### **Database Structure**

Given your requirements, we'll create the following tables:

1. **packing\_list Table**: Stores information about the boxes used in a specific quotation. It includes references to either a standard box (using box\_id from box\_details) or a custom box.
2. **custom\_boxes Table**: Stores details of custom boxes that are not part of the box\_details table.
3. **packing\_list\_products Table**: Stores details of the products inside each box for a specific quotation.

### **Table Structure**

#### **1. custom\_boxes Table**

sql

Copy code

CREATE TABLE IF NOT EXISTS `custom\_boxes` (

 `custom\_box\_id` int UNSIGNED NOT NULL AUTO\_INCREMENT,

 `box\_number` varchar(10) DEFAULT NULL,

 `box\_name` varchar(45) DEFAULT NULL,

 `box\_height` decimal(12,2) DEFAULT NULL,

 `box\_width` decimal(12,2) DEFAULT NULL,

 `box\_depth` decimal(12,2) DEFAULT NULL,

 `box\_max\_weight` decimal(12,2) DEFAULT NULL,

 PRIMARY KEY (`custom\_box\_id`)

);

#### **2. packing\_list Table**

sql

Copy code

CREATE TABLE IF NOT EXISTS `packing\_list` (

 `packing\_list\_id` int UNSIGNED NOT NULL AUTO\_INCREMENT,

 `quotation\_head\_id` int UNSIGNED NOT NULL,

 `box\_id` int UNSIGNED DEFAULT NULL,

 `custom\_box\_id` int UNSIGNED DEFAULT NULL,

 PRIMARY KEY (`packing\_list\_id`),

 FOREIGN KEY (`box\_id`) REFERENCES `box\_details`(`box\_id`) ON DELETE SET NULL,

 FOREIGN KEY (`custom\_box\_id`) REFERENCES `custom\_boxes`(`custom\_box\_id`) ON DELETE SET NULL,

 FOREIGN KEY (`quotation\_head\_id`) REFERENCES `quotations`(`quotation\_head\_id`) ON DELETE CASCADE

);

#### **3. packing\_list\_products Table**

sql

Copy code

CREATE TABLE IF NOT EXISTS `packing\_list\_products` (

 `packing\_list\_products\_id` int UNSIGNED NOT NULL AUTO\_INCREMENT,

 `packing\_list\_id` int UNSIGNED NOT NULL,

 `serial\_number` int UNSIGNED NOT NULL,

 `product\_code` varchar(45) DEFAULT NULL,

 `width` decimal(12,2) DEFAULT NULL,

 `height` decimal(12,2) DEFAULT NULL,

 `depth` decimal(12,2) DEFAULT NULL,

 `weight` decimal(12,2) DEFAULT NULL,

 `quantity` int UNSIGNED DEFAULT NULL,

 `type` varchar(45) DEFAULT NULL,

 PRIMARY KEY (`packing\_list\_products\_id`),

 FOREIGN KEY (`packing\_list\_id`) REFERENCES `packing\_list`(`packing\_list\_id`) ON DELETE CASCADE

);

### **PHP CodeIgniter 4: API to Accept JSON and Insert into Database**

Here's a controller method in CodeIgniter 4 to handle the JSON response and insert it into the database:

#### **Controller: PackingListController.php**

php

Copy code

<?php

namespace App\Controllers;

use App\Models\PackingListModel;

use App\Models\CustomBoxModel;

use App\Models\PackingListProductsModel;

class PackingListController extends BaseController

{

 public function insertPackingList()

 {

 $json = $this->request->getJSON(true);

 // Models

 $packingListModel = new PackingListModel();

 $customBoxModel = new CustomBoxModel();

 $packingListProductsModel = new PackingListProductsModel();

 // Assuming quotation\_head\_id is sent in the request

 $quotationHeadId = $json['quotation\_head\_id'];

 $boxes = $json['boxes'];

 foreach ($boxes as $box) {

 $boxId = null;

