

Practical no: 4

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Aim: 1. A company consists of departments. Departments are located in one or more offices. One office acts as a head quarter. Each department has a manager who is recruited from the set of employees. Your task is to model the system for the company.

Task: Draw a class diagram which consists of all the classes in your system, their attributes and operations, relationships between the classes, multiplicity specifications, and other model elements that you find appropriate.

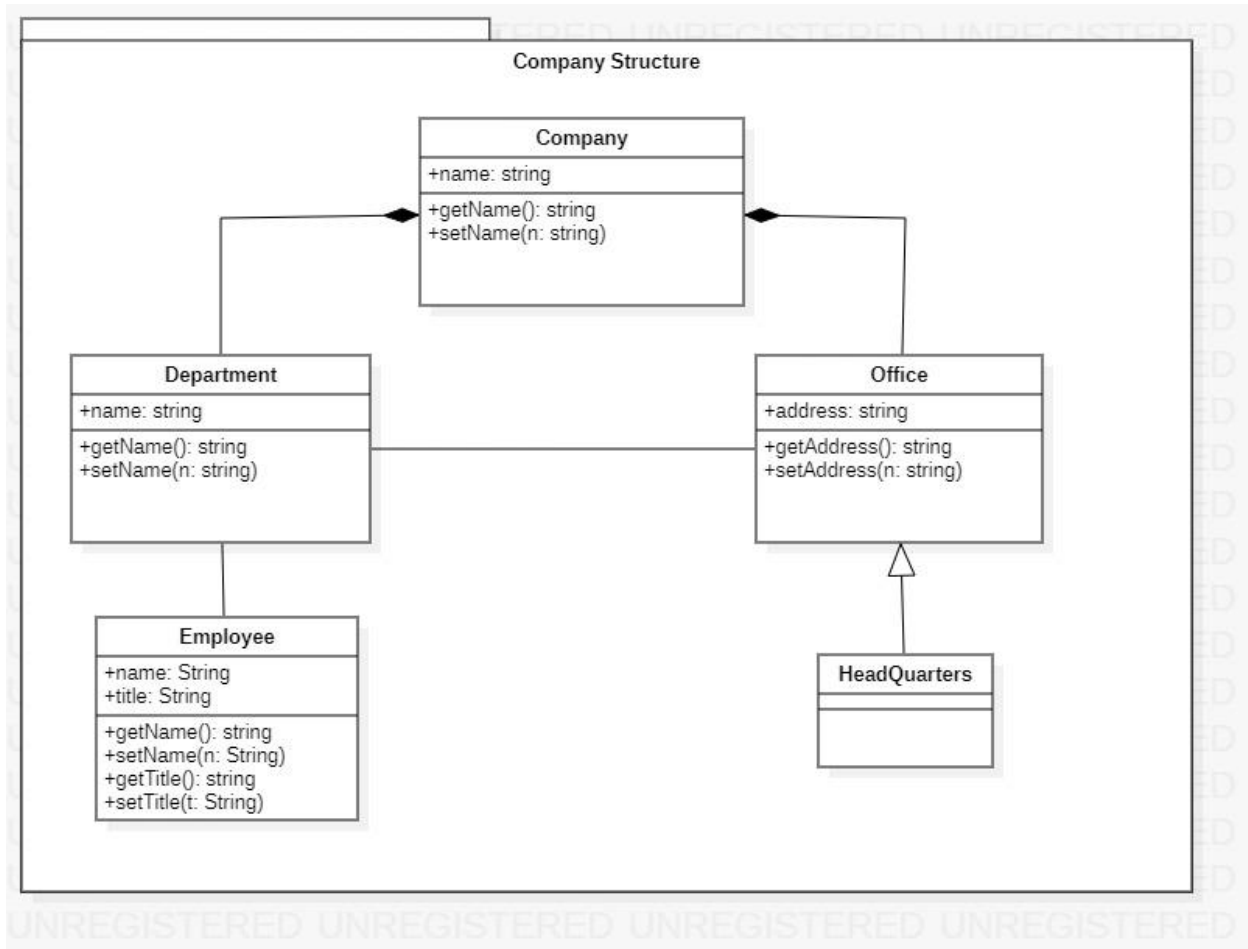
In this class diagram,

Company: Represents the company and contains attributes like its name and the headquarters. The headquarters relationship points to the Office class, indicating that one office acts as the headquarters.

Employee: Represents an employee with attributes such as employeeID, name, title, department, and salary. This class is associated with Department to show that an employee belongs to a department.

Department: Represents a department in the company. It has attributes like name, manager, and a collection of employees. The manager attribute represents the manager of the department, and it's related to the Employee class.

Office: Represents an office location with attributes like location and a collection of departments. The departments attribute represents the departments located in the office.



