



Title: Assignment on ORM

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Module: 18

Task 1:

Create a new migration file to add a new table named "categories" to the database. The table should have the following columns:

id (primary key, auto-increment)

name (string)

created_at (timestamp)

updated_at (timestamp)

Artisan Command for creating file:

```
php artisan make:migration create_Categories_table
```

Migration file:

```
*/
public function up(): void
{
    Schema::create('categories', function (Blueprint $table) {
        $table->id();
        $table->string('name',50);
        $table->timestamp('created_at')->useCurrent();
        $table->timestamp('updated_at')->useCurrent()->useCurrentOnUpdate();
    });
}
```

2. Task 2:

Create a new model named "Category" associated with the "categories" table. Define the necessary properties and relationships.

Defining Relationship:

```
<?php

namespace App\Models;

use App\Models\Post;
use Illuminate\Database\Eloquent\Model;
use Illuminate\Database\Eloquent\Factories\HasFactory;
```

```

class Category extends Model
{
    use HasFactory;
    protected $fillable = ['name'];

    public function posts(){
        return $this->hasMany(Post::class);
    }
}

```

Task 3:

Write a migration file to add a foreign key constraint to the "posts" table. The foreign key should reference the "categories" table on the "category_id" column.

Posts table Migration file:

```

public function up(): void
{
    Schema::create('posts', function (Blueprint $table) {
        $table->id();
        $table->string('name');
        $table->text('description')->nullable();
        $table->timestamp('created_at')->useCurrent();
        $table->timestamp('updated_at')->useCurrent()->useCurrentOnUpdate();
        $table->foreignId('category_id')->constrained('categories')
            ->cascadeOnDelete()
            ->cascadeOnUpdate();
    });
}

```

Task 4:

Create a relationship between the "Post" and "Category" models. A post belongs to a category, and a category can have multiple posts.

Post Model:

```

<?php

namespace App\Models;

use App\Models\Category;

```

```

use Illuminate\Database\Eloquent\Model;
use Illuminate\Database\Eloquent\Factories\HasFactory;
use Illuminate\Database\Eloquent\SoftDeletes;

class Post extends Model
{
    use HasFactory, SoftDeletes;
    protected $fillable = ['name', 'description', 'category_id'];
    public function category()
    {
        return $this->belongsTo(Category::class);
    }
}

```

Task 5:

Write a query using Eloquent ORM to retrieve all posts along with their associated categories. Make sure to eager load the categories to optimize the query.

Controller method:

```

//Task 5
public function postData()
{
    $postdata = Post::with('category')->get();
    return $postdata;
}

```

Task 6

Implement a method in the "Post" model to get the total number of posts belonging to a specific category. The method should accept the category ID as a parameter and return the count.

Route:

```

Route::controller(AdminController::class)->group(function () {

    Route::get('/categoryPost/{category_id}', 'categoryPost');

});

```

Implemented Method in Post Model:

```
public static function totalPostsCountByCategory($categoryId)
{
    return self::where('category_id', $categoryId)->count();
}
```

Controller method for testing In Postman:

```
public function categoryPost($category_id)
{
    $postCount = Post::totalPostsCountByCategory($category_id);
    return response()->json(['Count' => $postCount]);
}
```

Postman Output:

assignment_18 / 6. categoryPost Data

GET {{baseurl}}/categoryPost/category_id Send

Params • Authorization Headers (8) Body Pre-request Script Tests Settings Cookies

Query Params

Key	Value	Description	...	Bulk Edit
Key	Value	Description		

Path Variables

Key	Value	Description	...	Bulk Edit
category_id	3	Description		

Body Cookies (3) Headers (9) Test Results

Status: 200 OK Time: 481 ms Size: 1.11 KB Save as Example

Pretty Raw Preview Visualize JSON

```
1 {
2   "Count": 3
3 }
```

Task 7:

Create a new route in the web.php file to handle the following URL pattern: `/posts/{id}/delete`. Implement the corresponding controller method to delete a post by its ID. Soft delete should be used.

