



## IBM Developer SKILLS NETWORK

### Instructions

Now that you are equipped with the knowledge and skills to design databases, create tables, and load data, you have the opportunity in the final project to practice and apply your skills by implementing a new data infrastructure.

### Scenario

In this scenario, you have recently been hired as a Data Engineer by a New York based coffee shop chain that is looking to expand nationally by opening a number of franchise locations. As part of their expansion process, they want to streamline operations and revamp their data infrastructure.

Your job is to design their relational database systems for improved operational efficiencies and to make it easier for their executives to make data driven decisions.

Currently their data resides in several different systems: accounting software, suppliers' databases, point of sales (POS) systems, and even spreadsheets. You will review the data in all of these systems and design a central database to house all of the data. you will then create the database objects and load them with source data. Finally, you will create subsets of data that your business partners require, export them, and then load them into staging databases that use different RDBMS.

### Grading criteria

**There are a total of 40 points possible for this final project.**

Your final assignment will be graded by your peers who are also completing this assignment within the same session. Your grade will be based on the following tasks:

- Task 1: Identify entities (4 pts)
- Task 2: Identify attributes (4 pts)
- Task 3: Create an ERD using the pgAdmin ERD Tool (4 pts)
- Task 4: Normalize tables (4 pts)
- Task 5: Define keys and relationships (4 pts)
- Task 6: Create database objects by generating and running the SQL script from the ERD Tool (4 pts)
- Task 7: Create a view and export the data (4 pts)
- Task 8: Create a materialized view and export the data (4 pts)

- Task 9: Import data into a Db2 database (4 pts)
- Task 10: Import data into a MySQL database (4 pts)

### How to submit:

A screenshot in JPEG format is required to be submitted for each task. The screenshots will be uploaded in the following sections.

## Author(s)

Lin Joyner

## Change log

Date	Version	Changed by	Change Description
2021-04-07	1.0	Lin Joyner	Created initial version

© IBM Corporation 2020. All rights reserved.