 $customBoxId = null;

 if (isset($box['box\_id'])) {

 // It's a standard box, use box\_id from box\_details

 $boxId = $box['box\_id'];

 } else {

 // It's a custom box, insert into custom\_boxes

 $customBoxData = [

 'box\_number' => $box['box\_number'],

 'box\_name' => $box['box\_name'],

 'box\_height' => $box['box\_height'],

 'box\_width' => $box['box\_width'],

 'box\_depth' => $box['box\_depth'],

 'box\_max\_weight' => $box['box\_max\_weight'],

 ];

 $customBoxId = $customBoxModel->insert($customBoxData);

 }

 // Insert into packing\_list

 $packingListData = [

 'quotation\_head\_id' => $quotationHeadId,

 'box\_id' => $boxId,

 'custom\_box\_id' => $customBoxId,

 ];

 $packingListId = $packingListModel->insert($packingListData);

 // Insert products into packing\_list\_products

 foreach ($box['products'] as $product) {

 $productData = [

 'packing\_list\_id' => $packingListId,

 'serial\_number' => $product['serial\_number'],

 'product\_code' => $product['product\_id'],

 'width' => $product['width'],

 'height' => $product['height'],

 'depth' => $product['depth'],

 'weight' => $product['weight'],

 'quantity' => $product['quantity'],

 'type' => $product['type'],

 ];

 $packingListProductsModel->insert($productData);

 }

 }

 return $this->response->setStatusCode(200)->setJSON(['status' => 'success']);

 }

}

#### **Models**

**PackingListModel.php**

php

Copy code

<?php

namespace App\Models;

use CodeIgniter\Model;

class PackingListModel extends Model

{

 protected $table = 'packing\_list';

 protected $primaryKey = 'packing\_list\_id';

 protected $allowedFields = ['quotation\_head\_id', 'box\_id', 'custom\_box\_id'];

}

**CustomBoxModel.php**

php

Copy code

<?php

namespace App\Models;

use CodeIgniter\Model;

class CustomBoxModel extends Model

{

 protected $table = 'custom\_boxes';

 protected $primaryKey = 'custom\_box\_id';

 protected $allowedFields = ['box\_number', 'box\_name', 'box\_height', 'box\_width', 'box\_depth', 'box\_max\_weight'];

}

**PackingListProductsModel.php**

php

Copy code

<?php

namespace App\Models;

use CodeIgniter\Model;

class PackingListProductsModel extends Model

{

 protected $table = 'packing\_list\_products';

 protected $primaryKey = 'packing\_list\_products\_id';

 protected $allowedFields = ['packing\_list\_id', 'serial\_number', 'product\_code', 'width', 'height', 'depth', 'weight', 'quantity', 'type'];

}

### **Explanation:**

1. **Database Structure**:
	* packing\_list stores the relationship between quotations and boxes (both standard and custom).
	* custom\_boxes stores custom box information.
	* packing\_list\_products stores product information within each box.
2. **Controller**:
	* The insertPackingList method processes the incoming JSON and inserts the appropriate records into the database.
	* It distinguishes between standard boxes (with box\_id) and custom boxes (without box\_id), inserting custom boxes into the custom\_boxes table.
3. **Models**:
	* Three models are used to interact with their respective tables (packing\_list, custom\_boxes, and packing\_list\_products).

This setup should allow you to handle both standard and custom boxes, as well as the products inside them, while keeping the database normalized.

# Boxwise print view

<!DOCTYPE html>

<html lang="en">

<head>

 <meta charset="UTF-8">

 <meta name="viewport" content="width=device-width, initial-scale=1.0">

 <title>Packing List</title>

 <style>

 body {

 font-family: Arial, sans-serif;

 margin: 20px;

 }

 .container {

 border: 1px solid black;

 padding: 10px;

 width: 600px;

 max-width: 100%;

 }

 .header, .footer {

 text-align: center;

 font-weight: bold;

 margin-bottom: 10px;

 }

 .row {

 display: flex;

 justify-content: space-between;

 margin-bottom: 10px;

