

Here is the Oracle APEX-compatible SQL query and User Interface for creating the **Food Delivery management System** schema:

HOME PAGE

The Home page displays a grid of 12 icons, each representing a management function:

- CUSTOMERS (blue)
- RESTAURANTS (cyan)
- MENU_ITEMS (teal)
- DELIVERY DRIVERS (green)
- ORDERS (light green)
- ORDER ITEMS (yellow)
- PAYMENTS (orange)
- REVIEWS (red)
- ADDRESSES (pink)
- ORDER STATUS HISTORY (magenta)
- Administration (dark grey)
- Customers (highlighted in blue)

-- Customers Page

The Customers page shows a list of three customer records:

First Name	Last Name	Email	Phone Number	Address
Abebe	Kebede	abebe.kebede@example.com	+251911123456	Bole, Addis Ababa
Sara	Gebremariam	sara.gebre@example.com	+251922334455	Piassa, Addis Ababa
Tewodros	Mengistu	tewodros.mengistu@example.com	+251933112233	Mexico, Addis Ababa

CREATE TABLE Customers (

customer_id NUMBER GENERATED ALWAYS AS IDENTITY PRIMARY KEY,

first_name VARCHAR2(100) NOT NULL,

```

last_name VARCHAR2(100) NOT NULL,
email VARCHAR2(100) UNIQUE NOT NULL,
phone_number VARCHAR2(20) NOT NULL,
address VARCHAR2(255)
);

```

-- Restaurants Page

The screenshot shows a web application interface for food delivery management. The top navigation bar includes a logo, the title "FOOD DELIVERY MANAGEMENT", and a user identifier "nahomns060816@students.wku.edu.et". The left sidebar contains a navigation menu with links for Home, CUSTOMERS, RESTAURANTS (which is currently selected and highlighted in blue), MENU_ITEMS, DELIVERY DRIVERS, ORDERS, ORDER ITEMS, PAYMENTS, REVIEWS, ADDRESSES, ORDER STATUS HISTORY, and Administration. The main content area is titled "Restaurants" and displays a table with the following data:

	Name ↑	Phone Number	Address	Email
	Kategna	+251118540123	Gejji, Addis Ababa	info@kategna.et
	Romina Restaurant	+251112334455	Sarbet, Addis Ababa	romina@romina.et
	Yod Abyssinia	+251116612345	Bole, Addis Ababa	contact@yodabyssinia.et

At the bottom right of the table, there is a page number indicator "1 - 3".

```

CREATE TABLE Restaurants (
    restaurant_id NUMBER GENERATED ALWAYS AS IDENTITY PRIMARY KEY,
    name VARCHAR2(200) NOT NULL,
    phone_number VARCHAR2(20) NOT NULL,
    address VARCHAR2(255),
    email VARCHAR2(100) UNIQUE
);

```

-- Menu_Items Page

The screenshot shows the 'Food Delivery Management' application interface. The left sidebar contains navigation links for Home, Customers, Restaurants, Menu Items (selected), Delivery Drivers, Orders, Order Items, Payments, Reviews, Addresses, Order Status History, and Administration. The main content area is titled 'Menu Items' and displays a table with three rows of menu items. The columns are: Restaurant (dropdown), Item Name, Description, Price, and Available. The items listed are Kitfo (220, 1), Tibs Firfir (180, 1), and Doro Wat (250, 1). A 'Create' button is visible in the top right corner of the table header.

Restaurant	Item Name	Description	Price	Available
Kategna	Kitfo	Minced raw beef seasoned with spices	220	1
Romina Restaurant	Tibs Firfir	Stir-fried beef with injera pieces	180	1
Yod Abyssinia	Doro Wat	Spicy chicken stew with boiled eggs	250	1

CREATE TABLE Menu_Items (

```
item_id NUMBER GENERATED ALWAYS AS IDENTITY PRIMARY KEY,  
restaurant_id NUMBER NOT NULL,  
item_name VARCHAR2(200) NOT NULL,  
description CLOB,  
price NUMBER(10, 2) NOT NULL CHECK (price >= 0),  
available NUMBER(1) DEFAULT 1 CHECK (available IN (0, 1)),  
FOREIGN KEY (restaurant_id) REFERENCES Restaurants(restaurant_id)  
);
```

