

Lunchbreak calculator (V2)

Thijs, Danny, Stefan and Den regularly go out to lunch together. Normally they go somewhere and one of them pays the bill. At the end of the month they get all receipts together to even out the bill. They used to collect these receipts in an excel file, but now they are looking to automate the process a bit more. Your task is to build a small app that takes a list of receipt strings in a certain format and calculate whom owes what amount to whom.

The receipt lines are space separated and following this format:

1. amount in Euros, a decimal number
2. name of the person who has paid
3. comma separated list of persons who were joining for this particular receipt. This list includes the name of the person who has paid. Sometimes someone invites another for lunch, so it is possible that one name in the list is entered double, indicating this person will pay the additional share in the bill.

Requirements

Given is the file Calculator.php in which the scaffolding of the Calculator app is already been set up. Within this class the calculate() function is still empty and needs to be implemented. To achieve this you can make any changes you feel necessary to both the Calculator and the BillItem classes except for the printBill() function and the \$lines array.

Expected output

```
Thijs pays Danny 9.45
Stefan pays Thijs 10.00
Stefan pays Danny 20.25
Stefan pays Den 8.60
Den pays Thijs 40.80
Den pays Danny 19.65
```

Bonus Round!

In the output above, you can see that Stefan owes Den 8.60 while Den owes Danny 19.65 himself and Stefan also owes Danny 20.25. For extra bonus points, optimise the calculation so as little transactions as possible are needed.

In the above example Stefan could pay the part he owes to Den directly to Danny:

```
Stefan pays Danny 28.85 (20.25 + 8.60)
Den pays Danny 11.05 (19.65 - 8.60)
```