasilkan nilai hash acak dari string '12345', yang kemudian disimpan di database sebagai password yang diacak. Hal ini meningkatkan keamanan karena password sebenarnya tidak disimpan dalam bentuk teks biasa di database.
10.	Fungsi dari tanda tersebut adalah untuk parameter yang diberikan sebagai array di samping query itu sendiri. Saat query dijalankan, nilai-nilai dalam array akan menggantikan tanda tanya secara berurutan dalam query. Hal ini membantu agar memastikan keamanan dalam penggunaan parameter.
11.	Kode tersebut bertujuan untuk menetapkan nama tabel dan kolom kunci utama yang digunakan oleh model tersebut. Ini memungkinkan model untuk terhubung dengan tabel yang benar dan menggunakan kolom yang sesuai sebagai kunci utama ketika berinteraksi dengan database.
12.	Menurut saya lebih mudah menggunakan Eloquent ORM, karena menggunakan model PHP untuk mewakili setiap tabel dalam database, menyediakan relasi antar model, query builder yang ekspresif, serta fitur bawaan seperti pencarian, pengurutan, filter, dan validasi data. Sedangkan, Query Builder/DB



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	Facade lebih tepat digunakan untuk hal - hal sederhana dalam pengelolaan database atau ketika memerlukan kontrol langsung terhadap pembuatan query.
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