 }

 .box {

 flex: 1;

 }

 .box-right {

 text-align: right;

 }

 .packing-list-table {

 width: 100%;

 border-collapse: collapse;

 }

 .packing-list-table th, .packing-list-table td {

 border: 1px solid black;

 padding: 5px;

 text-align: center;

 }

 .packing-list-table th {

 background-color: #f2f2f2;

 }

 .footer-note {

 margin-top: 10px;

 text-align: center;

 font-size: 0.9em;

 }

 </style>

</head>

<body>

<div class="container">

 <div class="header">PACKING LIST</div>

 <div class="row">

 <div class="box">

 <strong>TO,</strong><br>

 Jain Media Advertising<br>

 140, Cuttack Road<br>

 Bhubaneshwar, Odisha 751006<br>

 Contact Number: 7749056633

 </div>

 <div class="box box-right">

 <strong>FROM,</strong><br>

 COSIGN INDIA PVT LTD,<br>

 PUNE - 411030<br>

 Mob: +91 9595615523<br>

 Sales Exe: 7397962333

 </div>

 </div>

 <table class="packing-list-table">

 <thead>

 <tr>

 <th>SR NO</th>

 <th>MATERIAL DESCRIPTIONS</th>

 <th>QTY</th>

 </tr>

 </thead>

 <tbody>

 <tr>

 <td>1</td>

 <td>ID-DS2024 610 MM X 152 MM</td>

 <td>06 NOS</td>

 </tr>

 <tr>

 <td>2</td>

 <td>STRATOS2024A4 300 MM</td>

 <td>07 NOS</td>

 </tr>

 <tr>

 <td>3</td>

 <td>STRATOSTRIPA4 300 MM</td>

 <td>07 NOS</td>

 </tr>

 <tr>

 <td>4</td>

 <td>STRATOSTRIPA4 212 MM</td>

 <td>34 NOS</td>

 </tr>

 <tr>

 <td>5</td>

 <td>APC3000S + APC4003 + APC4010</td>

 <td>12 NOS</td>

 </tr>

 <tr>

 <td>6</td>

 <td>ID-DSCORN24L</td>

 <td>24 NOS</td>

 </tr>

 <tr>

 <td>7</td>

 <td>STRATOBRACA4</td>

 <td>17 NOS</td>

 </tr>

 <tr>

 <td>8</td>

 <td>STRATOCAP3A4</td>

 <td>48 NOS</td>

 </tr>

 <tr>

 <td>9</td>

 <td>BLACK SCREW</td>

 <td>100 NOS</td>

 </tr>

 <tr>

 <td>10</td>

 <td>BRACKET SCREW</td>

 <td>70 NOS</td>

 </tr>

 </tbody>

 </table>

 <div class="footer">

 HANDLE WITH CARE<br>

 WEIGHT: 27.3 KG

 </div>

 <div class="footer-note">

 Packed by: HS / RS / AP / SS / SM<br>

 Checked by: GP<br>

 <strong>NINEX LOGISTICS BY ROAD TO PAY</strong><br>

 BOX DIMENSION: 600MM X 330MM X 360MM

 </div>

</div>

</body>

</html>

# Template for Entire Packing List Print View

<!DOCTYPE html>

<html lang="en">

<head>

 <meta charset="UTF-8">

 <meta name="viewport" content="width=device-width, initial-scale=1.0">

 <title>Entire Packing List</title>

 <style>

 body {

 font-family: Arial, sans-serif;

 margin: 20px;

 }

 .container {

 border: 1px solid black;

 padding: 10px;

 width: 800px;

 max-width: 100%;

 }

 .header, .footer {

 text-align: center;

 font-weight: bold;

 margin-bottom: 10px;

 }

 .row {

 display: flex;

 justify-content: space-between;

 margin-bottom: 10px;

 }

 .box {

 flex: 1;

 }

 .box-right {

 text-align: right;

 }

 .packing-list-table {

 width: 100%;

 border-collapse: collapse;

 margin-bottom: 20px;

