**Documentation for Outstanding Invoices Module**

**1. Database Migration: Outstanding Invoices Table**

The outstanding\_invoices table is the core structure for managing invoice data in the module. Below is the explanation of each column and its purpose:

**Table Name: outstanding\_invoices**

| **Column Name** | **Type** | **Details** |
| --- | --- | --- |
| id | unsignedBigInteger | Auto-incremented primary key for the invoice record. |
| client\_service\_id | unsignedBigInteger | Foreign key linking the invoice to a specific client service. |
| total\_amount | decimal(15,2) | Total charge for the current invoice cycle (e.g., monthly, yearly). Default: 0. |
| prev\_remaining\_amount | decimal(15,2) | Outstanding amount from previous invoices. Default: 0. |
| all\_total | decimal(15,2) | Total due for this invoice, including prev\_remaining\_amount and total\_amount. Default: 0. |
| paid\_amount | decimal(15,2) | The amount paid towards this invoice so far. Default: 0. |
| remaining\_amount | decimal(15,2) | Remaining amount to be paid for the invoice. Nullable. |
| discount\_amount | decimal(15,2) | Absolute discount applied to the invoice. Default: 0. |
| discount\_percentage | decimal(5,2) | Discount percentage applied to the invoice. Default: 0. |
| due\_date | date | Date by which the invoice must be paid. |
| last\_paid | date | The most recent payment date. Nullable (if not paid yet). |
| remarks | text | Additional comments or details about the invoice. Nullable. |
| bill\_number | string | Unique identifier for the invoice (e.g., physical bill number). Nullable and unique. |
| status | enum | Status of the invoice: pending, paid, or overdue. Default: pending. |
| all\_total\_paid | decimal(15,2) | Cumulative total paid for the invoice, including partial payments. Default: 0. |
| created\_at | timestamp | Timestamp for when the invoice was created. Auto-generated. |
| updated\_at | timestamp | Timestamp for when the invoice was last updated. Auto-generated. |

**Foreign Key Constraint**

* **Foreign Key**: client\_service\_id
  + References the id column of the client\_services table.
  + Ensures referential integrity by using the onDelete('cascade') rule, meaning if the linked client service is deleted, all related invoices are also deleted.

**Purpose**

The table is designed to handle various financial details for client services. It supports:

* Tracking outstanding amounts from previous invoices.
* Managing discounts and payment statuses.
* Ensuring proper client association with each invoice.

**Code Reference: Migration**

|  |
| --- |
| use Illuminate\Database\Migrations\Migration;  use Illuminate\Database\Schema\Blueprint;  use Illuminate\Support\Facades\Schema;  class CreateOutstandingInvoicesTable extends Migration  {  public function up()  {  Schema::create('outstanding\_invoices', function (Blueprint $table) {  $table->id();  $table->unsignedBigInteger('client\_service\_id');  $table->decimal('total\_amount', 15, 2)->default(0);  $table->decimal('prev\_remaining\_amount', 15, 2)->default(0);  $table->decimal('all\_total', 15, 2)->default(0);  $table->decimal('paid\_amount', 15, 2)->default(0);  $table->decimal('remaining\_amount', 15, 2)->nullable();  $table->decimal('discount\_amount', 15, 2)->default(0);  $table->decimal('discount\_percentage', 5, 2)->default(0);  $table->date('due\_date');  $table->date('last\_paid')->nullable();  $table->text('remarks')->nullable();  $table->string('bill\_number')->nullable()->unique();  $table->enum('status', ['pending', 'paid', 'overdue'])->default('pending');  $table->decimal('all\_total\_paid', 15, 2)->default(0);  $table->timestamps();  $table->foreign('client\_service\_id')  ->references('id')  ->on('client\_services')  ->onDelete('cascade');  });  }  public function down()  {  Schema::dropIfExists('outstanding\_invoices');  }  } |

**2. Model: OutStandingInvoice**

The OutStandingInvoice model represents the structure and relationships of the outstanding\_invoices table in the database. It encapsulates the data logic, relationships, and custom attributes for the invoice module.

**Model Details**

| **Property/Method** | **Description** |
| --- | --- |
| protected $table | Specifies the database table name explicitly (outstanding\_invoices). |
| protected $primaryKey | Defines the primary key for the table (id). |
| protected $fillable | Lists the attributes that are mass-assignable, allowing bulk insertion or updates. |
| protected $casts | Converts specific fields (due\_date, last\_paid) to date formats for easier manipulation. |

**Mass Assignable Attributes**

The fillable array defines the attributes that can be used for bulk operations like create() or update().

| **Attribute** | **Description** |
| --- | --- |
| client\_service\_id | Foreign key linking the invoice to a client service. |
| total\_amount | Total charge for the invoice period. |
| prev\_remaining\_amount | Outstanding balance from previous invoices. |
| all\_total | Total due amount for the invoice, including previous and current charges. |
| paid\_amount | Amount paid so far towards the invoice. |
| remaining\_amount | Remaining balance due on the invoice. |
| discount\_amount | Absolute discount applied to the invoice. |
| discount\_percentage | Percentage-based discount applied to the invoice. |
| due\_date | Payment deadline for the invoice. |
| last\_paid | Most recent payment date. |
| remarks | Additional comments or notes related to the invoice. |
| bill\_number | Unique identifier for the invoice (e.g., physical bill number). |
| status | Status of the invoice: pending, paid, or overdue. |
| all\_total\_paid | Total payments made towards the invoice. |

**Relationships**

1. **incomes()**
   * Defines a one-to-many relationship between OutStandingInvoice and Income.
   * **Purpose**: Fetches all income records linked to a specific invoice.
   * **Code**: