

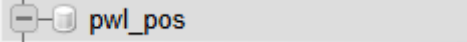
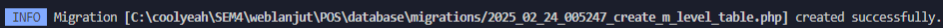
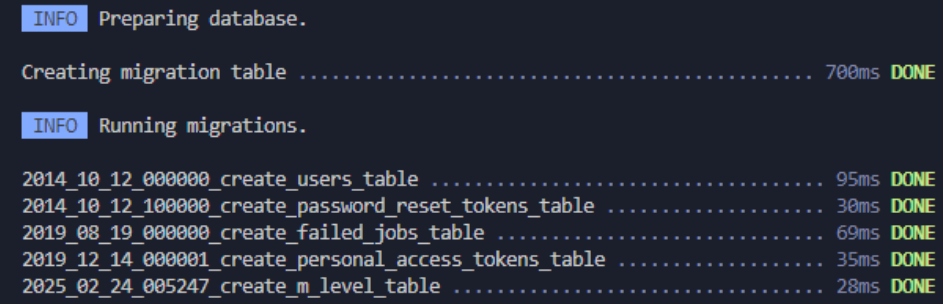
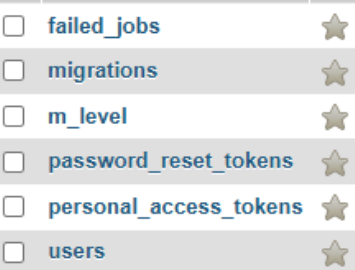
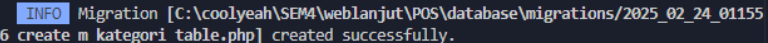
LAPORAN JOBSHEET 3  
PEMROGRAMAN WEB LANJUT



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D-IV TEKNIK INFORMATIKA  
JURUSAN TEKNOLOGI INFORMASI  
POLITEKNIK NEGERI MALANG

2024/2025

1.	Pengaturan Database
a.	
d.	<pre>APP_NAME=Laravel APP_ENV=local APP_KEY=base64:bp+l81dYXEgCDL4T7TSuFqon0agFx/In8azoUemWCBI= APP_DEBUG=true APP_URL=http://localhost</pre>
e.	<pre>DB_CONNECTION=mysql DB_HOST=127.0.0.1 DB_PORT=3306 DB_DATABASE=PWL_POS DB_USERNAME=root DB_PASSWORD=</pre>
2.1	Pembuatan file migrasi tanpa relasi
c.	
d.	<pre>public function up(): void {     Schema::create('m_level', function (Blueprint \$table): void {         \$table-&gt;id('level_id');         \$table-&gt;string('level_kode',10)-&gt;unique();         \$table-&gt;string('level_nama',100);         \$table-&gt;timestamps();     }); }</pre>
e.	
f.	
g.	 <pre>Schema::create('m_kategori', function (Blueprint \$table): void {     \$table-&gt;id('kategori_id');     \$table-&gt;string('kategori_kode',10)-&gt;unique();     \$table-&gt;string('kategori_nama',100);     \$table-&gt;timestamps(); });</pre>

