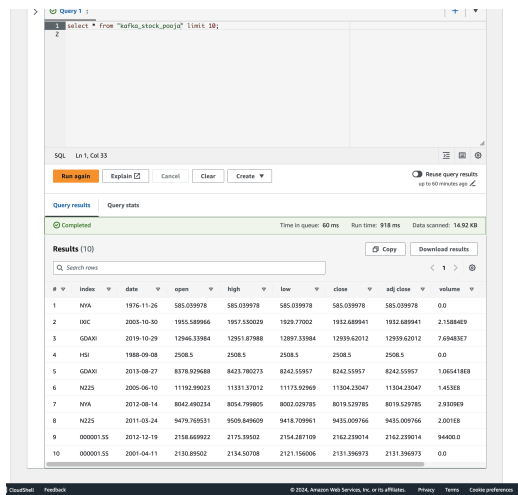


QUERIES:

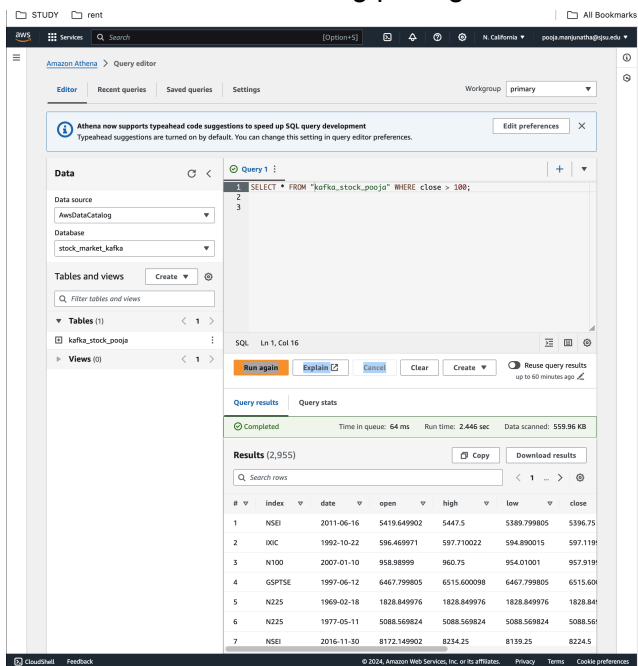
1. Select all columns



The screenshot shows the Amazon Athena Query Editor interface. The SQL query is: `select * from "kafka_stock_posjo" limit 10;`. The query is executed, and the results are displayed in a table with 10 rows and 11 columns: #, index, date, open, high, low, close, adj close, volume, and volume. The results are limited to 10 rows.

#	index	date	open	high	low	close	adj close	volume	volume
1	NYA	1976-11-26	585.039978	585.039978	585.039978	585.039978	0.0		
2	IOC	2005-10-30	1955.589965	1957.530039	1928.77002	1932.689941	1932.689941	2.138840	
3	QDAX	2019-10-29	12946.339984	12951.879988	12897.339984	12939.62012	12939.62012	7.6948367	
4	HDI	1988-09-08	2508.5	2508.5	2508.5	2508.5	0.0		
5	QDAX	2019-08-27	8378.829688	8423.780273	8242.55957	8242.55957	8242.55957	3.06541868	
6	NZ25	2005-06-10	11192.39023	11351.37012	11175.92969	11304.23047	11304.23047	1.45388	
7	NYA	2012-08-14	8042.490234	8054.799805	8002.029785	8019.529785	8019.529785	2.930869	
8	NZ25	2011-03-24	9479.769531	9509.849609	9418.709961	9435.009766	9435.009766	2.00188	
9	000001.SS	2012-12-19	2158.689922	2175.39502	2154.287109	2162.239014	2162.239014	94400.0	
10	000001.SS	2001-04-11	2130.89502	2134.50708	2121.156006	2131.396973	2131.396973	0.0	

2. Retrieve data with closing price greater than 100



The screenshot shows the Amazon Athena Query Editor interface. The SQL query is: `SELECT * FROM "kafka_stock_posjo" WHERE close > 100;`. The query is executed, and the results are displayed in a table with 7 rows and 11 columns: #, index, date, open, high, low, close, adj close, volume, and volume. The results are limited to 7 rows.

