

Database model documentation

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1. Model details

Model name:

Padelix Indonesia PDM

Version:

2.4

Database engine:

MySQL

Description:

2. Tables

2.1. Table roles

Description:

Defines groups of permissions (e.g., Admin, Editor, Viewer).

2.1.1. Columns

| Column name | Type | Properties | Description |
|-------------|--------------|------------|--------------------------------------------------|
| id | int | PK | unique primary identifier. |
| name | varchar(50) | | Human-readable name of the role. |
| description | varchar(255) | null | Explanation of what users with this role can do. |
| created_at | datetime | | Standard audit timestamps. |
| updated_at | datetime | | Standard audit timestamps. |

2.1.2. Alternate keys

| Key name | Columns | Description |
|---------------|---------|------------------|
| roles_uq_name | name | Unique Role Name |

2.2. Table permissions

2.2.1. Columns

| Column name | Type | Properties | Description |
|-------------|--------------|------------|--------------------------------------------------------------------------------|
| id | int | PK | unique primary identifier. |
| slug | varchar(50) | | Unique machine-readable string for code-level checks (e.g., im:product:write). |
| description | varchar(255) | null | Context for what the specific permission allows. |
| created_at | datetime | | Standard audit timestamps. |
| updated_at | datetime | | Standard audit timestamps. |

2.2.2. Alternate keys

| Key name | Columns | Description |
|---------------------|---------|------------------------|
| permissions_uq_slug | slug | Unique Permission Slug |

2.3. Table users

Description:

Stores user credentials and account status for administrative access to the system.

2.3.1. Columns

| Column name | Type | Properties | Description |
|---------------|--------------|------------|----------------------------------------------------------|
| id | int | PK | unique primary identifier. |
| is_active | boolean | | Flag to enable or suspend account access. |
| username | varchar(50) | | Unique login name. |
| email | varchar(100) | | Primary contact and unique identifier for communication. |
| password_hash | varchar(255) | | Securely salted and hashed password string. |
| last_login | datetime | | Timestamp of the most recent successful authentication. |
| created_at | datetime | | Standard audit timestamps. |
| updated_at | datetime | | Standard audit timestamps. |

2.3.2. Alternate keys

| Key name | Columns | Description |
|-------------------|----------|----------------------|
| users_uq_username | username | Unique User Username |
| users_uq_email | email | Unique User Email |

2.4. Table audit_logs

Description:

Immutable record of sensitive actions taken within the system for security and troubleshooting.

2.4.1. Columns

| Column name | Type | Properties | Description |
|-------------|--------|------------|----------------------------|
| id | bigint | PK | unique primary identifier. |

| | | | |
|-------------------|--------------|------|--------------------------------------------------------------------------|
| user_id | int | null | The user who performed the action. |
| entity_id | int | null | ID of the affected record (e.g., the Product ID). |
| username_snapshot | varchar(50) | | Captures the username at the time of action (in case user is deleted). |
| action | varchar(50) | | Verb describing the event (e.g., "LOGIN", "UPDATE_PRODUCT"). |
| ip_address | varchar(45) | null | Network origin of the request. |
| user_agent | varchar(255) | null | The platform it uses for the action |
| details | text | null | JSON or text blob containing the "before" and "after" state of the data. |
| created_at | datetime | | Standard audit timestamps. |

2.5. Table brands

Description:

Manufacturers or brands of the products.

2.5.1. Columns

| Column name | Type | Properties | Description |
|-------------|--------------|------------|--------------------------------------------------------|
| id | int | PK | unique primary identifier. |
| name | varchar(50) | | Official name of the manufacturer or brand |
| slug | varchar(50) | | URL-friendly unique identifier. |
| logo_url | varchar(255) | null | Absolute path to the logo's image (Storage or Public). |
| website | varchar(255) | | The official manufacturers' or brands' website |
| created_at | datetime | | Standard audit timestamps. |
| updated_at | datetime | | Standard audit timestamps. |

2.5.2. Alternate keys

| Key name | Columns | Description |
|----------------|---------|--------------------|
| brand_uq_name | name | Unique Brand Names |
| brands_uq_slug | slug | Unique Brand Slug |

2.6. Table categories

Description:

Hierarchical taxonomy for products.

