## **Name: Jianwei Su**

**Date:12/12/2022**

## Exercises

## **Level 1: Basic SQL Statements**

***Note: For all SQL homeworks, just paste your code under the question in the Word document. No images or proof of output are necessary. Please make your answers bold and blue.***

Sample Question: How would you select all position ids from table TRADE\_DATA\_HIST?

A: **SELECT POSITION\_ID FROM DBO.TRADE\_DATA\_HIST**

### **1.1: SELECT**

1. All position ids and the traders who traded those positions

**SELECT**

**TRADE\_DATA\_HIST.POSITION\_ID,**

**TRADE\_DATA\_HIST.EMPLOYEE\_ID**

**FROM DBO. TRADE\_DATA\_HIST**

1. All data from table employee\_info

**SELECT \* FROM DBO.EMPLOYEE\_INFO**

1. Unique list of all dates where there were trades

**SELECT**

**DISTINCT TRADE\_DATA\_HIST.COB\_DATE**

**FROM DBO.TRADE\_DATA\_HIST**

1. Unique list of first and last names of all employees

### **SELECT**

### **DISTINCT EMPLOYEE\_INFO.FIRST\_NAME,**

### **EMPLOYEE\_INFO.LAST\_NAME**

### **FROM DBO.EMPLOYEE\_INFO**

### **1.2: FILTERS**

1. All dates, cusips, quantity from trader T1

**SELECT**

**TRADE\_DATA\_HIST.COB\_DATE,**

**TRADE\_DATA\_HIST.CUSIP,**

**TRADE\_DATA\_HIST.QUANTITY**

**FROM**

**DBO.TRADE\_DATA\_HIST**

**WHERE**

**TRADE\_DATA\_HIST.EMPLOYEE\_ID IN ('T1')**

1. All rows where cusip starts with “C17”

**SELECT**

**\***

**FROM**

**DBO.TRADE\_DATA\_HIST**

**WHERE**

**TRADE\_DATA\_HIST.CUSIP LIKE 'C17%'**

1. All trader, cusips, fund\_id when the quantity is between 5,000 and 20,000

**SELECT**

**TRADE\_DATA\_HIST .EMPLOYEE\_ID,**

**TRADE\_DATA\_HIST .CUSIP,**

**TRADE\_DATA\_HIST .FUND\_ID**

**FROM**

**DBO.TRADE\_DATA\_HIST**

**WHERE**

**TRADE\_DATA\_HIST.QUANTITY BETWEEN 5000 AND 20000**

1. All data where the trader is T1 T2 or T3

**SELECT**

**\***

**FROM**

**DBO.TRADE\_DATA\_HIST**

**WHERE**

**TRADE\_DATA\_HIST.EMPLOYEE\_ID IN ('T1','T2','T3')**

1. All unique cusips that were traded in Jan 2018

**SELECT**

**DISTINCT TRADE\_DATA\_HIST.CUSIP**

**FROM**

**DBO.TRADE\_DATA\_HIST**

**WHERE**

**TRADE\_DATA\_HIST.COB\_DATE LIKE '201801%'**

### **1.3: MULTIPLE FILTERS**

1. All trades from trader T1 that were traded in Feb 2018

**SELECT**

**\***

**FROM**

**DBO.TRADE\_DATA\_HIST**

**WHERE**

**TRADE\_DATA\_HIST.COB\_DATE LIKE '201802%'**

**AND**

**TRADE\_DATA\_HIST.EMPLOYEE\_ID IN('T1')**

1. Unique list of fund\_ids where the notional is > 10,000, employee\_id is T3 or T4, and the year is 2019

**SELECT**

**DISTINCT** **TRADE\_DATA\_HIST.FUND\_ID**

**FROM**

**DBO.TRADE\_DATA\_HIST**

**WHERE**

**TRADE\_DATA\_HIST.COB\_DATE LIKE '2019%'**

**AND**

**TRADE\_DATA\_HIST.EMPLOYEE\_ID IN('T3','T4')**

**AND**

**TRADE\_DATA\_HIST.NOTIONAL\_USD > 10000**

1. Position IDs and cusips of all trades in 2019 where fund\_id is A007 or A012

**SELECT**

**TRADE\_DATA\_HIST.POSITION\_ID,**

**TRADE\_DATA\_HIST.CUSIP**

**FROM**

**DBO.TRADE\_DATA\_HIST**

**WHERE**

**TRADE\_DATA\_HIST.COB\_DATE LIKE '2019%'**

**AND**

**TRADE\_DATA\_HIST.FUND\_ID IN ('A007','A012')**

1. Unique list of Tickers (security\_info) where the ticker starts with “AA” or the sector is Health Care

**SELECT**

**DISTINCT** **SECURITY\_INFO.TICKER**

**FROM**

**DBO.SECURITY\_INFO**

**WHERE**

**SECURITY\_INFO.TICKER LIKE 'AA%'**

**OR**

**SECURITY\_INFO.SECTOR ='Health Care'**

### **1.4: ORDER / LIMIT**

1. Date, fund\_id, trader\_cusip but organized first by fund\_id, and then date

**SELECT**

**TRADE\_DATA\_HIST.FUND\_ID,**

**TRADE\_DATA\_HIST.COB\_DATE,**

**TRADE\_DATA\_HIST.CUSIP**

**FROM**

**DBO.TRADE\_DATA\_HIST**

**ORDER BY**

**TRADE\_DATA\_HIST.FUND\_ID,**

**TRADE\_DATA\_HIST.COB\_DATE**

1. All rows, all trades sorted from least quantity to most

**SELECT**

**\***

**FROM**

**DBO.****TRADE\_DATA\_HIST**

**ORDER BY**

**TRADE\_DATA\_HIST.QUANTITY ASC**

1. All employee information sorted by highest salary to lowest, but only show the first three rows

**SELECT**

**\***

**FROM**

**DBO.EMPLOYEE\_INFO**

**ORDER BY**

**EMPLOYEE\_INFO.SALARY DESC**

**LIMIT 3**