



HOME ACCOUNTING

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VSB-TU Ostrava, January 2016

Task description

Develop an application for financial data regarding income and expenditure in household finances, stored as CSV file.

This includes:

- unique record ID,
- record type (income, expenditure),
- category (food, household, entertainment, ...),
- amount in CZK,
- date.

On the basis of a CSV file and user input, create a HTML file that summarizes the revenues and expenses for each month:

- all records of the month listed in descending order by amount;
- sums of the amounts grouped by categories;
- total household finances (income - expenses).

Input

The input data is stored in .csv file (Input.csv). It contains the incomes and expenses stored as records in a following form:

ID;record type;category;amount;date

The meaning of particular elements is as follows:

ID	Unique record identification number.
record type	Type of the record: income or expenditure.
category	Category of the income/expenditure. The present categories are: 1) <i>salary</i> , 2) <i>food</i> , 3) <i>household</i> , 4) <i>health</i> , 5) <i>entertainment</i> , 6) <i>clothing</i> , 7) <i>transport</i> , 8) <i>other</i> .
amount	Money in CZK.
date	Date of the income/expenditure, in the form <i>dd.mm.yyyy</i> .

The exemplary data may look this way:

```
33;expenditure;transport;298;03.03.2015
34;expenditure;other;43;04.03.2015
35;expenditure;other;35;05.03.2015
36;expenditure;clothing;350;06.03.2015
37;expenditure;health;300;07.03.2015
```

Code structure

The code consists of the main function and support functions.

The main function is responsible for the control of operations calling other functions.

The other functions:

- open and read the input file,
- count the budget,
- sort the records by amount,
- create the output file and write the output,
- display the text to a console,
- do additional tasks (zero the tables, convert integer type to string)

Output

On the basis of the input, the program prepares the output in the form of .html file (Output.html). In the output we can find:

1. For each month:
 - a) Records listed in descending order by amount
 - b) Sums of particular categories' amounts
 - c) Total values of monthly budget
2. For the whole year:
 - a) Total sums of particular categories' amounts
 - b) Total values of yearly budget

The above data is stored in html tables.

Modification of categories

The code is written in a way that makes change of categories in the budget easy, according to the user's preferences. The user might do the following about the categories:

- change the names,
- add categories,
- remove categories.

To do so, it is just needed for the user to change the elements of the table that stores them (table [string names] defined in the beginning of main.cpp file). The program will adjust itself to the new names of categories and their number.

Thank you for your attention.
