DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

UNITED INTERNATIONAL UNIVERSITY

CSE6001: Advanced Database Systems

Implementing a Food Delivery Service Database Using Object-Oriented Oracle and MongoDB

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Part 1: Implementing in Object-Oriented Oracle

Some pints

- Created object types : Customers_O, Restaurants_O, FoodItems_O, Orders_O, DeliveryPersonnel_O, Payments_O, and ComboOffers_O.

- Relationships were created with foreign keys to ensure referential integrity. For example, food items reference restaurants, and orders reference customers and delivery personnel.

- Relationships were maintained: orders contain food items, and combo offers are belongs to specific restaurants.

- Tables (customers, restaurants, food_items, orders, delivery_personnel, combo_offers, payments) were created based on the defined object types.

- 3 tables (orders, order_food_items, food_items) made a many to many relationships here. order_food_items here the junction table.

- This is my life first OODB codes. So, it took some time to generate this.

Part 2: Implementing in MongoDB

Here I have used JSON schema to define the structure and validation rules for each collection. I have explicily used create commands. Though in mongodb we dont́ need to use create command. In each collection I have inserted at least 5 records or documents.

Some pints

- Each collections includes necessary fields with validation constraints

- Relationships were made based on field references

- **food_items collection:** here restaurant_id: linking the food item to the restaurant collection.

- **oreders collection:** customer_id linking the customer. food_items: Array of ordered food items which is embedded, each with a food_item_id which is linking with food item collection. delivery_personnel_id linking the delivery persoannel collection.

- **payments collection:** order_id linking with order collection.

- **combo_offers collection:** restaurant_id linking with restaurant collection