-- DeliveryDrivers Page

	First Name	Last Name	Email	Phone Number	Status
	Hana	Belele	hana.driver@example.com	+251944556677	On Delivery
	Mulugeta	Tesfaye	mulugeta.driver@example.com	+251933445566	Available
	Yonas	Demissie	yonas.driver@example.com	+251955667788	Available

```

CREATE TABLE DeliveryDrivers (
    driver_id NUMBER GENERATED ALWAYS AS IDENTITY PRIMARY KEY,
    first_name VARCHAR2(100) NOT NULL,
    last_name VARCHAR2(100) NOT NULL,
    email VARCHAR2(100) UNIQUE NOT NULL,
    phone_number VARCHAR2(20),
    status VARCHAR2(50) DEFAULT 'Available'
);

```

-- OrdersPage

CREATE TABLE Orders (

```

order_id NUMBER GENERATED ALWAYS AS IDENTITY PRIMARY KEY,
customer_id NUMBER NOT NULL,
restaurant_id NUMBER NOT NULL,
order_date DATE DEFAULT SYSDATE,
status VARCHAR2(50) DEFAULT 'Pending',
total_amount NUMBER(10, 2) NOT NULL CHECK (total_amount >= 0),
payment_method VARCHAR2(50),
driver_id NUMBER,
FOREIGN KEY (customer_id) REFERENCES Customers(customer_id),
FOREIGN KEY (restaurant_id) REFERENCES Restaurants(restaurant_id),
FOREIGN KEY (driver_id) REFERENCES DeliveryDrivers(driver_id)
);
```

-- Order_Items Page

FOOD DELIVERY MANAGEMENT

Home CUSTOMERS RESTAURANTS MENU_ITEMS DELIVERY_DRIVERS ORDERS ORDER_ITEMS PAYMENTS REVIEWS ADDRESSES ORDER_STATUS_HISTORY Administration

Order Items

Search Go Actions Create

No data found.

Release 1.0

```
CREATE TABLE Order_Items (
    order_item_id NUMBER GENERATED ALWAYS AS IDENTITY PRIMARY KEY,
    order_id NUMBER NOT NULL,
    item_id NUMBER NOT NULL,
    quantity NUMBER NOT NULL CHECK (quantity > 0),
    item_price NUMBER(10, 2) NOT NULL CHECK (item_price >= 0),
    FOREIGN KEY (order_id) REFERENCES Orders(order_id),
    FOREIGN KEY (item_id) REFERENCES Menu_Items(item_id)
);
```

-- Payments Page

FOOD DELIVERY MANAGEMENT

Home CUSTOMERS RESTAURANTS MENU_ITEMS DELIVERY_DRIVERS ORDERS ORDERS ORDER ITEMS PAYMENTS REVIEWS ADDRESSES ORDER STATUS HISTORY Administration

Order Items

Search Go Actions Create

No data found.

Release 1.0

CREATE TABLE Payments (

```
payment_id NUMBER GENERATED ALWAYS AS IDENTITY PRIMARY KEY,  
order_id NUMBER NOT NULL,  
payment_date DATE DEFAULT SYSDATE,  
amount NUMBER(10, 2) NOT NULL CHECK (amount >= 0),  
payment_method VARCHAR2(50),  
payment_status VARCHAR2(50) DEFAULT 'Pending',  
FOREIGN KEY (order_id) REFERENCES Orders(order_id)  
);
```

-- Reviews Page

The screenshot shows a web-based food delivery management system. The top navigation bar includes a logo, the title "FOOD DELIVERY MANAGEMENT", and a user identifier "nahomrs060816@students.wku.edu". The left sidebar contains a list of entities with their corresponding icons: Home, CUSTOMERS, RESTAURANTS, MENU_ITEMS, DELIVERY DRIVERS, ORDERS, ORDER ITEMS, PAYMENTS, REVIEWS (highlighted in blue), ADDRESSES, ORDER STATUS HISTORY, and Administration. The main content area is titled "Reviews" and displays a search interface with a search bar, a "Go" button, and an "Actions" dropdown. A large search icon is centered, and below it, the text "No data found." is displayed. In the bottom right corner of the main area, there is a "Create" button.