2.6.1. Columns

| Column name | Type | Properties | Description |
|-------------|--------------|------------|----------------------------------------------------------------------|
| id | int | PK | unique primary identifier. |
| parent_id | int | null | Self-reference to allow nested sub-categories. |
| name | varchar(50) | | Differentiable name of the Category |
| slug | varchar(50) | | URL-friendly unique identifier. |
| image_url | varchar(255) | | Absolute path to the category's thumbnail image (Storage or Public). |
| description | text | | Detailed Description of the category |
| created_at | datetime | | Standard audit timestamps. |
| updated_at | datetime | | Standard audit timestamps. |

2.6.2. Alternate keys

| Key name | Columns | Description |
|--------------------|---------|----------------------|
| categories_uq_name | name | Unique Category Name |
| categories_uq_slug | slug | Unique Category Slug |

2.7. Table products

Description:

The core catalog entity representing a saleable or displayable item.

2.7.1. Columns

| Column name | Type | Properties | Description |
|-------------|------|------------|----------------------------|
| id | int | PK | unique primary identifier. |
| created_by | int | null | Reference to the user |

| | | | |
|-------------|---------------|------|-----------------------------------------------------|
| | | | who added the product. |
| brand_id | int | null | Foreign keys for organization. |
| category_id | int | null | Foreign keys for organization. |
| name | varchar(150) | | Commercial name of the product. |
| slug | varchar(150) | | URL-friendly unique identifier. |
| is_featured | boolean | | If true, the item appears in homepage highlights. |
| is_active | boolean | | Controls visibility on the public frontend. |
| description | longtext | null | Detailed marketing text (HTML/Markdown supported). |
| base_price | decimal(20,2) | | Starting price before variant adjustments. |
| show_price | boolean | | Controls price's visibility on the public frontend. |
| created_at | datetime | | Standard audit timestamps. |
| updated_at | datetime | | Standard audit timestamps. |

2.7.2. Alternate keys

| Key name | Columns | Description |
|------------------|---------|---------------------|
| products_uq_name | name | Unique Product Name |
| products_uq_slug | slug | Unique Product Slug |

2.8. Table product_variants

Description:

Specific versions of a product (e.g., different sizes or materials).

2.8.1. Columns

| Column name | Type | Properties | Description |
|-------------|--------------|------------|-------------------------------------------------|
| id | int | PK | unique primary identifier. |
| product_id | int | | Reference to the product that have the variant. |
| is_active | boolean | | Controls visibility on the public frontend. |
| name | varchar(100) | | Commercial name of |

| | | | |
|--------------------|---------------|------|--------------------------------------------------------------|
| | | | the variant. |
| sku | varchar(50) | null | Stock Keeping Unit (Unique barcode/identifier) |
| price_adjustment | decimal(20,2) | | Amount added to or subtracted from the product's base price. |
| stock_quantity | decimal(20,2) | | Current inventory level. |
| is_unlimited_stock | boolean | | Flag for items that don't track physical inventory counts. |
| created_at | datetime | | Standard audit timestamps. |
| updated_at | datetime | | Standard audit timestamps. |

2.9. Table product_medias

Description:

Visual assets associated with a product.

2.9.1. Columns

| Column name | Type | Properties | Description |
|-------------|--------------|------------|-----------------------------------------------------|
| id | int | PK | unique primary identifier. |
| product_id | int | | Reference to the product that have the image. |
| media_id | int | | Reference to the media |
| is_primary | boolean | | If true, this is the main image used in thumbnails. |
| alt_text | varchar(255) | null | Image's alt text |
| sort_order | int | | Controls the sequence in the image gallery. |
| created_at | datetime | | Standard audit timestamps. |
| updated_at | datetime | | Standard audit timestamps. |

2.10. Table product_specifications

Description:

Flexible key-value pairs for technical data (e.g., "Weight": "10kg").

2.10.1. Columns

| Column name | Type | Properties | Description |
|-------------|--------------|------------|-----------------------------------------------|
| id | int | PK | unique primary identifier. |
| product_id | int | | Reference to the product that have the image. |
| spec_key | varchar(100) | | Specification's key |
| spec_value | varchar(50) | null | Specification's value |
| created_at | datetime | | Standard audit timestamps. |
| updated_at | datetime | | Standard audit timestamps. |

2.11. Table portfolios

Description:

Records of completed projects, court installations, or case studies.

