CSE 465/565
Spring 2023
Homework #5
85 points

A Scheme file titled hw5.scm is provided for you. Complete the functions in that file. Use the function names exactly as they appear in the file. Read the comments in hw5.scm for a description of what these functions should do. Include a function definition for each function, even if you do not complete it. You can add your own helper functions. Partial credit will be given for partial solutions.

Use the provided hw5tests.scm and sales.scm files to run tests. These files are already imported into the hw5.scm file. Take a look at the contents of file sales.scm before implementing exercises 5 and 6 below.

*For this assignment, **you must use the `ceclnx01` server**. Use the following command:*

        `scheme48 < hw5.scm`

Submit your file (hw5.scm) to Canvas.

For each exercise, you will see the points in parenthesis.

1. (10) modIt – **You must use *map*! Built-in function modulo may be useful**
2. (10) divisibleBy10 – **You must use *filter*! Built-in function *modulo* may be useful**
3. (10) union – **Built-in functions *memq?* and/or *remove-duplicates* may be useful**
4. (15) numZeros – **Your implementation must be tail recursive (needs a helper function)**
5. (20) getOrdersShippedOn
6. (20) totalProfitProv