2. Design a class diagram for the Amazon system.

In this simplified class diagram,

Amazon: Represents the Amazon platform, which includes attributes like name, address, and website. It has relationships with customers and products. Amazon has many products and orders.

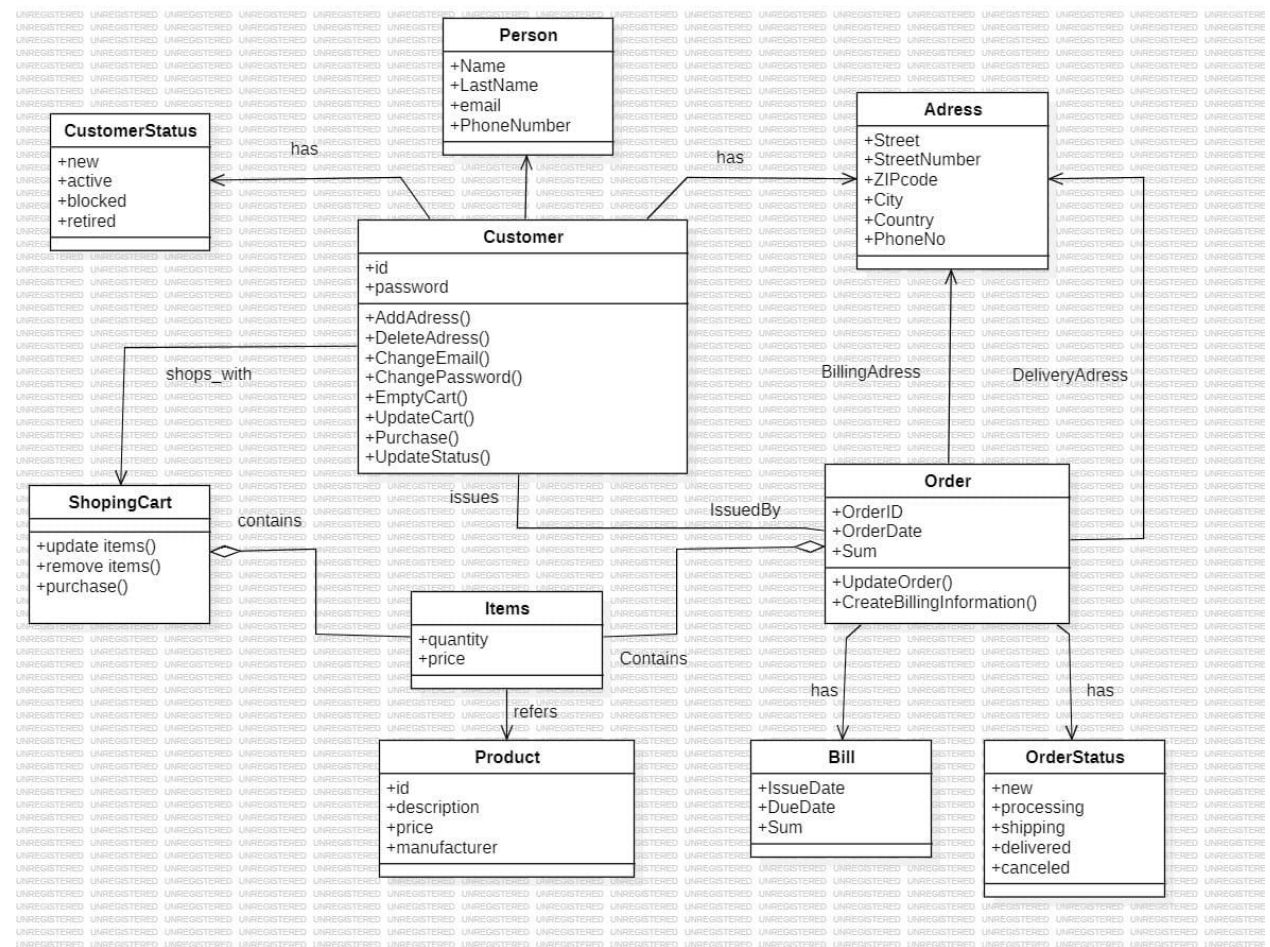
CustomerStatus: Represents Amazon customers with attributes like customerID, name, email, and address. Customers can place orders on Amazon.

Product: Represents products available on Amazon, with attributes like productID, name, description, price, category, and seller. Products are associated with a seller and can be part of multiple orders.

Seller: Represents the sellers on Amazon, with attributes like sellerID, name, and location. Sellers have multiple products listed on the platform.

Order: Represents an order placed by a customer. It has attributes like orderID, date, and a reference to the customer who placed the order. Each order includes multiple order items.

OrderItem: Represents individual items in an order, including the quantity, price, and a reference to the product being ordered.



Conclusion: We have successfully studied and implemented the Class diagram through the given problem statements using StarUML.

