

Comp115 Assignment 1: Designing a database

Please download this file and open it in a current version of Adobe Acrobat Reader. This will make the form items active. Viewing it in a web browser will not activate the form.

On this assignment, **you are encouraged to work in groups of up to 6 people**. These assignments are **designed to be done in groups**. Working alone is permissible but not recommended. Please enter the names and login names of all group members below.

Student 1
Name

Student 1
login name

Student 2
Name

Student 2
login name

Student 3
Name

Student 3
login name

Student 4
Name

Student 4
login name

Student 5
Name

Student 5
login name

Student 6
Name

Student 6
login name

Please paste your solutions to the following problems into the provided regions on the subsequent pages. Please leave the "Grade" and "Comments" boxes for use by your graders. Place your own comments in the "Solution" boxes.

Keep in mind that **you will be quizzed on this assignment after it is due**, so all members of the group should strive to understand the solution.

When you have finished this form, please assign one group member to provide it. To provide it, browse to the [web-based provide submission page](#) for the class.

You can also provide the solution by uploading this form to linux and typing:

provide comp115 a1 a1.pdf

This is equivalent to using the web form.

Results will be returned electronically to all group members. To see your results, please browse to the [web-based grade reporting page](#).

Accepting assignments in this format is a bold experiment for us, and we would appreciate your comments on difficulties you might have in submitting assignments, understanding your grade, or any other aspects of this grading system.

Problem 1: You have a drink machine to monitor via a database. Drinks are stocked periodically, purchased, and sometimes run out. You want to track:

- Individual sales of drinks, including time of day.
- Times at which each drink sold out.
- Times at which each drink was restocked.

Give the SQL statements that will create tables to track this information. Utilize relationships where possible to avoid storing redundant information. Hint: use your postgresql accounts to test your statements for correct function!

Solution 1

Grade 1

Comments 1

Exceeds expectations

Meets expectations

Minor issues

Major problems

Problem 2: In English, describe the model operations (database changes) that would be necessary in order to track the drink machine data in this database.

Solution 2

Grade 2

Comments 2

Exceeds expectations

Meets expectations

Minor issues

Major problems

Problem 3: Give SQL templates for each operation above, where \$1, \$2... denote variables, and define the meanings of those variables. Hint: you might want to look up CURRENT_TIME() and CURRENT_DATE() PostgreSQL functions.

Solution 3

Grade 3

Comments 3

Exceeds expectations

Meets expectations

Minor issues

Major problems