Миграции

1. Создание таблицы customers

php

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Schema::create('customers', function (Blueprint $table) {

$table->id('customer\_id');

$table->string('first\_name');

$table->string('last\_name');

$table->string('email')->unique();

$table->string('phone');

$table->date('registration\_date');

$table->timestamps();

});

2. Создание таблицы product\_categories

php

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Schema::create('product\_categories', function (Blueprint $table) {

$table->id('category\_id');

$table->string('category\_name');

$table->unsignedBigInteger('parent\_category\_id')->nullable();

$table->timestamps();

$table->foreign('parent\_category\_id')

->references('category\_id')

->on('product\_categories')

->onDelete('set null');

});

3. Создание таблицы products

php

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Schema::create('products', function (Blueprint $table) {

$table->id('product\_id');

$table->string('product\_name');

$table->text('description')->nullable();

$table->decimal('price', 10, 2);

$table->unsignedBigInteger('category\_id');

$table->integer('stock\_quantity')->default(0);

$table->timestamps();

$table->foreign('category\_id')

->references('category\_id')

->on('product\_categories')

->onDelete('restrict');

});

4. Создание таблицы orders

php

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Schema::create('orders', function (Blueprint $table) {

$table->id('order\_id');

$table->unsignedBigInteger('customer\_id');

$table->dateTime('order\_date');

$table->decimal('total\_amount', 10, 2);

$table->string('status')->default('pending');

$table->timestamps();

$table->foreign('customer\_id')

->references('customer\_id')

->on('customers')

->onDelete('cascade');

});

5. Создание таблицы order\_items

php

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Schema::create('order\_items', function (Blueprint $table) {

$table->id('order\_item\_id');

$table->unsignedBigInteger('order\_id');

$table->unsignedBigInteger('product\_id');

$table->integer('quantity');

$table->decimal('unit\_price', 10, 2);

$table->timestamps();

$table->foreign('order\_id')

->references('order\_id')

->on('orders')

->onDelete('cascade');

$table->foreign('product\_id')

->references('product\_id')

->on('products')

->onDelete('restrict');

});

6. Создание таблицы payments

php

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Schema::create('payments', function (Blueprint $table) {

$table->id('payment\_id');

$table->unsignedBigInteger('order\_id');

$table->decimal('amount', 10, 2);

$table->dateTime('payment\_date');

$table->string('payment\_method');

$table->string('transaction\_id')->unique();

$table->timestamps();

$table->foreign('order\_id')

->references('order\_id')

->on('orders')

->onDelete('cascade');

});

Калькулирующий запрос

Пример запроса для расчета общей выручки по категориям товаров за определенный период:

php

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// В репозитории или сервисе

public function getRevenueByCategory($startDate, $endDate)

{

return DB::table('product\_categories as pc')

->select(

'pc.category\_id',

'pc.category\_name',

DB::raw('SUM(oi.quantity \* oi.unit\_price) as total\_revenue'),

DB::raw('SUM(oi.quantity) as total\_quantity\_sold')

)

->join('products as p', 'p.category\_id', '=', 'pc.category\_id')

->join('order\_items as oi', 'oi.product\_id', '=', 'p.product\_id')

->join('orders as o', 'o.order\_id', '=', 'oi.order\_id')

->whereBetween('o.order\_date', [$startDate, $endDate])

->where('o.status', 'completed')

->groupBy('pc.category\_id', 'pc.category\_name')

->orderByDesc('total\_revenue')

->get();

}

Пример использования в контроллере

php

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public function categoryRevenueReport(Request $request)

{

$startDate = $request->input('start\_date', now()->subMonth()->toDateString());

$endDate = $request->input('end\_date', now()->toDateString());

$revenueByCategory = $this->orderRepository->getRevenueByCategory($startDate, $endDate);

return view('reports.category\_revenue', [

'revenueData' => $revenueByCategory,

'startDate' => $startDate,

'endDate' => $endDate

]);

}