CREATE TABLE Reviews (

review_id NUMBER GENERATED ALWAYS AS IDENTITY PRIMARY KEY,

customer_id NUMBER NOT NULL,

restaurant_id NUMBER NOT NULL,

menu_item_id NUMBER NOT NULL,

rating NUMBER CHECK (rating BETWEEN 1 AND 5),

comment CLOB,

FOREIGN KEY (customer_id) REFERENCES Customers(customer_id),

FOREIGN KEY (restaurant_id) REFERENCES Restaurants(restaurant_id),

FOREIGN KEY (menu_item_id) REFERENCES Menu_Items(item_id)

);

-- Addresses Page

The screenshot shows a web-based food delivery management system. The top navigation bar includes a logo, the title 'FOOD DELIVERY MANAGEMENT', and a user account indicator. A sidebar on the left lists various entities: Home, CUSTOMERS, RESTAURANTS, MENU_ITEMS, DELIVERY DRIVERS, ORDERS, ORDERS, ORDER ITEMS, PAYMENTS, REVIEWS, ADDRESSES (which is currently selected), ORDER STATUS HISTORY, and Administration. The main content area is titled 'Addresses'. It features a search bar with a dropdown menu, a 'Go' button, and an 'Actions' dropdown. A large 'Create' button is located in the top right corner of the data grid area. Below the grid, a message says 'No data found.'

CREATE TABLE Addresses (

```
address_id NUMBER GENERATED ALWAYS AS IDENTITY PRIMARY KEY,  
customer_id NUMBER NOT NULL,  
address_line1 VARCHAR2(255),  
address_line2 VARCHAR2(255),  
city VARCHAR2(100),  
state VARCHAR2(100),  
zip_code VARCHAR2(20),  
country VARCHAR2(100),  
FOREIGN KEY (customer_id) REFERENCES Customers(customer_id)  
);
```

-- Order_Status_History Page

The screenshot shows a web-based food delivery management system. The top navigation bar includes a logo, the title 'FOOD DELIVERY MANAGEMENT', and a user account indicator. The left sidebar is a navigation menu with the following items:

- Home
- CUSTOMERS
- RESTAURANTS
- MENU_ITEMS
- DELIVERY DRIVERS
- ORDERS
- ORDER ITEMS
- PAYMENTS
- REVIEWS
- ADDRESSES
- ORDER STATUS HISTORY** (selected)
- Administration

The main content area is titled 'Order Status Histories'. It features a search bar with dropdown menus for 'Search' and 'Go', and an 'Actions' dropdown. A large 'Create' button is located in the top right corner of the search area. Below the search area, there is a message: 'No data found.'

```
CREATE TABLE Order_Status_History (
    status_history_id NUMBER GENERATED ALWAYS AS IDENTITY PRIMARY KEY,
    order_id NUMBER NOT NULL,
    status VARCHAR2(50),
    status_date DATE DEFAULT SYSDATE,
    FOREIGN KEY (order_id) REFERENCES Orders(order_id)
);
```

-- Indexes

```
CREATE INDEX idx_orders_customer_id ON Orders(customer_id);
```

```
CREATE INDEX idx_menu_items_restaurant_id ON Menu_Items(restaurant_id);
```

-- View

```
CREATE OR REPLACE VIEW vw_OrderDetails AS
SELECT
```

```
o.order_id,  
c.first_name || ' ' || c.last_name AS customer_name,  
r.name AS restaurant_name,  
o.order_date,  
o.total_amount,  
o.status  
  
FROM Orders o  
  
JOIN Customers c ON o.customer_id = c.customer_id  
  
JOIN Restaurants r ON o.restaurant_id = r.restaurant_id;  
  
  
-- Trigger  
  
CREATE OR REPLACE TRIGGER trg_InsertOrderStatus  
  
AFTER INSERT ON Orders  
  
FOR EACH ROW  
  
BEGIN  
  
    INSERT INTO Order_Status_History (order_id, status, status_date)  
    VALUES (:NEW.order_id, :NEW.status, SYSDATE);  
  
END;  
  
/  
  
  
-- Stored Procedure  
  
CREATE OR REPLACE PROCEDURE PlaceOrder (  
    p_CustomerID IN NUMBER,  
    p_RestaurantID IN NUMBER,  
    p_TotalAmount IN NUMBER,  
    p_PaymentMethod IN VARCHAR2,  
    p_DriverID IN NUMBER,
```

p_NewOrderID OUT NUMBER

)

AS

BEGIN

INSERT INTO Orders (

customer_id, restaurant_id, order_date, status,

total_amount, payment_method, driver_id

)

VALUES (

p_CustomerID, p_RestaurantID, SYSDATE, 'Pending',

p_TotalAmount, p_PaymentMethod, p_DriverID

)

RETURNING order_id INTO p_NewOrderID;

END;

/

Web link  <https://apex.oracle.com/pls/apex/r/nahoo/food-delivery-management261909/home?session=102842674308907>

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