

Problem Statement : Food Delivery Order API

Models

RoleModel

| Field Name | Datatype | Primary Key | Comments |
|------------|----------|-------------|--------------------------------------|
| id | Integer | Yes | Autoincrement |
| rolename | String | No | Values: "CUSTOMER", "DELIVERY_AGENT" |

UserModel

| Field Name | Datatype | Primary Key | Foreign Key | Comments |
|------------|----------|-------------|-------------|-----------------|
| id | Integer | Yes | No | Autoincrement |
| username | String | No | No | - |
| email | String | No | No | Unique |
| password | String | No | No | - |
| role | Integer | No | Yes | FK to RoleModel |

OrderModel

| Field Name | Datatype | Primary Key | Foreign Key | Comments |
|-------------|----------|-------------|-------------|---|
| id | Integer | Yes | | Autoincrement |
| customerId | Integer | No | | FK to UserModel |
| items | String | No | | Comma-separated list |
| baseAmount | Double | No | | Sum of item prices |
| deliveryFee | Double | No | | Default: 50 |
| discountPct | Double | No | | Default: 0 |
| gstPct | Double | No | | Default: 5 |
| finalAmount | Double | No | | Calculated: (baseAmount - discount) + gst + deliveryFee |
| orderDate | String | No | | Default: Current date |
| status | String | No | | Default: "placed" |

Endpoints

1. POST /order/create (CUSTOMER only)

- Manipulations:
 - $\text{discount} = \text{baseAmount} * (\text{discountPct}/100)$
 - $\text{gst} = (\text{baseAmount} - \text{discount}) * (\text{gstPct}/100)$
 - $\text{finalAmount} = (\text{baseAmount} - \text{discount}) + \text{gst} + \text{deliveryFee}$

2. GET /order/list?minAmount=500&status=placed&maxItems=3 (Both roles)

- Filters by minAmount, status, and number of items.

3. PATCH /order/update/{id} (DELIVERY_AGENT only)

- Updates status to "delivered".

4. DELETE /order/delete/{id} (Conditional)

- Delivery agent or customer who placed can delete.

✓ Manipulations: Discount, GST, delivery fee combined into finalAmount; query params with minAmount + status + maxItems.