📚 Laravel Beginner Notes: Understanding 5 Core Folders

These 5 folders are **foundational** for Laravel development. Here's what each does — simplified for beginners:

1️⃣ Model Folder (app/Models)

📍 Location: app/Models

🔍 **Purpose:**

Handles **data interaction with the database** using **Eloquent ORM**.

🧠 **Remember:**

- One model = one table
- It defines how your app talks to the database

🛠️ **Example:**

php

Copy code

php artisan make:model Post

This creates: app/Models/Post.php

🔗 **Related To:**

- Migrations
- Relationships (hasMany, belongsTo, etc.)
- DB Queries

2️⃣ Controller Folder (app/Http/Controllers)

📍 Location: app/Http/Controllers

🔍 **Purpose:**

Handles **business logic** and connects models to views.

🧠 **Remember:**

- Controller receives the request
- Talks to the model
- Returns a response (like a view)

🛠️ **Example:**

php

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php artisan make:controller PostController

This creates: app/Http/Controllers/PostController.php

🧩 Usage:

php

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return view('posts.index', ['posts' => Post::all()]);

3️⃣ View Folder (resources/views)

📍 Location: resources/views

🔍 **Purpose:**

Stores all **HTML & Blade template files**.

🧠 **Remember:**

- .blade.php is Laravel's special HTML file
- Views show data from the controller

🛠️ **Example:**

Create: resources/views/welcome.blade.php

🧩 Usage in controller:

php

Copy code

return view('welcome');

4️⃣ Routing Folder (routes)

📍 Location: routes/web.php

🔍 **Purpose:**

Defines **URLs** (routes) and connects them to controller methods or views.

🧠 **Remember:**

- It's like a **traffic controller** for requests
- You tell Laravel: "If someone visits /home, do this"

🛠 Example:

php

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```php
Route::get('/home', [HomeController::class, 'index']);
```

Or for a simple page:

php

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```php
Route::view('/about', 'about');
```

5️⃣ Assets/Public Folder (public/)

📍 Location: public/

🔍 **Purpose:**

Holds all **publicly accessible files** like:

- CSS
- JavaScript
- Images
- Fonts
- Audio/Video

🧠 **Remember:**

Only public/ is visible from the browser

🛠 Usage in blade:

html

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```html
<link rel="stylesheet" href="{{ asset('css/style.css') }}">
<img src="{{ asset('images/logo.png') }}" alt="Logo">
```

🧠 Memory Tip (📦 MVC + Routes + Assets):

Folder	Shortcut	Role
Models	**M** in MVC	Talk to the **Database**
Controllers	**C** in MVC	Handle **Logic**

Folder	Shortcut	Role
Views	**V** in MVC	Show **HTML Output**
Routes	R	Define **URLs**
Public/Assets	A	Serve **static files** (CSS, JS, IMG)

✍️ **Summary Cheat Sheet:**

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- ◆ Models   -> app/Models   -> Talks to DB
- ◆ Controllers -> app/Http/Controllers   -> Logic handler
- ◆ Views   -> resources/views   -> HTML output
- ◆ Routes   -> routes/web.php   -> URL mapping
- ◆ Public   -> public/   -> Static files (CSS, JS, etc.)