INFSCI 2710 – Database Systems – Spring 2023

Homework 1 – Introduction to SQL

Homework Instructions

1. Connect to the database created for you by your instructor - you should have received your connection instructions and credentials last week.
2. Write SQL queries for each of the tasks using MySQL workbench.
3. Follow the underscore convention when naming your database schema, entities, and attributes.
4. Save your work as an SQL script – name your script **yourPittID_assignment1.sql**.
5. Submit your work via Canvas.

For this assignment, you will need to create tables to store information about a point-of-sale (POS) system.

The POS system must have the following entities (each entity's logical structure is described below):

customers

Field	Type	Null	Key
customer_number	int(11)	NO	PRIMARY
customer_last_name	varchar(50)	NO	
customer_first_name	varchar(50)	NO	
phone	varchar(50)	NO	
address_line_1	varchar(50)	NO	
address_line_2	varchar(50)	YES	
city	varchar(50)	NO	
state	varchar(50)	YES	
zip	varchar(15)	YES	

employees

Field	Type	Null	Key
employee_number	int(11)	NO	PRIMARY
last_name	varchar(50)	NO	
first_name	varchar(50)	NO	
extension	varchar(10)	NO	
email	varchar(100)	NO	
job_title	varchar(50)	NO	

products

Field	Type	Null	Key
product_code	varchar(15)	NO	PRIMARY
product_name	varchar(70)	NO	
product_vendor	varchar(150)	NO	
product_description	text	NO	
quantity_in_stock	smallint(6)	NO	
buy_price	double	NO	
msrp	double	NO	

orders

Field	Type	Null	Key
order_number	int(11)	NO	PRIMARY
order_date	date	NO	
required_date	date	NO	
shipped_date	date	YES	
status	varchar(15)	NO	

fk_customer_number	int(11)	NO	Foreign key to **customers**
fk_employee_number	int(11)	NO	Foreign key to **employees**

orderdetails

Field	**Type**	**Null**	**Key**
fk_order_number	int(11)	NO	• Foreign key to **orders** • Multiattribute PRIMARY key in this table in combination with fk_product_code
fk_product_code	varchar(15)	NO	• Foreign key to **products** • Multiattribute PRIMARY key in this table in combination with fk_order_number
quantity_ordered	int(11)	NO	
price_each	double	NO	

Task 1 (50 points): In database **[your Pitt username]**, create the following entity tables. Each table's logical structure should correspond to the descriptions provided in this assignment. Use the **CREATE TABLE** statement to create the tables, including referential integrity constraints (primary keys, foreign keys, etc.).

1. customers
2. employees
3. products
4. orders
5. orderdetails

Task 2 (50 points): For each table, insert at least 3 rows using the **INSERT** statement. You can make up your own data for the **INSERT** statements. Make sure to pay attention to the order in which you are inserting the data. For example, you must insert a record into **customers**, **employees**, and **products** tables before creating a corresponding record in **orders**. Similarly, you must have a record in **orders** before inserting corresponding records in **orderdetails**.

1. At least 3 customers in the **customers** table
2. At least 3 employees in the **employees** table

3. At least 3 products in the **products** table
4. At least 3 orders in the **orders** table
5. At least 2 order details for each order in the **orderdetails** table