CSCI 330 Assignment 7

Reporting with awk (100pts)

Purpose

This assignment should give you experience using awk to generate reports from input data.

Assignment

You must write an awk script that will generate a report when supplied input data in a specified format.

Program

Your awk script must compute summary data on the performance of sales associates for the company "No-op Computing."

Your awk script file name must be `z1234567.awk` where `z1234567` is *your* zid. If Blackboard will not accept this, you may compress it to either a `.zip` or `.tar.gz` file and submit that, or change its extension to `.txt`, but ***only*** if Blackboard is not accepting a submission with the originally required name.

The script should compute the sales amounts for each associate in the year 2018 and print them in a table ranked according to the sales amount. The highest sales should be shown first.

The script will be invoked with awk from the command line with an input file that contains data on products, associates, and sales, potentially for multiple years:

```
% awk -f z1234567.awk inputfile
```

Input

A sample input file called `salesdb` can be found with the assignment write-up on Blackboard.

The records in the input file use ":" as the input field separator, and the input record separator is the default, newline. There are three types of records that will be found in the file.

1. Products - each product record has the following fields
    1. product id - an integer uniquely identifying a product
    2. product category - a string describing the category of the product
    3. description - a string describing the product
    4. price - floating point number with 2 significant digits – how much does this product cost?
2. Associates - each record for an associate will have the following fields:
    1. associate id - an integer uniquely identifying the associate
    2. name - a string containing the name of the associate
    3. position - a string describing the job position of the associate
3. Sales - each record for a sale will have the following fields:
    1. transaction id - integer uniquely identifying the transaction
    2. product id - the product id of the product sold in this transaction
    3. quantity - integer quantifying how many of the specified product were sold
    4. date - date of the transaction in the format `mm/dd/yyyy`
    5. associate id - the associate id of the associate that made this sale

Error checking

If any error is encountered, such as incorrect data in the input file, just skip the line in question. Nothing further needs to be done to recover and use the values of the line.

Output

This is an example of how output may look for a hypothetical input file. It will be different with your actual data.

```
% awk -f z1234567.awk inputfile
Name              Position    Sales Amount
=======================================
Lindon, Rosemary  Producer         1603.67
Worker, Susan     Manager           248.81
Doe, John         Clerk             231.93
Miller, Dennis    Comedian           84.88
Buck, Fast        Stockboy           73.03
%
```

Other requirements

Make sure your `awk` script functions properly on `turing` and/or `hopper`, as this is where the grading is to be performed.

What to turn in?

Turn in, through Blackboard, the script file, with a name as described above.