

# Database Design Project 4 Mini Report

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You should submit a mini report with your conceptual design of the information system you are building. In this report, you should use an ER diagram to explain your design, and put all entity sets, relationship sets, as well as their attributes, relevant and reasonable constraints into the diagram.

Github Repo: <https://github.com/Siwon-Kim/cop4710-project4>

### Database Entities Description:

- Customers: this entity stores information about the customers of the online enterprise management system, such as their name, email, and address.
- Products: this entity stores information about the products that are offered by the online enterprise management system, such as the product name, description, and price.
- Orders: this entity stores information about the orders that are placed by customers, such as the order date, order status, and total amount.
- OrderDetails: this entity stores information about the details of each order, such as the quantity, and price.
- Employees: this entity stores information about the employees of the online enterprise management system, such as their name, email, and job affiliation.
- Departments: this entity stores information about the departments within the online enterprise management system, such as the department name and location.

### Database Schema:

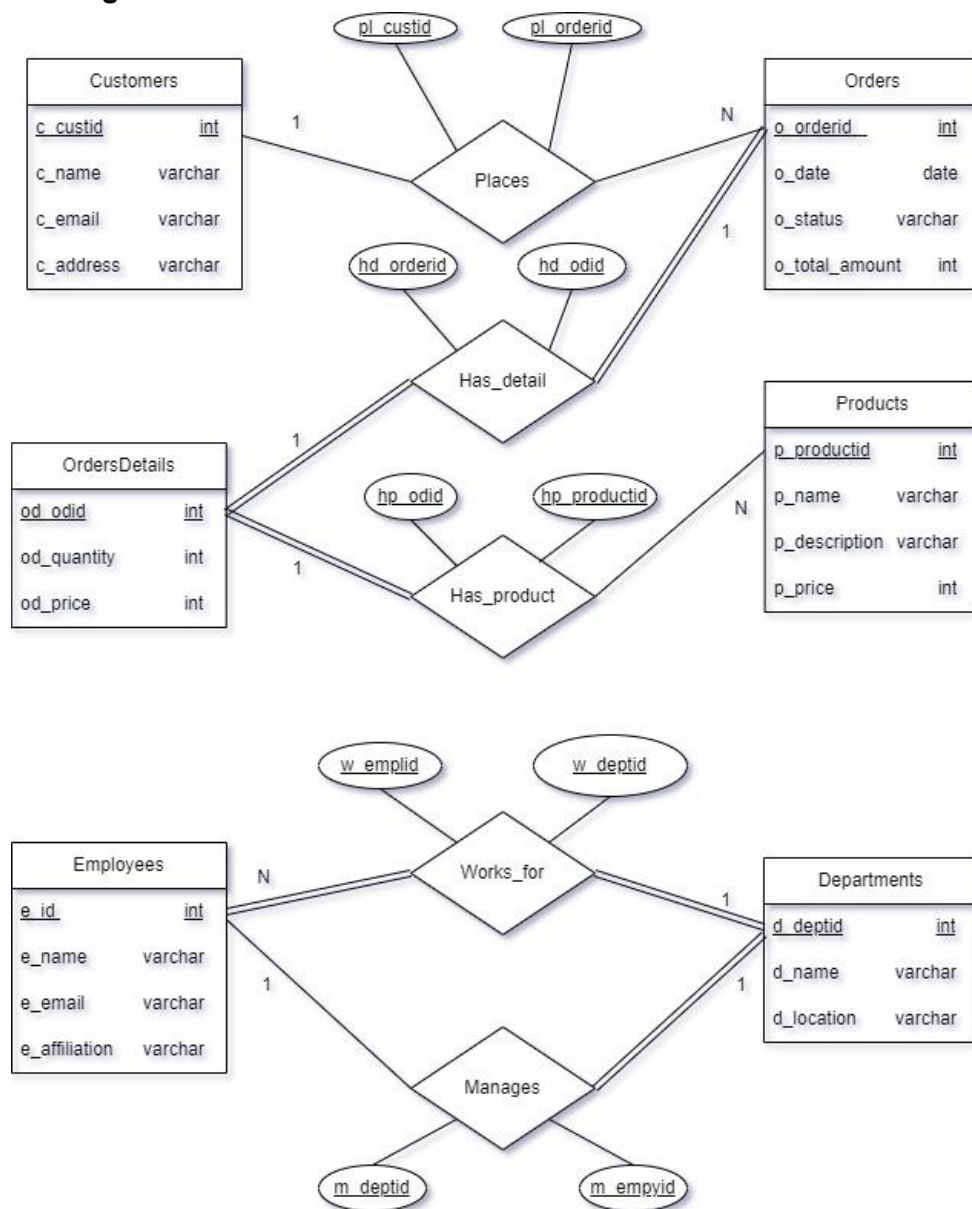
- Customers
  - c\_custid int
  - c\_name varchar
  - c\_email varchar
  - c\_address varchar
  - c\_privilege varchar
- Products
  - p\_productid int
  - p\_name varchar
  - p\_description varchar
  - p\_price int
- Orders
  - o\_orderid int
  - **o\_productid** int
  - o\_date date
  - o\_status varchar
  - o\_total\_amount int
- OrdersDetails
  - od\_odid int
  - **od\_orderid** int

- od\_quantity int
- od\_price int
- Employees
  - e\_emplid int
  - e\_name varchar
  - e\_email varchar
  - e\_affiliation varchar
  - **e\_deptid** int
- Departments
  - d\_deptid int
  - d\_name varchar
  - d\_location varchar

**Foreign Keys:**

- Employees e\_deptid -> Department d\_deptid
- Product p\_productid -> Orders o\_productid
- Orders o\_orderid -> OrdersDetails od\_orderid

## ER Diagram:



## There are 2 kinds of database users:

1. Staff: These users will have the ability to load the database tables, make changes to orders, products, users, etc.
2. Customer: These users will be able to place an order for products, see their order, order status, products, etc.

## The constraints need to be enforced by Python program:

1. Customers are not allowed to order the products numbered above 1000 or below 1.

2. Customers and staffs should enter a valid email when registering.