

# Different Ways of Routing in Laravel

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Abdullah Al Noman Prince

## Different Ways of Routing in Laravel

In Laravel, routes are defined in the `routes` directory, specifically in the `web.php` file for web routes and `api.php` file for API routes. Here are different types of routes you can define in Laravel:

### Simple Routing in Laravel

#### Basic Routes:

- Define routes using the `Route::` methods in the `web.php` file.
- Example:

```
Route::get('/', function () {  
    return view('welcome');  
});
```

#### Route Parameters:

- Define routes with parameters to capture values from the URL.
- Example:

```
Route::get('/user/{id}', function ($id) {  
    return 'User ID: ' . $id;  
});
```

## Optional Parameters:

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- Define optional parameters in routes.
- Example:

```
Route::get('/user/{name?}', function ($name = null) {  
    return 'User Name: ' . $name;  
});
```

## Named Routes:

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- Give a route a name for easier referencing.
- Example:

```
Route::get('/profile', function () {  
    // ...  
})->name('profile');
```

## Route Groups:

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- Group related routes together for applying middleware, prefixes, and more.
- Example:

```
Route::prefix('admin')->group(function () {  
    Route::get('/dashboard', function () {  
        return 'Admin Dashboard';  
    })->name('admin');  
    // ...  
});
```

## Route with Middleware:

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- Apply middleware to routes for filtering HTTP requests.
- Example:

```
Route::get('/admin', function () {  
    // ...  
})->middleware('admin')->name('admin');
```

## Controller Routes:

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- Define routes that point to controller methods.
- Example:

```
Route::get('/users', [UserController::class, 'index'])->name('users');
```

## Resource Controller Routes:

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- Create routes for CRUD operations automatically using resource controllers.
- Example:

```
Route::resource('photos', PhotoController::class);
```

## API Resource Routes:

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- API resource routes are similar to resource routes but are typically used for building API endpoints. They generate routes for standard CRUD operations but without the need for rendering views.
- Example:

```
Route::apiResource('products', ProductController::class);
```

## Advance Routing in Laravel

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### Route Prefixing:

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- Prefix a group of routes with a common path.
- Example:

```
Route::prefix('admin')->group(function () {  
    Route::get('/dashboard', [AdminController::class, 'dashboard']);  
});
```

### Combined Route Group with Prefix and Middleware:

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```
Route::group(['prefix' => 'admin', 'middleware' => ['auth']], function() {  
    Route::get('/dashboard', [AdminController::class, 'dashboard'])->  
>name('dashboard');  
});
```

## Combined Named Route Group with Prefix and Middleware:

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```
Route::name('admin.')
    ->prefix('admin')
    ->middleware(['auth'])
    ->group(function () {

        Route::get('/users', function () {
            // Route assigned name "admin.users"...
            // Matches The "/admin/users" URL
            // This /users URI only for logged in users
        })->name('users');
    });

// Or,

Route::name('admin.')
    ->group(['prefix' => 'admin','middleware' => ['auth']], function() {
        // Route assigned name "admin.dashboard"
        // Matches The "/admin/dashboard" URL
        // This /dashboard URI only for logged in users
        Route::get('/dashboard',[AdminController::class, 'dashboard'])->
        name('dashboard');
    });
```

## Controllers Route Group:

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```
Route::controller(OrderController::class)->group(function () {
    Route::get('/orders/{id}', 'show');
    Route::post('/orders', 'store');
});
```

## Route Middleware Group:

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```
Route::middleware(['auth', 'is_admin'])->group(function () {
    Route::get('/', function () {
        // Uses auth & is_admin middlewares
    });

    Route::get('/user/profile', function () {
        // Uses auth & is_admin middlewares
    });
});
```

Thank you for taking the time to delve into this article.

Happy Learning! 

#laravel\_routing #laravel #php