**DATA TYPE CONVERSION AND THE USE OF UNION ALL OPERATOR TO APPEND VERTICALLY TWO TABLES**

use Commercial\_Project

-- CHANGE DATA TYPES FROM VARCHAR(50) TO DATE FOR THE FOLLOWING COLUMNS

ALTER TABLE return\_data

ALTER COLUMN Return\_date date

ALTER TABLE customers

ALTER COLUMN birthdate date

ALTER TABLE customers

ALTER COLUMN acct\_open\_date date

ALTER TABLE stores

ALTER COLUMN first\_opened\_date date

ALTER TABLE stores

ALTER COLUMN last\_remodel\_date date

-- TO VIEW ALL THE COLUMNS DATA TYPES OF A TABLE

SELECT \*

FROM INFORMATION\_SCHEMA.COLUMNS

WHERE TABLE\_NAME = 'customers'

-- CHANGE DATA TYPE FROM VARCHAR TO INTEGER IN THE CUSTOMERS TABLE

select \* from Customers

SELECT \*

FROM INFORMATION\_SCHEMA.COLUMNS

WHERE TABLE\_NAME = 'customers'

ALTER TABLE customers

ALTER COLUMN total\_children integer

ALTER TABLE customers

ALTER COLUMN num\_children\_at\_home integer

-- CHANGE DATA TYPE FROM FLOAT TO VARCHAR(50) IN THE PRODUCTS TABLE

select \* from Products

SELECT \*

FROM INFORMATION\_SCHEMA.COLUMNS

WHERE TABLE\_NAME = 'products'

ALTER TABLE products

ALTER COLUMN product\_sku varchar(50)

-- CHANGE DATA TYPE FROM FLOAT TO DECIMAL(10,2) IN THE PRODUCTS TABLE

ALTER TABLE products

ALTER COLUMN product\_retail\_price decimal(10,2)

ALTER TABLE products

ALTER COLUMN product\_weight decimal(10,2)

-- CHANGE DATA TYPE FROM VARCHAR TO DECIMAL(10,2) IN THE PRODUCTS TABLE

ALTER TABLE products

ALTER COLUMN product\_cost decimal(10,2)

-- CHANGE DATA TYPES IN THE RETURN\_DATA TABLE

select \* from Return\_Data

SELECT \*

FROM INFORMATION\_SCHEMA.COLUMNS

WHERE TABLE\_NAME = 'return\_data'

ALTER TABLE return\_data

ALTER COLUMN quantity decimal(10,2)

-- CHANGE DATA TYPE FROM VARCHAR TO DATE IN THE TRANSACTIONS\_1997 TABLE

select \* from Transactions\_1997

SELECT \*

FROM INFORMATION\_SCHEMA.COLUMNS

WHERE TABLE\_NAME = 'transactions\_1997'

ALTER TABLE transactions\_1997

ALTER COLUMN transaction\_date date

ALTER TABLE transactions\_1997

ALTER COLUMN stock\_date date

-- CHANGE DATA TYPE FROM VARCHAR TO INTEGER IN THE TRANSACTIONS\_1997 TABLE

ALTER TABLE transactions\_1997

ALTER COLUMN quantity integer

-- CHANGE DATA TYPE FROM VARCHAR TO DATE IN THE TRANSACTIONS\_1998 TABLE

select \* from Transactions\_1998

SELECT \*

FROM INFORMATION\_SCHEMA.COLUMNS

WHERE TABLE\_NAME = 'transactions\_1998'

ALTER TABLE transactions\_1998

ALTER COLUMN transaction\_date date

ALTER TABLE transactions\_1998

ALTER COLUMN stock\_date date

-- CHANGE DATA TYPE FROM VARCHAR TO INTEGER IN THE TRANSACTIONS\_1998 TABLE

ALTER TABLE transactions\_1998

ALTER COLUMN quantity integer

-- UNION ALL operator which does not remove duplicates to append vertically Transactions\_1997 and Transactions\_1998

-- in order to mimic the function Append Queries or Get Data > From Folder in Power BI

select transaction\_date, stock\_date, product\_id, customer\_id, store\_id, quantity from Transactions\_1997

UNION ALL

select transaction\_date, stock\_date, product\_id, customer\_id, store\_id, quantity from Transactions\_1998

order by transaction\_date ASC

-- HOW TO MOVE UNION QUERY RESULTS TO A NEW TABLE (in this case I named it Transaction\_Data)

SELECT \* INTO Transaction\_Data

FROM

(select transaction\_date, stock\_date, product\_id, customer\_id, store\_id, quantity from Transactions\_1997

UNION ALL

select transaction\_date, stock\_date, product\_id, customer\_id, store\_id, quantity from Transactions\_1998) A

select \* from Transaction\_Data

order by transaction\_date ASC

**ADD FOREIGN KEY TO CONNECT TWO DIMENSION (LOOKUP) TABLES AS A POWER BI SNOWFLAKE SCHEMA**

-- ADD FOREIGN KEY to Region\_id column of the Stores table

-- to reference the Region\_id PK column of the Regions table as a Power BI 'snowflake' schema

ALTER TABLE Stores

ADD FOREIGN KEY (region\_id)

REFERENCES Regions(region\_id)

**ADD FOREIGN KEYS TO FACT(DATA) TABLES IN ORDER TO REFERENCE THEM WITH DIMENSION (LOOKUP) TABLES AS A POWER BI STAR SCHEMA**

ALTER TABLE Transaction\_data

ADD FOREIGN KEY (store\_id)

REFERENCES Stores(store\_id)

ALTER TABLE Transaction\_data

ADD FOREIGN KEY (customer\_id)

REFERENCES Customers(customer\_id)

ALTER TABLE Transaction\_data

ADD FOREIGN KEY (product\_id)

REFERENCES Products(product\_id)

ALTER TABLE Return\_data

ADD FOREIGN KEY (product\_id)

REFERENCES Products(product\_id)

ALTER TABLE Return\_data

ADD FOREIGN KEY (store\_id)

REFERENCES Stores(store\_id)