

# Time to try out this ASOF join that they've introduced to Snowflake!

In the heart of a bustling financial district lies a brokerage firm's trading floor, where traders make split-second decisions amid a frenzy of activity. Trades and quotes, recorded in separate tables, hold vital information about transactions and market prices.

To ensure traders have the latest market data, a critical task emerges: pairing each trade with the most recent quote available at or before its time. Analysts devise a sophisticated SQL query, leveraging temporal joins to seamlessly integrate trade and quote data based on timestamps.

Given two tables, trade and quotes, containing transactional data in a financial market, where the trade table records trades and the quotes table records quotes for a specific financial instrument, construct an ASOF join SQL statement to pair each trade record with the most recent quote record available at or before the time of the trade.

Start up Code

```
create or replace temporary table trade (  
    type VARCHAR,  
    id INT,  
    ticker VARCHAR,  
    datetime TIMESTAMP_TZ,  
    price FLOAT,  
    volume INT  
);  
  
create or replace temporary table quotes(  
    type VARCHAR,  
    id INT,  
    ticker VARCHAR,  
    datetime TIMESTAMP_TZ,  
    ask FLOAT,  
    bid FLOAT  
);  
insert into trade values  
    ('trade', 2, 'AAPL', '2020-01-06 09:00:30.000+09:00', 305, 1),  
    ('trade', 2, 'AAPL', '2020-01-06 09:01:00.000+09:00', 310, 2),  
    ('trade', 2, 'AAPL', '2020-01-06 09:01:30.000+09:00', 308, 1),  
    ('trade', 3, 'GOOGL', '2020-01-06 09:02:00.000+09:00', 1500, 2),  
    ('trade', 3, 'GOOGL', '2020-01-06 09:03:00.000+09:00', 1520, 3),  
    ('trade', 3, 'GOOGL', '2020-01-06 09:03:30.000+09:00', 1515, 1);  
  
insert into quotes values  
    ('quote', 2, 'AAPL', '2020-01-06 08:59:59.999+09:00', 305, 304),  
    ('quote', 2, 'AAPL', '2020-01-06 09:02:00.000+09:00', 311, 309),  
    ('quote', 3, 'GOOGL', '2020-01-06 09:01:00.000+09:00', 1490, 1485),  
    ('quote', 3, 'GOOGL', '2020-01-06 09:04:00.000+09:00', 1530, 1528);  
  
insert into quotes values  
    ('quote', 2, 'AAPL', '2020-01-06 09:00:30.000+09:00', 307, 305),  
    ('quote', 2, 'AAPL', '2020-01-06 09:01:30.000+09:00', 308, 306),  
    ('quote', 3, 'GOOGL', '2020-01-06 09:02:00.000+09:00', 1502, 1498),  
    ('quote', 3, 'GOOGL', '2020-01-06 09:03:30.000+09:00', 1518, 1513);
```