Route:

```
Route::controller(AdminController::class)->group(function () {  
  
    Route::get('/posts/{id}/delete', 'softDelete');  
});
```

Controller method:

```
//Task 7  
public function softDelete($id)  
{  
    $softDelete = Post::findOrFail($id)->delete();  
    if ($softDelete) {  
        return 'successfully soft deleted';  
    } else {  
        return 'failed to softdelete';  
    }  
}
```

Postman Output:

The screenshot shows a Postman interface for a GET request to `{{baseurl}}/posts/18/delete`. The request is configured with a path variable `id` set to `18`. The response is a 200 OK status with a body containing the text `successfully soft deleted`.

Params • Authorization Headers (8) Body Pre-request Script Tests Settings Cookies

Query Params

Key	Value	Description	...	Bulk Edit
Key	Value	Description		

Path Variables

Key	Value	Description	...	Bulk Edit
id	18	Description		

Body Cookies (3) Headers (9) Test Results

Status: 200 OK Time: 563 ms Size: 1.13 KB Save as Example

Pretty Raw Preview Visualize HTML

1 successfully soft deleted

Task 8:

Implement a method in the "Post" model to get all posts that have been soft deleted. The method should return a collection of soft deleted posts.

Route:

```
Route::controller(AdminController::class)->group(function () {  
    Route::get('/softData', 'softData');  
});
```

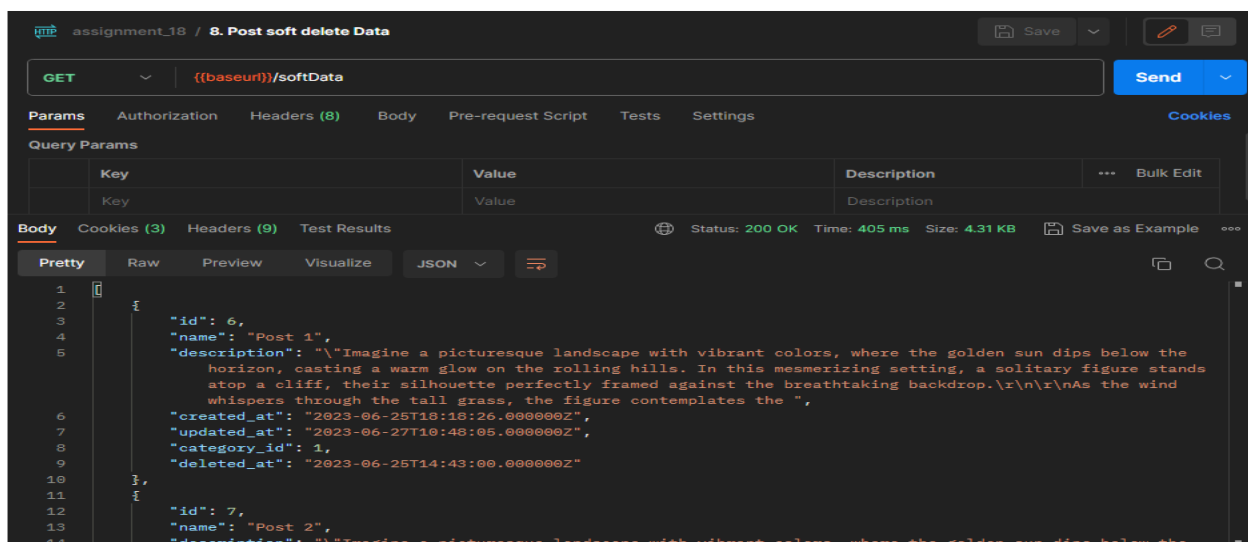
Implemented Method in Post Model:

```
public static function softDeletedData()  
{  
    return self::onlyTrashed()->get();  
}
```

Controller method for testing In Postman:

```
public function softData()  
{  
    $softData = Post::softDeletedData();  
    return $softData;  
}
```

Postman output:



