Programming Project, Database Technology

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1 Introduction

2 Requirements

3 Outline

4 Model

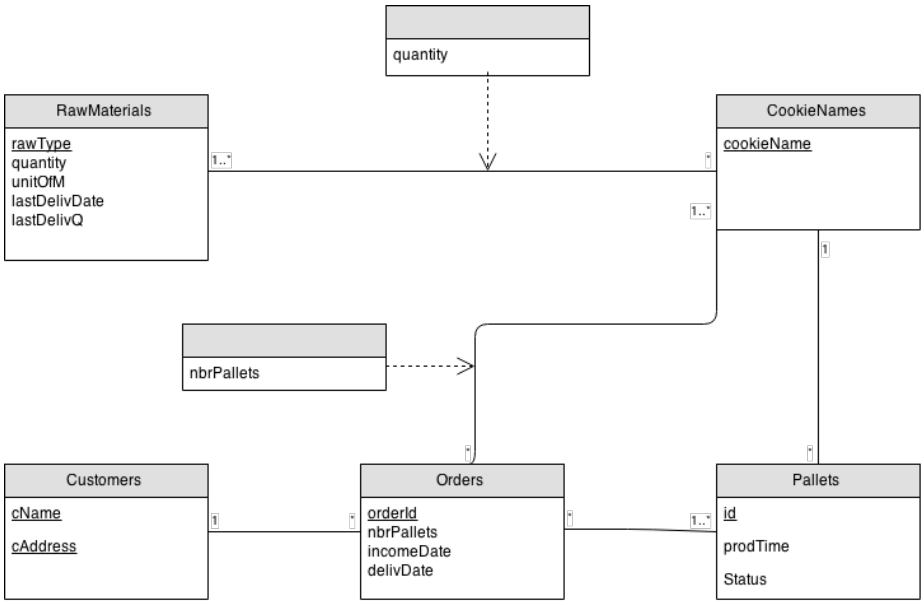

Figure 1: An UML diagram illustrating the database design.

5 Statements

```
--
-- Disable foreign key checks temporarily so
-- tables can be deleted in arbitrary order,
-- and so that insertion is faster.

set FOREIGN_KEY_CHECKS = 0;

-- Drop the tables if they already exist.

drop table if exists RawMaterials;
drop table if exists RecipeDetails;
drop table if exists CookieNames;
drop table if exists Pallets;
drop table if exists OrderDetails;
```

```
drop table if exists Orders;
drop table if exists Customers;

-- Create the tables.

create table RawMaterials (
    rawType     varchar(30) not null,
    quantity    integer default 100000000
      check (quantity >= 0),
    unitOfM     enum('g', 'ml') not null,
    lastDeliv   datetime,
    lastDelivQ  integer,
    primary key (rawType)
);

create table RecipeDetails (
    cookieName  varchar(20) not null,
    rawType     varchar(30) not null,
    quantity    integer not null,
    primary key (cookieName, rawType),
    foreign key (cookieName) references
      CookieNames(cookieName),
    foreign key (rawType) references
      RawMaterials(rawType)
);

create table CookieNames (
    cookieName  varchar(20) not null,
    primary key (cookieName)
);

create table Pallets (
    id          integer auto_increment,
    prodTime    datetime not null,
    cookieName  varchar(20) not null,
    status      enum('free','blocked','ordered','delivered')
      not null default 'free',
    orderId     integer default null,
    primary key (id),
    foreign key (cookieName) references
      CookieNames(cookieName),
    foreign key (orderId) references
      OrderDetails(orderId)
);

create table Customers (
    cName       varchar(30) not null,
    cAddress    varchar(30) not null,
    primary key (cName, cAddress)
);
```

```
create table Orders (
    orderId      integer auto_increment,
    nbrPallets   integer not null check (nbrPallets > 0),
    incomeDate   datetime not null,
    delivDate    datetime not null,
    cName        varchar(30) not null,
    cAddress     varchar(30) not null,
    primary key (orderId),
    foreign key (cName, cAddress) references
      Customers(cName, cAddress)
);

create table OrderDetails (
    orderId      integer not null,
    cookieName   varchar(20) not null,
    nbrPallets   integer not null check (nbrPallets >= 0),
    primary key (orderId, cookieName),
    foreign key (orderId) references Orders(orderId),
    foreign key (cookieName) references
      CookieNames(cookieName)
);
```

6 Manual