<Online Pizza Bestellung>

Milestone 1: Requirements Analysis & Conceptual Design

Person is a super type of employee and customer. A person gets uniquely identified by an id. Additionally, a person has a full name. The employee expands the person entity with a start date and a salary. There is one employee that is the boss, and the rest are ordinary employees (in a pizzeria). Every employee works in exactly one pizzeria, but in a pizzeria work multiple employees. A customer is also a person with a telephone number and the count of orders. Customers can make multiple orders, but every order is uniquely mapped to a single customer. An order has an id, date and a total price calculated based on the type of pizza and the number of pizzas that the order consists of. A pizza has a unique name, a price, and a list of ingredients. A pizzeria gets uniquely identified by id and has a name, zip code and street.

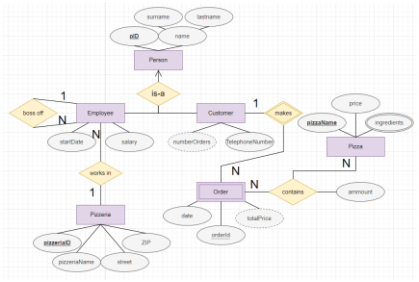

Figure 1: Entity Relationship Diagram

Milestone 2: Logical Design

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1. Pizzeria (pizzeriaId, pizzeriaName, ZIP, street)
       1.1 SK = {pizzeriaId}
       1.2 PK = {pizzeriaId}


2. Person (pID, surname, lastname)
       2.1 SK = {pID}
       2.2 PK = {pID}

3. Customer (cID, telephoneNumber)
       3.1 SK = {cID}
       3.2 PK = {cID}
       3.3 FK
             cID <> Person

4. Employee (eID, startDate, salary, bID)
       4.1 SK = {eID}
       4.2 PK = {eID}
       4.3 FK
             eID <> Person
             bID <> Employee

5. Workplace (empId, workplaceId)
       5.1 SK = {empId}
       5.2 PK = {empId}
       5.3 FK
             empId <> Employee
             workplaceId <> Pizzeria

6. Pizza (pizzaName, price)
       6.1 SK = {pizzaName}
       6.2 PK = {pizzaName}

7. Ingredient (ingredientId, name)
       7.1 SK = {ingredientId}
       7.2 PK = {ingredientId}
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8. PizzaIngredient (pizName, ingredientNr)
       8.1 SK = {pizName, ingredientNr}
       8.2 PK = {pizName, ingredientNr}
       8.3 FK
             pizName <> Pizza
             ingredientNr <> Ingredient

9. Order (orderID, customerID, date)
       9.1 SK = {orderID, customerID}, {orderID, customerID, date}
       9.2 PK = {orderID, customerID}
       9.3 FK
             customerID <> Customer

10. OrderContent (ordID, custId, orderedPizza, ammount)
       10.1 SK = {ordID, orderedPizza, custId},
       10.2 PK = {ordID, orderedPizza, custId}
       10.3 FK
              {orderID, custId} <> Order
              orderedPizza <> Pizza
```

Milestone 4: Implementation

Java

The implementation of the Java program was not that difficult. I used the knowledge from the lectures i.e., batch processing and precompiled statements. In general working with the Java API is very intuitive and the slides in Moodle helped a lot.

PHP

The implementation of the website was a little bit of a challenge because I've never done. such thing. Also, I had to debug my code a lot which was tedious and overall, I would say that the PHP part took more time than the Java program.