The screenshot shows a Postman interface for a GET request to the endpoint `{{baseurl}}/softData`. The request is successful, returning a 200 OK status with a response time of 405 ms and a size of 4.31 KB. The response body is displayed in JSON format, showing a collection of two soft-deleted posts. The first post has an ID of 6 and a name of "Post 1", with a description that is truncated. The second post has an ID of 7 and a name of "Post 2", with a description that is also truncated. Both posts have a `deleted_at` timestamp.

```
{  
  "id": 6,  
  "name": "Post 1",  
  "description": "\"Imagine a picturesque landscape with vibrant colors, where the golden sun dips below the horizon, casting a warm glow on the rolling hills. In this mesmerizing setting, a solitary figure stands atop a cliff, their silhouette perfectly framed against the breathtaking backdrop.\\r\\n\\r\\nAs the wind whispers through the tall grass, the figure contemplates the \",  
  "created_at": "2023-06-25T18:18:26.000000Z",  
  "updated_at": "2023-06-27T10:48:05.000000Z",  
  "category_id": 1,  
  "deleted_at": "2023-06-25T14:43:00.000000Z",  
  },  
  {  
    "id": 7,  
    "name": "Post 2",  
    "description": "\"Imagine a picturesque landscape with vibrant colors, where the golden sun dips below the
```

Task 9:

Write a Blade template to display all posts and their associated categories. Use a loop to iterate over the posts and display their details.

Blade File:

```
<section class="py-5">
  <div class="container px-5 mb-5">
    <div class="text-center mb-5">
      <h1 class="display-5 fw-bolder mb-0"><span class="text-gradient d-inline">All Post With Category</span></h1>
    </div>
    <div class="row gx-5 justify-content-center">
      <div id="project-list" class="col-lg-11 col-xl-9 col-xxl-8">
        @foreach ( $postdata as $data )
          <div class="card overflow-hidden shadow rounded-4 border-0 mb-5">
            <div class="card-body p-0">
              <div class="d-flex align-items-center">
                <div class="p-5">
                  <h2 class="fw-bolder"> {{ $data->name }}</h2>
                  <h4 class="fw-bolder"> {{ $data->category['name'] }}</h4>
                  <p>{{ $data->description }}</p>
                </div>
              </div>
            </div>
          </div>
        @endforeach
      </div>
    </div>
  </div>
</section>
```


