

## PAYMENT BETWEEN ROOMMATES – EXAM SIMULATION

Two roommates have the problem of splitting the check when one of them goes shopping. In the rules they have given themselves, whoever goes shopping pays for both and then asks the roommate for reimbursement. The reimbursement is computed considering the list of products that they needed and that were available. The balance is made considering the receipt and the list of products requested by the roommate.

Write a program that helps the roommates calculate how much the roommate who went shopping should get from the other. The program will receive two files as input: a check and a product list.

The **check** is a text file that contains, in each line, two fields separated by a comma:

the product name, the unit price

The unit price is reported to two decimal digits. Moreover, the same product can appear several times on the receipt if several pieces have been purchased (example: if you buy 3 packs of milk, the receipt will have 3 lines for the milk).

The **product list** requested by the roommate is a text file that contains in each line two fields separated by a comma:

the name of the product, the desired quantity

**The program must print on the screen:**

- the total amount of the shopping
- the total due from the roommate that is not gone to the market
- the names and quantities of products not found in the check.

in the following page, there is an example of the output of the program using the **check.txt** and **product\_list.txt** input files.

<p>Example of <b>check.txt</b> file (in input)</p> <p>Milk,1.59  Milk,1.59  Egg,1.99  Milk,1.59  Egg,1.99  Bread,2.20  Tomatos,5.60  Soap,2.99  Soap,2.99  Beer,1.29  Beer,1.29  Beer,1.29  Beer,1.29  Beer,1.29  Bananas,3.50  Mozzarella,1.80  Rum,12.59  Oil,6.99  Oil,6.99  Rice,2.50  Mozzarella,1.80  Flour,0.80  Flour,0.80  Water,2.40  Water,2.40  Water,2.40  Water,2.40  Chewing gum,1.20  Razors,4.99</p>	<p>Example of <b>product_list.txt</b> file (in input)</p> <p>Beer,2  Bread,1  Oil,3  Rum,2  Milk,2  Tomatos,1  Mozzarella,4  Water,1  AAA Battery,2</p>
<p>Example of execution (in output)</p> <p>Total spent: 82.54 euro  Money from roommate: 46.13 euro  Item not purchased:  1 Oil  1 Rum  2 Mozzarella  2 AAA Battery</p>	