

Joe's Pizzeria

Overview

Joe wants to automate order taking and tracking in his pizzeria. Your task is to create an initial design for part of the system by modeling classes of objects, dependencies, and associations involved in this system. Below is a brief description of the orders in the pizzeria and Joe's tracking ideas.

An order is for an identifiable customer, take place on a specific date (Jan 30th, 2017), was placed at a specific time (5:00 pm), and is eventually filled at another time (5:23 pm).

An order includes one or more order items. Each order item is for some quantity of a specific pizza type, a side dish menu item, or a drink menu item. A pizza type is defined by a size (*large, medium, or small*), a crust type (*deep dish, regular, or thin*), a type of sauce (*marinara or alfredo*), and zero or more topping types. The topping types available at Joe's pizzeria include *cheese, extra cheese, pepperoni, sausage, hamburger, olives, onions, mushrooms, peppers, pineapple, and anchovies*.

Every pizza size has a base price. All crust types, sauce types, and topping types have add-on prices, but some of add-on prices may be zero, which means that there is no extra charge for this types of things. For example, assume that the base price of a small pizza is \$6, that marinara sauce and cheese have an add-on price of \$0, and that pepperoni has an add-on price of \$1. With this prices, a small cheese and pepperoni pizza with marinara sauce would be \$7.

The side dish menu items include, but are not limited to a *chef salad* and *french fries*. Each side dish menu item has a fixed price. The drink menu items are simply *small, medium, and large*; Joe doesn't care about tracking the flavor of drink, only the size. Each drink menu item has a fixed price.

An order item's cost is its quantity times the price of the item. An order's total cost is the sum of the order items' costs, plus tax.

Joe know not only wants to improve operations within store, but wants to keep track of his customers (or at least their phone numbers or email address) and so he can send them promotions. However, Joe will only track this information for customers who willing provide it and agree to receiving occasional promotions.