SRZ	postData	categories
All Post With Category		
	<div>Post 3</div> <div>Technology</div> <div>Imagine a picturesque landscape with vibrant colors, where the golden sun dips below the horizon, casting a warm glow on the rolling hills. In this mesmerizing setting, a solitary figure stands atop a cliff, their silhouette perfectly framed against the breathtaking backdrop. As the wind whispers through the tall grass, the figure contemplates the</div>	
	<div>Post 4</div> <div>Food</div> <div>Imagine a picturesque landscape with vibrant colors, where the golden sun dips below the horizon, casting a warm glow on the rolling hills. In this mesmerizing setting, a solitary figure stands atop a cliff, their silhouette perfectly framed against the breathtaking backdrop. As the wind whispers through the tall grass, the figure contemplates the</div>	
	<div>Post 5</div> <div>Sports</div> <div>Imagine a picturesque landscape with vibrant colors, where the golden sun dips below the horizon, casting a warm glow on the rolling hills. In this mesmerizing setting, a solitary figure stands atop a cliff, their silhouette perfectly framed against the breathtaking backdrop. As the wind whispers through the tall grass, the figure contemplates the</div>	
	<div>Post 6</div> <div>Sports</div> <div>Imagine a picturesque landscape with vibrant colors, where the golden sun dips below the horizon, casting a warm glow on the rolling hills. In this mesmerizing setting, a solitary figure stands atop a cliff, their silhouette perfectly framed against the breathtaking backdrop. As the wind whispers through the tall grass, the figure contemplates the</div>	
	<div>Post 7</div> <div>Food</div> <div>Imagine a picturesque landscape with vibrant colors, where the golden sun dips below the horizon, casting a warm glow on the rolling hills. In this mesmerizing setting, a solitary figure stands atop a cliff, their silhouette perfectly framed against the breathtaking backdrop. As the wind whispers through the tall grass, the figure contemplates the</div>	
	<div>Post 8</div> <div>Food</div> <div>Imagine a picturesque landscape with vibrant colors, where the golden sun dips below the horizon, casting a warm glow on the rolling hills. In this mesmerizing setting, a solitary figure stands atop a cliff, their silhouette perfectly framed against the breathtaking backdrop. As the wind whispers through the tall grass, the figure contemplates the</div>	
	<div>Post 13</div> <div>Fashion</div> <div>Imagine a picturesque landscape with vibrant colors, where the golden sun dips below the horizon, casting a warm glow on the rolling hills. In this mesmerizing setting, a solitary figure stands atop a cliff, their silhouette perfectly framed against the breathtaking backdrop. As the wind whispers through the tall grass, the figure contemplates the</div>	
	<div>Post 14</div> <div>Travel</div> <div>Imagine a picturesque landscape with vibrant colors, where the golden sun dips below the horizon, casting a warm glow on the rolling hills. In this mesmerizing setting, a solitary figure stands atop a cliff, their silhouette perfectly framed against the breathtaking backdrop. As the wind whispers through the tall grass, the figure contemplates the</div>	
	<div>Post 15</div> <div>Fashion</div> <div>Imagine a picturesque landscape with vibrant colors, where the golden sun dips below the horizon, casting a warm glow on the rolling hills. In this mesmerizing setting, a solitary figure stands atop a cliff, their silhouette perfectly framed against the breathtaking backdrop. As the wind whispers through the tall grass, the figure contemplates the</div>	
	<div>Post 16</div> <div>Travel</div> <div>Imagine a picturesque landscape with vibrant colors, where the golden sun dips below the horizon, casting a warm glow on the rolling hills. In this mesmerizing setting, a solitary figure stands atop a cliff, their silhouette perfectly framed against the breathtaking backdrop. As the wind whispers through the tall grass, the figure contemplates the</div>	

Task 10:

Create a new route in the web.php file to handle the following URL pattern: `"/categories/{id}/posts"`. Implement the corresponding controller method to retrieve all posts belonging to a specific category. The category ID should be passed as a parameter to the method.

Route:

```
Route::controller(AdminController::class)->group(function () {  
  
    Route::get('/categories/{id}/posts', 'specificCatPost');  
});
```

Controller method:

```
//Task 10  
public function specificCatPost($id)  
{  
    try {  
        $category = Category::findOrFail($id);  
        return $category->posts;  
    } catch (\Exception $e) {  
        return 'Category not found.';  
    }  
}
```

Postman output:

The screenshot shows a Postman interface for a GET request. The URL is `{{baseurl}}/categories/3/posts`. The response is a JSON array of two post objects. The first object has an id of 9 and a detailed description. The second object has an id of 12.

Key	Value	Description
id	3	Description

```
{  
  "id": 9,  
  "name": "Post 4",  
  "description": "\\Imagine a picturesque landscape with vibrant colors, where the golden sun dips below the horizon, casting a warm glow on the rolling hills. In this mesmerizing setting, a solitary figure stands atop a cliff, their silhouette perfectly framed against the breathtaking backdrop.\\r\\n\\r\\nAs the wind whispers through the tall grass, the figure contemplates the ",  
  "created_at": "2023-06-25T18:18:27.000000Z",  
  "updated_at": "2023-06-27T10:48:06.000000Z",  
  "category_id": 3,  
  "deleted_at": null  
},  
  {  
    "id": 12,
```

Task 11:

Implement a method in the "Category" model to get the latest post associated with the category. The method should return the post object.

