

PROI – project 3

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Description

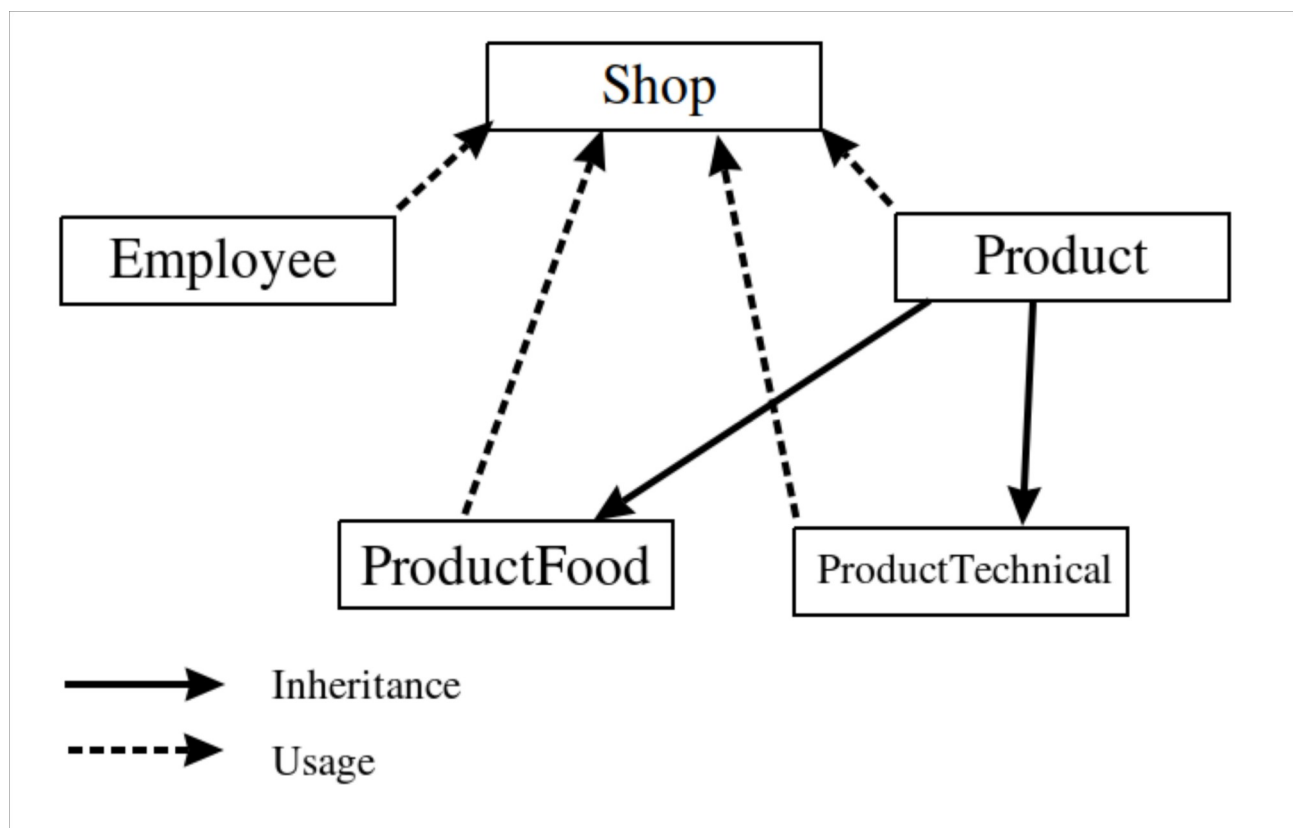
Project simulates shop database. It stores data about employees, their salaries, names, about products, their prices and additional information. Program also has a feature, that allows to measure company's budget.

Project structure

Project contains of 5 classes:

- Product
- ProductTechnical
- ProductFood
- Employee
- Shop

Classes ProductTechnical and ProductFood inherit from class Product.



Class description

Product

Contains name (string) and price (int) – both protected.

Methods: default constructor, int change price (int), string getName(), int getPrice(), string getInfo(), which is virtual and returns product info formatted in a way that allows direct print while listing products.

ProductTechnical

Additionally contains information if product is inflammable (bool).

Methods: default constructor, string getInfo(), which is similar to that in Product but it adds information about inflammability.

ProductFood

Additionally contains information about expiryDate (unsigned).

Methods: default constructor, string getInfo(), which is similar to that in Product but it adds information about expiry date.

Employee

Stores information about name (string), age (int) and salary (int or unsigned).

Methods: default constructor, string getName(), int getAge(), int/unsigned getSalary(), int/unsigned setSalary(int/unsigned).

Shop

Stores information about shop's name (string), address (string), capital (short/int/long), products (vector of *Product), number of products (int), array of employees (int) allocated dynamically, number of employees (int).

Methods: default constructor, string printInfo(), int payEmployees(), Employee hireEmployee(const &Employee), int fireEmployee(string), void listEmployees(), void listEmployees(int), void listProducts(), Product buyProduct(const &Product), void sellProduct(string), void binProduct(string), destructor.

Class Shop catches exceptions if memory is not allocated correctly or when an employee is younger than 18 years.

Tests

All methods of class Product were tested using Boost library.