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CS 443

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Lab 1

1. **Just by observing the tables below, what would you choose the primary key of each table? Based on the explanation of the attributes given below, write down all the foreign keys.**

Salesreps Table:

The primary key of the Salesreps Table is **EMPL\_NUM**. **REP\_OFFICE** is a foreign key in the Salesrep Table because it refers to the primary key of the Offices Table which is **OFFICE**. **MANAGER** is a foreign key in the Salesreps Table because it refers to the primary of the Salesreps Table which is **EMPL\_NUM.**

Offices Table:

The primary key of the Offices Table is **OFFICE**. **MGR** is a foreign key in the Offices Table because it refers to the primary key of the Salesrep Table which is **EMPL\_NUM**.

Customers Table:

The primary key of the Customers Table is **CUST\_NUM**. CUST\_REP is a foreign key in the Customers Table because it refers to the primary key of Salesreps Table which is **EMPL\_NUM**.

Orders Table:

The primary key of the Orders Table is **ORDER\_NUM**. **CUST** is a foreign key in the Orders Table because it refers to the primary key of the Customers Table which is **CUST\_NUM**. **REP** is a foreign key in the Orders Table because it refers to the primary key of the Salesreps Table. **MRF** and **PRODU** is a composite foreign key in the Customers Table because it refers to the composite primary key of the Products Table which is **MRF\_ID** and **PRODUCT\_ID**.

Products Table:

The primary key of the Products Table would be a composite primary key of **MFR\_ID** and **PRODUCT\_ID**.

1. **Without looking at the product table, can the “Price” column in the products table be used as the primary key if the store only carries 5 items? Why? Why not? What assumption do you need to make for the price to be the primary key? Is your assumption realistic?**

The “Price” column in the Products Table can be used as a primary key but we would have to assume that each product on the table is priced uniquely meaning that each product has a different price from each other. The assumption that each product is uniquely priced is unrealistic because different products in the real world can be priced the same.

1. **Without looking at the Office table, can you make “City” to be the Primary key? Why or Why not? What if you are obligated to use City as the primary key or part of the primary key. What would you change (add/ delete/ modify) to make “City” as the primary key or part of the composite primary key? What would you make as your assumption? Is your assumption realistic?**

The “City” column can be used as a primary key but to make it work, it would have to be part of a composite primary key. In order to make “City” work as a primary key we would have to assume that a new column named “State” would be part of the composite primary key with “City”. This would work because there is a possibility of multiple offices in a city and there is a possibility of multiple cities having the same name. My assumption would be realistic that there are multiple cities have the same name because for example San Marcos is a city in Southern California but San marcos is also the name of another city located in Texas.