Route:

```
Route::controller(AdminController::class)->group(function () {  
    Route::get('/categories/{id}/latestpost', 'latestPost');  
});
```

Implemented Method in Category Model:

```
public function LatestPost()  
{  
    return $this->posts()->orderBy('id', 'desc')->first();  
}
```

Controller method for testing In Postman:

```
public function latestPost($id)  
{  
    $category = Category::findOrFail($id)->LatestPost();  
    return $category;  
}
```

Postman output:

The screenshot shows a Postman interface for a REST client. The request is a GET to `{{baseurl}}/categories/categoryId/latestpost` with a path variable `categoryId` set to `2`. The response is a 200 OK status with a JSON body containing post details.

Key	Value	Description
categoryId	2	Description

Body (JSON):

```
{  
  "id": 11,  
  "name": "Post 6",  
  "description": "\nImagine a picturesque landscape with vibrant colors, where the golden sun dips below the horizon, casting a warm glow on the rolling hills. In this mesmerizing setting, a solitary figure stands atop a cliff, their silhouette perfectly framed against the breathtaking backdrop.\n\nAs the wind whispers through the tall grass, the figure contemplates the ",  
  "created_at": "2023-06-25T18:18:27.000000Z",  
  "updated_at": "2023-06-27T10:48:06.000000Z",  
  "category_id": 2,  
  "deleted_at": null  
}
```

Task 12:

Write a Blade template to display the latest post for each category. Use a loop to iterate over the categories and display the post details.

```
<section class="py-5">
  <div class="container px-5 mb-5">
    <div class="text-center mb-5">
      <h1 class="display-5 fw-bolder mb-0"><span class="text-gradient d-inline">Latest Post For Each Category</span></h1>
    </div>
    <div class="row gx-5 justify-content-center">
      <div id="project-list" class="col-lg-11 col-xl-9 col-xxl-8">
        @foreach ($categories as $category)
          <div class="card overflow-hidden shadow rounded-4 border-0 mb-5">
            <div class="card-body p-0">
              <div class="d-flex align-items-center">
                <div class="p-5">
                  <h2>{{ $category->name }}</h2>
                  @if ($category->LatestPost())
                    <div>
                      <h3>{{ $category->LatestPost()->name }}</h3>
                      <p>{{ $category->LatestPost()->description }}</p>
                    </div>
                  @else
                    <p>No posts found for this category.</p>
                  @endif
                </div>
              </div>
            </div>
          </div>
        @endforeach
      </div>
    </div>
  </div>
</section>
```

Output:

Latest Post For Each Category

Technology

Post 3

"Imagine a picturesque landscape with vibrant colors, where the golden sun dips below the horizon, casting a warm glow on the rolling hills. In this mesmerizing setting, a solitary figure stands atop a cliff, their silhouette perfectly framed against the breathtaking backdrop. As the wind whispers through the tall grass, the figure contemplates the

Sports

Post 6

"Imagine a picturesque landscape with vibrant colors, where the golden sun dips below the horizon, casting a warm glow on the rolling hills. In this mesmerizing setting, a solitary figure stands atop a cliff, their silhouette perfectly framed against the breathtaking backdrop. As the wind whispers through the tall grass, the figure contemplates the

Food

Post 8

"Imagine a picturesque landscape with vibrant colors, where the golden sun dips below the horizon, casting a warm glow on the rolling hills. In this mesmerizing setting, a solitary figure stands atop a cliff, their silhouette perfectly framed against the breathtaking backdrop. As the wind whispers through the tall grass, the figure contemplates the

Fashion

Post 15

"Imagine a picturesque landscape with vibrant colors, where the golden sun dips below the horizon, casting a warm glow on the rolling hills. In this mesmerizing setting, a solitary figure stands atop a cliff, their silhouette perfectly framed against the breathtaking backdrop. As the wind whispers through the tall grass, the figure contemplates the

Travel

Post 16

"Imagine a picturesque landscape with vibrant colors, where the golden sun dips below the horizon, casting a warm glow on the rolling hills. In this mesmerizing setting, a solitary figure stands atop a cliff, their silhouette perfectly framed against the breathtaking backdrop. As the wind whispers through the tall grass, the figure contemplates the