2.11.1. Columns

| Column name | Type | Properties | Description |
|-----------------|--------------|------------|------------------------------------------------------------------|
| id | int | PK | unique primary identifier. |
| created_by | int | null | Reference to the user who documented the project. |
| title | varchar(150) | | Name of the project. |
| slug | varchar(150) | | URL-friendly unique identifier. |
| location | varchar(100) | null | Physical area where the project was completed (e.g., "Jakarta"). |
| is_featured | boolean | | Controls visibility in the "Featured Projects" section. |
| is_active | boolean | | Controls visibility on the public frontend. |
| description | longtext | null | Detailed documentation text (HTML/Markdown supported). |
| completion_date | date | null | The date the project was finalized. |
| created_at | datetime | | Standard audit timestamps. |
| updated_at | datetime | | Standard audit |

| | | | |
|--|--|--|-------------|
| | | | timestamps. |
|--|--|--|-------------|

2.11.2. Alternate keys

| Key name | Columns | Description |
|---------------------|---------|----------------------|
| portfolios_uq_title | title | Unique Project Title |
| portfolios_uq_slug | slug | Unique Project Slug |

2.12. Table portfolio_medias

Description:

Visual assets associated with a portfolio.

2.12.1. Columns

| Column name | Type | Properties | Description |
|--------------|--------------|------------|-----------------------------------------------------|
| id | int | PK | unique primary identifier. |
| portfolio_id | int | | Reference to the portfolio that have the image. |
| media_id | int | | Reference to the media |
| is_primary | boolean | | If true, this is the main image used in thumbnails. |
| alt_text | varchar(255) | null | Image's alt text |
| sort_order | int | | Controls the sequence in the image gallery. |
| created_at | datetime | | Standard audit timestamps. |
| updated_at | datetime | | Standard audit timestamps. |

2.13. Table users_roles

Description:

Bridge tables between users and roles (Many-to-Many).

2.13.1. Columns

| Column name | Type | Properties | Description |
|-------------|----------|------------|----------------------------|
| users_id | int | PK | unique primary identifier. |
| roles_id | int | PK | unique primary identifier. |
| assigned_at | datetime | | Standard audit timestamps. |

2.14. Table roles_permissions

Description:

Bridge tables between roles and permissions (Many-to-Many).

2.14.1. Columns

| Column name | Type | Properties | Description |
|----------------|----------|------------|----------------------------|
| roles_id | int | PK | unique primary identifier. |
| permissions_id | int | PK | unique primary identifier. |
| granted_at | datetime | | Standard audit timestamps. |

2.15. Table medias

Description:

This is the central repository for all assets. It separates the "physical" asset info from where it is used.

2.15.1. Columns

| Column name | Type | Properties | Description |
|-------------|------------------------------------------------------|------------|---------------------------------------------------------|
| id | int | PK | unique primary identifier. |
| name | varchar(255) | | Original filename or a user-defined title. |
| file_key | varchar(255) | | Unique identifier (e.g., the local filename or S3 key). |
| type | enum("image", "video", "document", "audio", "other") | | image, video, document, audio, other. |
| provider | varchar(20) | | local, mux, cloundinary, etc. |
| mime_type | varchar(100) | | application/pdf, image/webp, video/mp4, etc. |
| file_size | bigint | | Size in bytes for tracking storage usage. |
| url | text | | Publicly accessible URL. |
| metadata | json | null | Stores type-specific data. |

| | | | |
|------------|----------|--|----------------------------|
| created_at | datetime | | Standard audit timestamps. |
| updated_at | datetime | | Standard audit timestamps. |

2.15.2. Alternate keys

| Key name | Columns | Description |
|--------------------|----------|-----------------------|
| medias_uq_file_key | file_key | Unique Media File Key |

3. References

3.1. Reference audit_logs_users

Description:

Maps users to none or more audit_logs (One-to-Many).

| users | 0..* | audit_logs |
|-------|------|------------|
| id | <-> | user_id |

3.2. Reference products_brands

Description:

Maps brands to none or more products (One-to-Many).

| brands | 0..* | products |
|--------|------|----------|
| id | <-> | brand_id |

3.3. Reference products_categories

Description:

Maps categories to none or more products (One-to-Many).

| categories | 0..* | products |
|------------|------|-------------|
| id | <-> | category_id |

3.4. Reference product_variants_products

Description:

Maps products to none or more product_variants (One-to-Many).

| products | 0..* | product_variants |
|----------|------|------------------|
| id | <-> | product_id |

3.5. Reference product_images_products

Description:

Maps products to none or more product_images (One-to-Many).

| products | 0..* | product_medias |
|----------|------|----------------|
| id | <-> | product_id |

3.6. Reference product_specifications_products

Description:

Maps products to none or more product_specification (One-to-Many).

