Database model for the first test

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1 Relational model

Relations in database:

- `Product(`<u>`pID`</u>`, serialNr, trademark, lastProductionYear)`

- `Customer(`<u>`cID`</u>`, name, gender, registrationYear, sendNews, email)`

- `Purchase(`<u>`nID`</u>`, cID, pID, eID, purchaseDay, purchaseCount, price)`

- `Complaint(`<u>`nID`</u>`, eID, `<u>`complaintOrder`</u>`, duration, price)`

- `Employee(`<u>`eID`</u>`, name, town, birthyear, country, status)`

We store information about employees, products, customers, and their purchases and complaints about these purchases.

Relation `Product` contains the information about products in the store, their serial numbers, trademarks and the last year of their production. The relation has a primary key `pID`, which uniquely defines each product.

Relation `Customer` contains the information about customers of the store, it means their names, genders, the year of their registration, and the flag, if the customer wants to receive the store news (1 - yes, 0 - no).

Relation `Employee` contains information about the employee name, town/birthyear/country of origin and their status.

Relation `Purchase` stores the information about purchases of any product by any customer for a price. The relation also contains the number of products bought by a customer. The primary key of the relation is `nID`. `cID` is a foreign key referencing to a customer who bought the product `pID`, and `eID` is a foreign key referencing to an employee taking care of the purchase.

The last relation `Complaint` contains information about complaints about a product by a customer. The primary key of the relation contains attributes `nID` and `complaintOrder`. The second attribute of the primary key is the order of complaint of a specified product by a customer. It means the multiple complaints of one purchase is allowed. The relation also stores the information about complaint duration, its price and foreign key referencing to an employee taking care of the complaint.

On the figure below, the relation model of the database is presented. Let us define important information on the figure: P = primary key, F - foreign, star = the value can not be NULL. The figure also contains the relations between the tables. The customer can buy many products; many customers can buy the product. Multiple complaints about one purchase are allowed.

Product

P * pID

  * serialNr
  * trademark
    lastProductionYear

Purchase

P * nID
F * cID
F * pID
F * eID
  * purchaseDay
  * price
  * purchaseCount

Customer

P * cID

  * name
  * email
    gender
    registrationYear
    sendNews

Employee

P * eID
  * name
  * town
    birthYear
  * country
    status

Complaint

PF * nID
 F * eID
 P * complaintOrder
    duration
    price