#	index	date	open	high	low	close	adj close	volume	volume
1	NSDI	2011-06-16	5419.649902	5447.5	5389.799805	5396.75			
2	IOC	1992-10-22	596.469971	597.710022	594.890015	597.119			
3	N100	2007-01-10	958.98999	960.75	954.01001	957.919			
4	GSPICE	1997-06-12	6467.799805	6515.600098	6467.799805	6515.60			
5	NZ25	1969-02-18	1828.849976	1828.849976	1828.849976	1828.84			
6	NZ25	1977-05-11	5088.569824	5088.569824	5088.569824	5088.56			
7	NSDI	2016-11-30	8172.149902	8234.25	8139.25	8224.5			

3. Calculating Moving Averages of 7 days

The screenshot shows the Amazon Athena Query Editor interface. The query editor has a sidebar on the left with 'Data' and 'Tables and views' sections. The 'Data' section shows 'Data source' as 'AwsDataCatalog' and 'Database' as 'stock_market_kafka'. The 'Tables and views' section shows a table named 'kafka_stock_pooja'. The main editor area contains a SQL query:

```
1 SELECT date, close,
2     AVG(close) OVER (ORDER BY date ROWS BETWEEN 6 PRECEDING AND CURRENT ROW)
3     AS moving_avg_7day
4 FROM "kafka_stock_pooja";
```

 The query is executed, and the results are displayed in a table with 7 rows and 3 columns: 'date', 'close', and 'moving_avg_7day'. The query status is 'Completed' with a run time of 1.572 sec and data scanned of 559.96 KB.

#	date	close	moving_avg_7day
1	1965-02-25	1216.709961	1216.709961
2	1965-03-10	1173.339966	1195.0249635
3	1965-12-03	1376.560059	1255.536662
4	1965-12-24	1389.290039	1288.97500625
5	1966-02-04	535.450012	1138.2700074
6	1966-02-10	538.409973	1038.293335
7	1966-02-11	538.309998	966.8671439999999

4. Date with highest volume traded

The screenshot shows the Amazon Athena Query Editor interface. The query editor has a sidebar on the left with 'Data' and 'Tables and views' sections. The 'Data' section shows 'Data source' as 'AwsDataCatalog' and 'Database' as 'stock_market_kafka'. The 'Tables and views' section shows a table named 'kafka_stock_pooja'. The main editor area contains a SQL query:

```
1 SELECT date, volume
2 FROM "kafka_stock_pooja"
3 ORDER BY volume DESC
4 LIMIT 1;
```

 The query is executed, and the results are displayed in a table with 1 row and 2 columns: 'date' and 'volume'. The query status is 'Completed' with a run time of 1.594 sec and data scanned of 559.96 KB.

#	date	volume
1	2021-03-19	6.025388E10

5. Daily Percentage Change in Closing price

The screenshot shows the Amazon Athena Query Editor interface. On the left, the 'Data' panel shows the data source as 'AwsDataCatalog' and the database as 'stock_market_kafka'. The 'Tables and views' panel shows a table named 'kafka_stock_pooja'. The main query editor contains the following SQL query:

```
1 SELECT date, close,
2       LAG(close) OVER (ORDER BY date) AS prev_close,
3       ((close - LAG(close) OVER (ORDER BY date)) / LAG(close) OVER (ORDER BY
4       date)) * 100 AS pct_change
5 FROM "kafka_stock_pooja";
```

The query is executed, and the results are displayed in a table with 12 rows. The columns are: #, date, close, prev_close, and pct_change. The results show the daily closing price and the percentage change from the previous day.

#	date	close	prev_close	pct_change
1	1965-02-25	1216.709961		
2	1965-03-10	1173.339966	1216.709961	-3.5645302816749123
3	1965-12-03	1376.560059	1173.339966	17.319796383719186
4	1965-12-24	1389.290039	1376.560059	0.9247674968317579
5	1966-02-04	535.450012	1389.290039	-61.4587309367443
6	1966-02-10	538.409973	535.450012	0.5527987550031134
7	1966-02-11	538.309998	538.409973	-0.01856856392221506
8	1966-03-28	1566.599976	538.309998	191.02189850094518
9	1966-04-14	1537.900024	1566.599976	-1.8319898148651537
10	1966-06-15	1545.77002	1537.900024	0.5117365158451873
11	1966-08-17	1494.130005	1545.77002	-3.3407307899528256
12	1966-08-24	453.51001	1494.130005	-69.64721888441026