	<div><div>INFO</div>Running migrations.</div> <div>2025_02_24_011556_create_m_kategori_table ..... 52ms <b>DONE</b></div>																									
2.2	Pembuatan file migrasi dengan relasi																									
a.	<div><div>INFO</div>Migration [C:\coolyeah\SEM4\weblanjut\POS\database\migrations\2025_02_24_012448_create_m_user_table.php] created successfully.</div>																									
b.	<pre>public function up(): void {     Schema::table('m_user', function (Blueprint \$table): void {         \$table-&gt;id('user_id');         \$table-&gt;unsignedBigInteger('level_id')-&gt;index();         \$table-&gt;string('nama',100);         \$table-&gt;string('username',20)-&gt;unique();         \$table-&gt;string('password');         \$table-&gt;timestamps();          \$table-&gt;foreign('level_id')-&gt;references('level_id')-&gt;on('m_level');     }); }</pre>																									
c.	<div><div>INFO</div>Running migrations.</div> <div>2025_02_24_014413_create_m_user_table ..... 167ms <b>DONE</b></div>																									
d.	<div><div>INFO</div>Running migrations.</div> <div>2025_02_24_015419_create_m_barang_table ..... 269ms <b>DONE</b></div> <div>2025_02_24_015728_create_t_penjualan_table ..... 96ms <b>DONE</b></div> <div>2025_02_24_015737_create_t_stok_table ..... 157ms <b>DONE</b></div> <div>2025_02_24_015747_create_t_penjualan_detail_table ..... 134ms <b>DONE</b></div>																									
e.																										
3.	Seeder																									
a.	<pre>public function run(): void {     \$data = [         ['level_id' =&gt; 1, 'level_code' =&gt; 'ADM', 'level_nama' =&gt; 'Administrator'],         ['level_id' =&gt; 2, 'level_code' =&gt; 'MNG', 'level_nama' =&gt; 'Manager'],         ['level_id' =&gt; 3, 'level_code' =&gt; 'STF', 'level_nama' =&gt; 'Staff/Kasir'],     ];     DB::table('m_level')-&gt;insert(\$data); }</pre>																									
b.	<pre>public function run(): void {     \$data = [         ['level_id' =&gt; 1, 'level_code' =&gt; 'ADM', 'level_nama' =&gt; 'Administrator'],         ['level_id' =&gt; 2, 'level_code' =&gt; 'MNG', 'level_nama' =&gt; 'Manager'],         ['level_id' =&gt; 3, 'level_code' =&gt; 'STF', 'level_nama' =&gt; 'Staff/Kasir'],     ];     DB::table('m_level')-&gt;insert(\$data); }</pre>																									
c.	<div><div>INFO</div>Seeding database.</div> <div>PS C:\coolyeah\SEM4\weblanjut\POS&gt;</div>																									
d.	<table><thead><tr><th></th><th>level_id</th><th>level_code</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>Administrator</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_code	level_nama	created_at	updated_at	<input type="checkbox"/>	1	ADM	Administrator	NULL	NULL	<input type="checkbox"/>	2	MNG	Manager	NULL	NULL	<input type="checkbox"/>	3	STF	Staff/Kasir	NULL	NULL
	level_id	level_code	level_nama	created_at	updated_at																					
<input type="checkbox"/>	1	ADM	Administrator	NULL	NULL																					
<input type="checkbox"/>	2	MNG	Manager	NULL	NULL																					
<input type="checkbox"/>	3	STF	Staff/Kasir	NULL	NULL																					

e.

INFO Seeder [C:\coolyeah\SEM4\web\lanjut\POS\database\seeders\UserSeeder.php] created successfully.

f.

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

g.

INFO Seeding database.

C:\coolyeah\SEM4\web\lanjut\POS>

h.

	user_id	level_id	username	nama	password	created_at	updated_at
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	1	1	admin	Administrator	\$2y\$12\$z4VAMC.RWMhyEjaNMOHfHenLynC0L0CqSNT5kCEsIE...	NULL	NULL
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	2	2	manager	Manager	\$2y\$12\$QuPCChdu4U3OgJZF.ECZupKzpwqr1MYB8wVvBtuRhf...	NULL	NULL
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	3	3	staff	Staff/Kasir	\$2y\$12\$q4JhekSedqLJr69eGF4kbeOpw9QhL86Mkq6SgRbaTD...	NULL	NULL

j.

	kategori_id	kategori_kode	kategori_nama	created_at	updated_at
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	1	K001	Makanan	NULL	NULL
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	2	K002	Minuman	NULL	NULL
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	3	K003	Barang Elektronik	NULL	NULL
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	4	K004	Fashion	NULL	NULL
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	5	K005	Olahraga	NULL	NULL

	barang_id	kategori_id	barang_kode	barang_nama	harga_jual	harga_beli	created_at	updated_at
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	1	1	B001	Tahu Sikma	5000	2000	NULL	NULL
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	2	1	B002	Tempe Mendoan	6000	3000	NULL	NULL
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	3	1	B003	Sate Ayam	10000	5000	NULL	NULL
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	4	2	B004	Es Teh Manis	2000	1000	NULL	NULL
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	5	2	B005	Es Jeruk	3000	1500	NULL	NULL
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	6	3	B006	Laptop	6000000	5000000	NULL	NULL
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	7	3	B007	Smartphone	3500000	3000000	NULL	NULL
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	8	4	B008	T-Shirt	60000	50000	NULL	NULL
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	9	4	B009	Jeans	120000	100000	NULL	NULL
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	10	5	B010	Bola Sepak	60000	50000	NULL	NULL