 }

 .packing-list-table th, .packing-list-table td {

 border: 1px solid black;

 padding: 5px;

 text-align: center;

 }

 .packing-list-table th {

 background-color: #f2f2f2;

 }

 .footer-note {

 margin-top: 10px;

 text-align: center;

 font-size: 0.9em;

 }

 .box-section {

 margin-bottom: 20px;

 }

 </style>

</head>

<body>

<div class="container">

 <div class="header">ENTIRE PACKING LIST</div>

 <div class="row">

 <div class="box">

 <strong>TO,</strong><br>

 Jain Media Advertising<br>

 140, Cuttack Road<br>

 Bhubaneshwar, Odisha 751006<br>

 Contact Number: 7749056633

 </div>

 <div class="box box-right">

 <strong>FROM,</strong><br>

 COSIGN INDIA PVT LTD,<br>

 PUNE - 411030<br>

 Mob: +91 9595615523<br>

 Sales Exe: 7397962333

 </div>

 </div>

 <!-- Packing List Table for Entire Shipment -->

 <div class="header">ALL PRODUCTS FROM ALL BOXES</div>

 <table class="packing-list-table">

 <thead>

 <tr>

 <th>SR NO</th>

 <th>BOX NUMBER</th>

 <th>MATERIAL DESCRIPTIONS</th>

 <th>QTY</th>

 </tr>

 </thead>

 <tbody>

 <!-- Sample data, replicate this for all products in all boxes -->

 <tr>

 <td>1</td>

 <td>BX001</td>

 <td>ID-DS2024 610 MM X 152 MM</td>

 <td>06 NOS</td>

 </tr>

 <tr>

 <td>2</td>

 <td>BX001</td>

 <td>STRATOS2024A4 300 MM</td>

 <td>07 NOS</td>

 </tr>

 <tr>

 <td>3</td>

 <td>BX002</td>

 <td>STRATOSTRIPA4 300 MM</td>

 <td>07 NOS</td>

 </tr>

 <!-- Add more rows as per your data -->

 </tbody>

 </table>

 <!-- Box-wise Details -->

 <div class="header">BOX-WISE PACKING LIST DETAILS</div>

 <!-- Repeat this section for each box -->

 <div class="box-section">

 <div class="header">BOX: BX001</div>

 <table class="packing-list-table">

 <thead>

 <tr>

 <th>SR NO</th>

 <th>MATERIAL DESCRIPTIONS</th>

 <th>QTY</th>

 </tr>

 </thead>

 <tbody>

 <!-- Sample data, replicate this for all products in the box -->

 <tr>

 <td>1</td>

 <td>ID-DS2024 610 MM X 152 MM</td>

 <td>06 NOS</td>

 </tr>

 <tr>

 <td>2</td>

 <td>STRATOS2024A4 300 MM</td>

 <td>07 NOS</td>

 </tr>

 <!-- Add more rows as per your data -->

 </tbody>

 </table>

 </div>

 <div class="box-section">

 <div class="header">BOX: BX002</div>

 <table class="packing-list-table">

 <thead>

 <tr>

 <th>SR NO</th>

 <th>MATERIAL DESCRIPTIONS</th>

 <th>QTY</th>

 </tr>

 </thead>

 <tbody>

 <tr>

 <td>1</td>

 <td>STRATOSTRIPA4 300 MM</td>

 <td>07 NOS</td>

 </tr>

 <!-- Add more rows as per your data -->

 </tbody>

 </table>

 </div>

 <!-- Repeat above section for each box -->

 <div class="footer">

 HANDLE WITH CARE<br>

 WEIGHT: 27.3 KG

 </div>

 <div class="footer-note">

 Packed by: HS / RS / AP / SS / SM<br>

 Checked by: GP<br>

 <strong>NINEX LOGISTICS BY ROAD TO PAY</strong><br>

 BOX DIMENSION: 600MM X 330MM X 360MM

 </div>

</div>

</body>

</html>