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LABORATORY EXERCISES FOR UML

1. Pizzeria Alfonso provides a pizza taxi service. The products of Alfonso's pizza service include pizzas, sandwiches, salads, pastas, and drinks. Each product type may be available in different sizes of portions. The prices depend on the product and the size of the portion.

    Accompaniments like garlic, parmesan cheese, and mushrooms are also available. Accompaniments are priced separately from products. Alfonso's product catalogue explains in detail what ingredients are used in each product.

    Accompaniments are included in ingredients. All ingredients, such as pizza dough, are not, however, sold as accompaniments. An order may contain many portions, each with no or many accompaniments. The accompaniments are not sold separately. The information system should take care of maintaining of the product data and the pricing information. It should also support the processing of the orders. Draw an UML class diagram to describe the information contents of the system. A noun not used as a class could often be used as an attribute.

    Supplement the above description with the missing details (or ask the teacher for more information).

2. Consider the pizza delivery. A use case specific class diagram has only the classes essential for the use case. Draw the use case specific class diagrams for the use cases:

    take next order from queue
    The pizza maker takes the next order from the order queue and gives his estimate of the time the order is ready for delivery

    mark order ready
    The pizza maker marks the order as ready.

    get delivery assignment
    The delivery manager takes a list of orders estimated to be ready within the next 15 minutes. He collects orders to be delivered to the same area into one assignment. He takes a list of the estimated return times of delivery boys and selects the delivery boy for the assignment.

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prepare delivery
A delivery boy picks up an assignment. He prints the bills for all the orders in the assignment and waits for the orders to be ready. He registers his estimated return time from his delivery trip.

3. Combine your classes to one single diagram.