	penjualan_id	user_id	pembeli	penjualan_kode	tanggal_penjualan	created_at	updated_at
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	1	3	sumanto	P001	2025-02-24 04:37:30	NULL	NULL
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	2	3	siti	P002	2025-02-24 04:37:30	NULL	NULL
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	3	3	joko	P003	2025-02-24 04:37:30	NULL	NULL
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	4	3	susi	P004	2025-02-24 04:37:30	NULL	NULL
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	5	3	budi	P005	2025-02-24 04:37:30	NULL	NULL
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	6	3	sri	P006	2025-02-24 04:37:30	NULL	NULL
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	7	3	agus	P007	2025-02-24 04:37:30	NULL	NULL
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	8	3	wati	P008	2025-02-24 04:37:30	NULL	NULL
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	9	3	yati	P009	2025-02-24 04:37:30	NULL	NULL
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	10	3	tati	P010	2025-02-24 04:37:30	NULL	NULL



j.

```
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Data Level Pengguna</title>
</head>
<body>
  <h1>Data Level Pengguna</h1>
  <table border="1" cellpadding="2" cellspacing="0">
    <tr>
      <th>ID</th>
      <th>Kode Level</th>
      <th>Nama Level</th>
    </tr>
    @foreach ($data as $d)
    <tr>
      <td>{{ $d->level_id }}</td>
      <td>{{ $d->level_kode }}</td>
      <td>{{ $d->level_nama }}</td>
    </tr>
    @endforeach
  </table>
</body>
</html>
```

k.

## Data Level Pengguna

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

5.

Implementasi Query Builder

a.

INFO Controller [C:\coolyeah\SEMA4\web\lanjut\PMW\_P05\app\Http\Controllers\KategoriController.php] created successfully.

b.

```
Route::get('/level', [LevelController::class, 'index']);
Route::get('/kategori', [KategoriController::class, 'index']);
```

c.

```
public function index(): string{
    $data = [
        'kategori_kode' => 'SNK',
        'kategori_nama' => 'Snack/Makanan Ringan',
        'created_at' => now(),
    ];
    DB::table('m_kategori')->insert($data);
    return 'Insert data baru berhasil ditambahkan';
}
```

d.

	kategori_id	kategori_kode	kategori_nama	created_at	updated_at
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	1	K001	Makanan	NULL	NULL
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	2	K002	Minuman	NULL	NULL
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	3	K003	Barang Elektronik	NULL	NULL
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	4	K004	Fashion	NULL	NULL
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	5	K005	Olahraga	NULL	NULL
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	6	SNK	Snack/Makanan Ringan	2025-02-24 05:44:49	NULL

e.

```
$row = DB::table('m_kategori')
->where('kategori_kode','SNK')->update(['kategori_nama' => 'Cemilan']);
return "Update data baru berhasil. Jumlah data yang diupdate:" . $row. "baris";
```

f.

<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	6	SNK	Cemilan	2025-02-24 05:44:49	NULL
---	---	-----	---------	---------------------	------

g.

```
$row = DB::table('m_kategori')
->where('kategori_kode','SNK')->delete();
return "Delete data berhasil. Jumlah data yang dihapus:" . $row. "baris";
```

h.

```
$data = DB::select('select * from m_kategori');
return view(view: 'kategori', data: ['data' => $data]);
```

i.

Data Kategori Pengguna

ID	Kode Kategori	Nama Kategori
1	K001	Cemilan
2	K002	Cemilan
3	K003	Cemilan
4	K004	Cemilan
5	K005	Cemilan

6.

– Implementasi Eloquent ORM

a.

