**DDL Statements & Normal Forms**

CREATE TABLE Metadata

(table\_id INTEGER,

table\_name CHAR(30),

description CHAR (100),

number\_of\_fields INTEGER,

number\_of\_primary\_keys INTEGER,

number\_of\_foreign\_keys INTERGER,

number\_of\_indexes INTEGER,

PRIMARY KEY (table\_id))

The primary key table\_id functionally determines all attributes. There are no other FD’s. It is in BCNF.

CREATE TABLE Customer

(customer\_id INTEGER,

customer\_name CHAR(20),

customer\_address\_street CHAR(50),

customer\_address\_city CHAR(30),

customer\_address\_state CHAR(20),

customer\_address\_zip CHAR(10),

PRIMARY KEY (customer\_id))

The primary key customer\_id functionally determines all attributes. There are no other FD’s. It is in BCNF.

Note: Although infrequent, zip codes do not always determine the state or the city. One zip code can span multiple state and city borders.

CREATE TABLE Accounts

(customer\_id INTEGER,

balance DOUBLE,

PRIMARY KEY (customer\_id)

FOREIGN KEY (customer\_id REFERENCES Customer))

The primary key customer\_id functionally determines all attributes. There are no other FD’s. It is in BCNF

CREATE TABLE Customer\_Business

(customer\_id INTEGER,

customer\_type CHAR(20),

business\_category CHAR(20),

business\_income INTEGER,

PRIMARY KEY (customer\_id),

FOREIGN KEY (customer\_id REFERENCES Customer))

The primary key customer\_id functionally determines all attributes. There are no other FD’s. It is in BCNF.

CREATE TABLE Customer\_Home

(customer\_id INTEGER,

customer\_type CHAR(20),

marriage\_status CHAR(10),

gender CHAR(6),

age INTEGER,

home\_income DOUBLE,

PRIMARY KEY (customer\_id),

FOREIGN KEY (customer\_id REFERENCES Customer))

The primary key customer\_id functionally determines all attributes. There are no other FD’s. It is in BCNF.

CREATE TABLE Product

(product\_id INTEGER,

product\_name CHAR(20),

quantity INTEGER,

price DOUBLE,

cost DOUBLE,

product\_type CHAR(20),

PRIMARY KEY (product\_id))

The primary key product\_id functionally determines all attributes. There are no other FD’s. It is in BCNF.

CREATE TABLE Employees

(emp\_id INTEGER,

emp\_name CHAR(20),

emp\_address\_street CHAR(50),

emp\_address\_city CHAR(30),

emp\_address\_state CHAR(20),

emp\_address\_zip CHAR(10),

email CHAR(50),

PRIMARY KEY (emp\_id)

FOREIGN KEY (emp\_id REFERENCES Salesperson))

The primary key emp\_id functionally determines all attributes. There are no other FD’s. It is in BCNF.

Note: Although infrequent, zip codes do not always determine the state or the city. One zip code can span multiple state and city borders.

CREATE TABLE Region

(region\_id INTEGER,

region\_name CHAR(30),

region\_manager CHAR(50),

PRIMARY KEY (region\_id))

The primary key region\_id functionally determines all attributes. There are no other FD’s. It is in BCNF.

CREATE TABLE Salesperson

(emp\_id INTEGER,

title CHAR(20),

salary INTEGER,

store\_id INTEGER,

PRIMARY KEY (emp\_id),

FOREIGN KEY (store\_id REFERENCES Store))

The primary key salesperson\_id functionally determines all attributes. There are no other FD’s. It is in BCNF.

CREATE TABLE Store

(store\_id INTEGER,

store\_name CHAR(20),

store\_address\_street CHAR(50),

store\_address\_city CHAR(30),

store\_address\_state CHAR(20),

store\_address\_zip CHAR(10),

manager CHAR(50),

number\_of\_salespersons INTEGER,

region\_id INTEGER,

PRIMARY KEY (store\_id),

FOREIGN KEY (region\_id REFERENCES Region))

The primary key store\_id functionally determines all attributes. There are no other FD’s. It is in BCNF.

Note: Although infrequent, zip codes do not always determine the state or the city. One zip code can span multiple state and city borders.

CREATE TABLE Transaction

(order\_id INTEGER,

order\_date DATE,

salesperson\_ID INTEGER,

product\_ID INTEGER,

customer\_ID INTEGER,

product\_quantity INTEGER,

price (double),

PRIMARY KEY (order\_id),

FOREIGN KEY (salesperson\_id REFERENCES Salesperson),

FOREIGN KEY (product\_id REFERENCES Product),

FOREIGN KEY (customer\_id REFERENCES Customer))

The primary key order\_id functionally determines all attributes. There are no other FD’s. It is in BCNF.