6. Date Range for highest and lowest closing prices

The screenshot shows the Amazon Athena Query Editor interface. On the left, the 'Data' panel shows the data source as 'AwsDataCatalog' and the database as 'stock_market_kafka'. The 'Tables and views' panel shows a table named 'kafka_stock_pooja'. The main query editor contains the following SQL query:

```
1 WITH price_stats AS (
2   SELECT MIN(close) AS min_close, MAX(close) AS max_close
3   FROM "kafka_stock_pooja"
4 )
5 SELECT ksp.date, ksp.close, ps.min_close, ps.max_close
6 FROM "kafka_stock_pooja" ksp, price_stats ps
7 WHERE ksp.close = ps.min_close OR ksp.close = ps.max_close;
```

The query is executed, and the results are displayed in a table with 2 rows. The columns are: #, date, close, min_close, and max_close. The results show the date and closing price for the highest and lowest closing prices in the dataset.

#	date	close	min_close	max_close
1	2021-04-14	67812.14844	55.16	67812.14844
2	1974-10-04	55.16	55.16	67812.14844

7. Date Range for highest and Lowest Closing Prices

The screenshot displays the Amazon Athena Query Editor interface. At the top, there's a navigation bar with the AWS logo, 'Services', a search bar, and user information. Below this, the 'Query editor' tab is active, showing options for 'Editor', 'Recent queries', 'Saved queries', and 'Settings'. A notification banner at the top states: 'Athena now supports typeahead code suggestions to speed up SQL query development'. The 'Data' sidebar on the left shows the 'Data source' as 'AwsDataCatalog' and the 'Database' as 'stock_market_kafka'. Under 'Tables and views', a table named 'kafka_stock_pooja' is listed. The main query editor area contains the following SQL query:

```
1 SELECT date, high, low, (high - low) AS daily_range
2 FROM "kafka_stock_pooja"
3 ORDER BY daily_range DESC
4 LIMIT 5;
```

Below the query editor, there are buttons for 'Run again', 'Explain', 'Cancel', 'Clear', and 'Create'. A 'Reuse query results' toggle is also present. The 'Query results' tab is selected, showing a 'Completed' status with a green checkmark. The query statistics are: 'Time in queue: 63 ms', 'Run time: 1.436 sec', and 'Data scanned: 559.96 KB'. The results are displayed in a table with 5 rows:

#	date	high	low	daily_range
1	2021-02-23	67696.89844	65775.59375	1921.3046900000045
2	2019-09-11	56243.78125	54344.75	1899.03125
3	2020-04-23	49682.57031	48108.48828	1574.0820300000005
4	2014-10-15	47761.94141	46358.62109	1403.3203199999999
5	2021-05-05	67400.46875	66173.96875	1226.5

The footer of the interface includes links for 'CloudShell', 'Feedback', and copyright information for Amazon Web Services, Inc. or its affiliates, along with 'Privacy', 'Terms', and 'Cookie preferences' links.

8. Days where closing price was higher than the opening price

The screenshot shows the Amazon Athena Query Editor interface. The query editor displays the following SQL query:

```
1 SELECT date, open, close
2 FROM "kafka_stock_pooja"
3 WHERE close > open;
```

The query has been executed successfully. The results show 7 rows of data:

#	date	open	close
1	2019-04-26	29513.08008	29605.00977
2	2006-10-05	2289.530029	2306.340088
3	2004-01-14	8389.799805	8403.799805
4	1999-06-15	17216.2795	17282.0
5	2013-10-01	8618.589844	8689.139648
6	2000-08-29	17062.00977	17240.10938
7	2003-10-09	3086.26001	3089.899902

9. Calculating cumulative volume traded over time

The screenshot shows the Amazon Athena Query Editor interface. The query editor displays the following SQL query:

```
1 SELECT date, volume,
2 SUM(volume) OVER (ORDER BY date) AS cumulative_volume
3 FROM "kafka_stock_pooja";
```

The query has been executed successfully. The results show 13 rows of data:

#	date	volume	cumulative_volume
1	1995-02-25	0.0	0.0
2	1995-03-10	0.0	0.0
3	1995-12-03	0.0	0.0
4	1995-12-24	0.0	0.0
5	1996-02-04	0.0	0.0
6	1996-02-10	0.0	0.0
7	1996-02-11	0.0	0.0
8	1996-03-28	0.0	0.0
9	1996-04-14	0.0	0.0
10	1996-06-15	0.0	0.0
11	1996-08-17	0.0	0.0
12	1996-09-17	0.0	0.0
13	1996-09-17	0.0	0.0