INFO Model [C:\coolyeah\SEM4\web\lanjut\PM\_L\_POS\app\Models\UserModel.php] created successfully.

b.

```
class UserModel extends Model
{
    use HasFactory;
    0 references
    protected $table = 'm_users';
    0 references
    protected $primaryKey = 'user_id';
}
```

c.

```
Route::get('/level', [LevelController::class, 'index']);
Route::get('/kategori', [KategoriController::class, 'index']);
Route::get('/user', [UserController::class, 'index']);
```

d.

```
use App\Models\UserModel;
use Illuminate\Http\Request;

2 references | 0 implementations
class UserController extends Controller
{
    1 reference | 0 overrides | Tabnine | Edit | Test | Explain | Document
    public function index(): Factory|View{
        $user = UserModel::all();
        return view(view: 'user', data: ['data' => $user]);
    }
}
```

e.

```
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <title>Data User</title>
</head>
<body>
    <h1>Data User</h1>
    <table border="1" cellpadding="2" cellspacing="0">
        <tr>
            <th>ID</th>
            <th>Username</th>
            <th>Nama</th>
            <th>ID Level Pengguna</th>
        </tr>
        @foreach ($data as $d)
            <tr>
                <td>{{ $d->user_id }}</td>
                <td>{{ $d->username }}</td>
                <td>{{ $d->nama }}</td>
                <td>{{ $d->level_id }}</td>
            </tr>
        @endforeach
    </table>
</body>
</html>
```

f.

Data User

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

g.

```
class UserController extends Controller
{
    1 reference | 0 overrides | Tabnine | Edit | Test | Explain | Document
    public function index(): Factory|View{
        $data = [
            'username' => 'customer-1',
            'nama' => 'pelanggan',
            'password' => Hash::make(12345),
            'level_id' => 4,
        ];
        UserModel::insert($data);

        $user = UserModel::all();
        return view(view: 'user', data: ['data' => $user]);
    }
}
```

h.

## Data User

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

i.

```
$data = [
    'nama' => 'pelanggan pertama',
];
UserModel::where('username', 'customer-1')->update($data);
```

j.

## Data User

ID	Username	Nama	ID Level Pengguna
1	admin	Administrator	1
2	manager	Manager	2
3	staff	Staff/Kasir	3
4	customer-1	pelanggan pertama	4

### Jawaban Penutup

1. Untuk memverifikasi pengguna tertentu yang bisa mengakses API agar lebih aman.
2. Dengan memasukkan kode php artisan key:generate atau klik generate key ketika load pertama kali.
3. Ada 4 file migrasi yaitu :
  - create\_users\_table.php= Membuat tabel users
  - create\_password\_resets\_table.php = Menyimpan data reset password.
  - create\_failed\_jobs\_table.php = Menyimpan informasi tentang pekerjaan yang gagal dalam queue.
  - create\_personal\_access\_tokens\_table.php = Digunakan oleh Laravel Sanctum untuk menyimpan token akses pribadi (biasanya untuk API authentication).
4. Menambahkan 2 kolom created\_at dan updated\_at yang masing-masing berfungsi menyimpan kapan data dibuat dan diperbarui
5. Adalah bigint dengan auto increment yang berfungsi sebagai primary key pada tabel
6. Jika menggunakan id(); maka primary key adalah id dan jika 'level\_id' maka primary keynya adalah level\_id dan bukan id.
7. Fungsi unique() adalah agar setiap data yang dimasukkan berbeda dari data yang lainnya.



8. Karena pada `m_user` `level_id` berfungsi sebagai foreign key dan perlu dikosongkan yang akan diisi oleh foreign key dari tabel referensi, sedangkan pada `m_level` berfungsi sebagai primary key.
9. Digunakan untuk mengenkripsi password agar password tidak mudah dilihat oleh pengguna lainnya.
10. Digunakan sebagai parameter binding agar mencegah serangan SQL injection.
11. `protected $table = 'm_user'`; berfungsi sebagai `m_user` sebagai representasi tabel dari model `UserModel` dan `protected $primaryKey = 'user_id'`; sebagai representasi primary key dari model tersebut.
12. DB Facade : penggunaannya menggunakan SQL raw yang berarti kode sama persis dengan SQL biasanya.  
Query Builder : penggunaannya lebih fleksibel dibandingkan dengan DB Facade tanpa SQL raw.  
Eloquent ORM : Sangat mudah digunakan karena kita tidak perlu menuliskan SQL secara mentak karena berbasis objek.