**Lab3**

* Handed out Wednesday, May 13，2015
* Due Friday, May 22, 2015
* Upload via *ftp* only!

**Abstract**

Implement a system used by cashier for checkout in supermarket.

**Data type**

1. Commodity

Each kind of commodity has its unique id, name, base price.

1. VIP

Every vip member object has its id, name, gender, tel, level and point. There are three levels of VIP.

1. Shopping Card

Contains id and balance.

|  |  |  |
| --- | --- | --- |
| level | Discount | point |
| 1 | For a **bill**, each section:  ≤2000.00，No discount.  >2000.00 and ≤5000.00, 95%.  >5000.00, 90% | 0.5point/yuan |
| 2 | For a **bill**, each section:  ≤1000.00, 95%  >1000.00 and ≤2000.00, 90%  >2000.00, 85% | For a **bill**, each section:  ≤2000.00, 1.2point/yuan  >2000.00 and ≤5000.00, 1.5point/yuan.  >5000.00, 1.8point/yuan |
| 3 | For each **commodity**:  ≤10.00, No discount.  >10.00 and ≤20.00, 95%.  >20.00, 90% | For a **bill**, each section:  ≤1000.00, 1.5point/yuan  >1000.00 and ≤5000.00, 1.8point/yuan.  >5000.00, 2.0point/yuan |

**Logic**

1. When starting the system, user input its id if it is a VIP, otherwise -1.
2. Then, it inputs the commodity id and count. System will show how much should the customer pay.
3. Customer has two choices to pay for the bill: shopping card and cash
4. After these operations, the system should write logs.

**Input**

1. commodity.txt

This file contains information about commodities in the following format:

[id] [name] [gender] [tel] [vip level] [point]

[id] [name] [basic price]

1. vip.txt

[id] [balance]

1. shopping\_card.txt
2. process.txt

[customer id] //-1 if it not a vip

[n] //the following n lines show commodities

[commodity id] [count]

[shopping card id] //-1 if cash

This file contains some test cases. Each case has following format:

**Output**

To a simple implement, the log should be print on screen instead of files. And each log should be in the format:

[customer id] [bill] [point] [shopping card id]

If the customer is not a vip, the id is -1 and point is 0

If he uses cash, the shopping card is -1.

**Hand In**

1. All of your code
2. A document to describe your code.

Compress all your file in a [studentid].zip and upload to FTP before deadline.