| | | |
|--------------------------|-------------|----------------------------------------|
| products | 0..* | product_specifications |
| id | <-> | product_id |

3.7. Reference products_users

Description:

Maps users to none or more products (One-to-Many).

| | | |
|-----------------------|-------------|--------------------------|
| users | 0..* | products |
| id | <-> | created_by |

3.8. Reference portfolios_users

Description:

Maps users to none or more portfolios (One-to-Many).

| | | |
|-----------------------|-------------|----------------------------|
| users | 0..* | portfolios |
| id | <-> | created_by |

3.9. Reference portfolio_images_portfolios

Description:

Maps portfolios to none or more portfolio_images (One-to-Many).

| | | |
|----------------------------|-------------|----------------------------------|
| portfolios | 0..* | portfolio_medias |
| id | <-> | portfolio_id |

3.10. Reference categories_parent_categories

Description:

Maps categories to none or one parent products (One-to-One).

| | | |
|----------------------------|-------------|----------------------------|
| categories | 0..1 | categories |
| id | <-> | parent_id |

3.11. Reference users_users_roles

Description:

Maps users to none or more roles (Many-to-Many).

| | | |
|-----------------------|-------------|-----------------------------|
| users | 0..* | users_roles |
|-----------------------|-------------|-----------------------------|

| | | |
|----|-----|----------|
| id | <-> | users_id |
|----|-----|----------|

3.12. Reference roles_users_roles

Description:

Maps roles to none or more users (Many-to-Many).

| | | |
|-------|------|-------------|
| roles | 0..* | users_roles |
| id | <-> | roles_id |

3.13. Reference roles_permissions_roles

Description:

Maps roles to none or more permissions (Many-to-Many).

| | | |
|-------|------|-------------------|
| roles | 0..* | roles_permissions |
| id | <-> | roles_id |

3.14. Reference roles_permissions_permissions

Description:

Maps permissions to none or more roles (Many-to-Many).

| | | |
|-------------|------|-------------------|
| permissions | 0..* | roles_permissions |
| id | <-> | permissions_id |

3.15. Reference portfolio_medias_medias

Description:

Maps medias to none or more portfolio_medias (One-to-Many).

| | | |
|--------|------|------------------|
| medias | 0..* | portfolio_medias |
| id | <-> | media_id |

3.16. Reference product_medias_medias

Description:

Maps medias to none or more product_medias (One-to-Many).

| | | |
|--------|------|----------------|
| medias | 0..* | product_medias |
| id | <-> | media_id |

4. Areas

4.1. Role-Based Access Control (RBAC) subject area

4.1.1. Tables

- roles
- permissions
- users
- users_roles
- roles_permissions

4.1.2. References

- audit_logs_users
- products_brands
- products_categories
- product_variants_products
- product_images_products
- product_specifications_products
- products_users
- portfolios_users
- portfolio_images_portfolios
- categories_parent_categories
- users_users_roles
- roles_users_roles
- roles_permissions_roles
- roles_permissions_permissions
- portfolio_medias_medias
- product_medias_medias

4.2. Inventory & Catalog Management (ICM) subject area

4.2.1. Tables

- brands
- categories
- products
- product_variants
- product_medias
- product_specifications

4.2.2. References

- audit_logs_users
- products_brands
- products_categories
- product_variants_products

- product_images_products
- product_specifications_products
- products_users
- portfolios_users
- portfolio_images_portfolios
- categories_parent_categories
- users_users_roles
- roles_users_roles
- roles_permissions_roles
- roles_permissions_permissions
- portfolio_medias_medias
- product_medias_medias

4.3. System Administration (SA) subject area

4.3.1. Tables

- audit_logs

4.3.2. References

- audit_logs_users
- products_brands
- products_categories
- product_variants_products
- product_images_products
- product_specifications_products
- products_users
- portfolios_users
- portfolio_images_portfolios
- categories_parent_categories
- users_users_roles
- roles_users_roles
- roles_permissions_roles
- roles_permissions_permissions
- portfolio_medias_medias
- product_medias_medias

4.4. Content Management (CM) subject area

4.4.1. Tables

- portfolios
- portfolio_medias
- medias

4.4.2. References

- audit_logs_users

- products_brands
- products_categories
- product_variants_products
- product_images_products
- product_specifications_products
- products_users
- portfolios_users
- portfolio_images_portfolios
- categories_parent_categories
- users_users_roles
- roles_users_roles
- roles_permissions_roles
- roles_permissions_permissions
- portfolio_medias_medias
- product_medias_medias