CS 687
Online Transaction Database
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This database supports a company that runs an online transaction website connecting customers to businesses. Essentially providing the same service as Amazon. This database has seven different tables to help the hosting company connect and track the sales and purchases between customers and the various companies offering products on the website. The seven tables are company, product, listing, product_types, user, transaction and support.

The first table is the company table. It has four attributes, company name, company id, company address and country of origin. Only the company address is optional. This is to help customers filter products by country of origin in case they are interested in buying from and supporting specific countries (or avoiding).

The product table has three attributes. Product name, category, and product id. Each product must have a name, company id, price and product id. If the category is not specified, then miscellaneous is chosen. The category is to help customers search for products in specific areas of interest.

The third table is for users and it facilitates keeping track of customer information. Its attributes are first name, last name, customer id and address. All of the attributes are required, but it is on the customer to make sure that they have inputted the correct information when signing up. The customer database is not visible to anyone outside the hosting company.

The listing table has only three attributes. A company is able to list a product for a specific price. Each product can have multiple companies list it and each company can list multiple products. This table serves as an intercept table to remove the many to many relationship. The company and product id pair are the primary key.

The transaction table keeps track of transactions of customers. It has a product id (to tell which product), company id (the company selling), user id (the customer purchasing), timestamp (date of purchase), transaction id (unique identifier of each transaction) and quantity. This table is only partially visible to non-hosting company participants. Customers can only view transactions that match their user id or companies can only view transactions that match their company id.

The support table contains information for customers to help them get into contact with each company's support, if that company has a support set up. Not all companies need to have a support available. It contains a company id, contact name, contact email and contact phone. Only company id is required.

The final table is for product types. It contains a category and category name. It is a simple mapping from category as an integer to a string category to report a user friendly category for viewing.

The database will allow companies to list products for sale and customers to view items to purchase. Anyone can view all support, companies and items. Customers can search through the

various products and try and find a product of interest for them to purchase by viewing many different options from various companies. The customers and companies can view the history of their transactions to see what they have purchase/what they have sold. It also allows the hosting company to keep track of all sales. Information which may be useful for companies or the hosting company.

USER	
PK	**id int NOT NULL**
	firstname varchar(32) NOT NULL
	lastname varchar(32) NOT NULL
	address varchar(255) NOT NULL

TRANSACTIONS	
PK	**id int NOT NULL**
FK1	user_id int NOT NULL
FK2	product_id int NOT NULL
FK3	company_id int NOT NULL
	quantity int NOT NULL
	transact_date date NOT NULL

PRODUCT_TYPES	
PK	**category int NOT NULL**
	category_name

SUPPORT	
PK	**company_id int NOT NULL**
	contact_name varchar(50)
	contact_email varchar(50)
	contact_phone bigint

COMPANY	
PK	**id int NOT NULL**
	came varchar(255) NOT NULL
	address varchar(255)
	country_code varchar(64) NOT NULL

LISTING	
PK	**company_id NOT NULL**
PK	**product_id NOT NULL**
	price float NOT NULL

PRODUCT	
PK	**id int NOT NULL**
	product_name varchar(128) NOT NULL
	category int NOT NULL