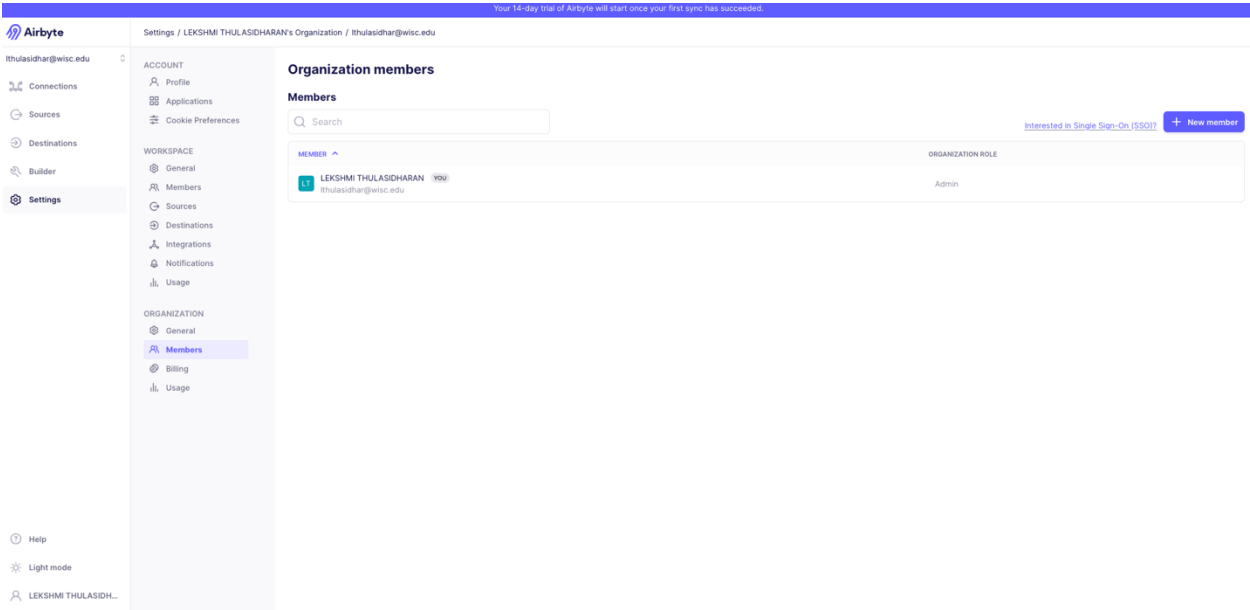
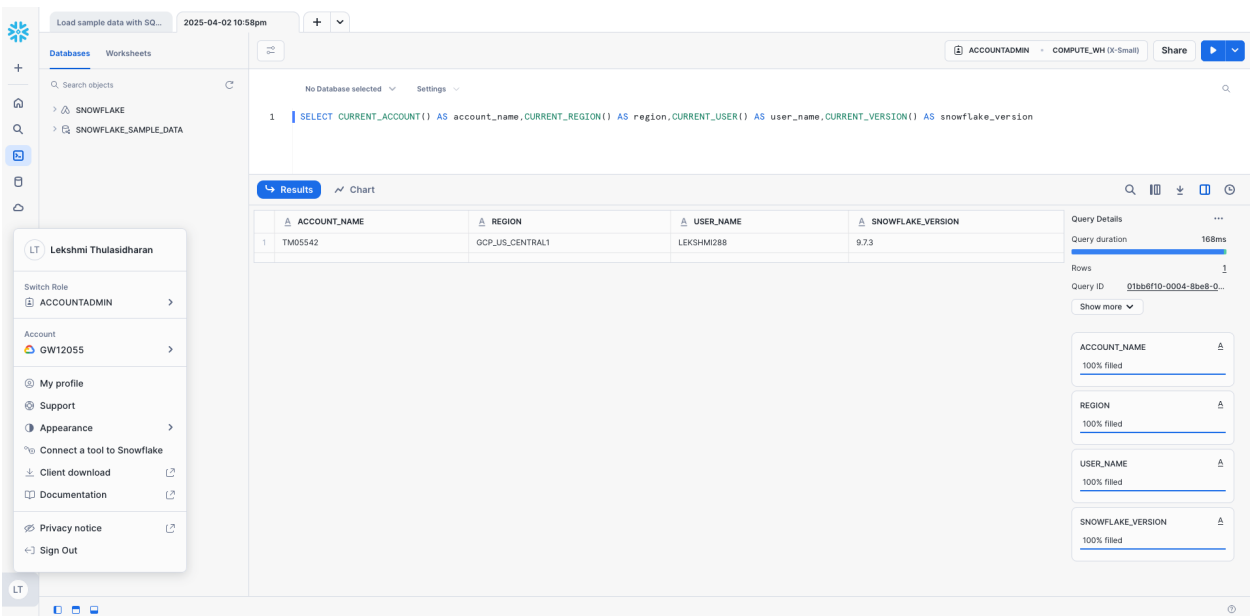


Section 1: Setup environment (15 points in total)

Q1.



Q2.



Q3. In p4.ipynb

## Q4.

- (1) Write a SQL query to switch to use accountadmin role.

```
use role accountadmin;
```

- (2) Create a warehouse named P4\_WAREHOUSE using xsmall as warehouse size.

```
begin;
create warehouse if not exists P4_WAREHOUSE
with
warehouse_size = xsmall
warehouse_type = standard
auto_suspend = 60
auto_resume = true
initially_suspended = true;
commit;
```

- (3) Create two databases named SURVEY\_DATABASE and STOCK\_DB.

```
begin;
create database if not exists SURVEY_DATABASE;
create database if not exists STOCK_DB;
commit;
```

- (4) Create a role named P4\_ROLE.

```
begin;
create role if not exists P4_ROLE;
grant role P4_ROLE to role SYSADMIN;
commit;
```

- (5) Grant usage on the warehouse P4\_WAREHOUSE to the P4\_ROLE.

```
begin;
grant USAGE
on warehouse P4_WAREHOUSE
to role P4_role;
commit;
```

- (6) Grant the role P4\_ROLE to your Snowflake user (username should be your Snowflake username).

```
grant role P4_ROLE to user LEKSHMI288;
```

- (7) Grant ownership of SURVEY\_DATABASE and STOCK\_DB to P4\_ROLE.

```
begin;
grant OWNERSHIP
on database SURVEY_DATABASE
to role P4_ROLE;

grant OWNERSHIP
on database STOCK_DB
to role P4_ROLE;
commit;
```

- (8) Switch to P4\_ROLE.

```
use role P4_ROLE;
```

- (9) Create a schema in SURVEY\_DATABASE named SURVEY\_SCHEMA.

```
begin;  
use database SURVEY_DATABASE;  
create schema if not exists SURVEY_SCHEMA;  
commit;
```

- (10) Create a schema in STOCK\_DB named STOCK\_SCHEMA

```
begin;  
use database STOCK_DB;  
create schema if not exists STOCK_SCHEMA;  
commit;
```

- (11) Grant ownership of SURVEY\_SCHEMA to P4\_role

```
begin;  
use database SURVEY_DATABASE;  
grant ownership  
on schema SURVEY_SCHEMA  
to role P4_role;  
commit;
```

- (12) Grant ownership of STOCK\_SCHEMA to P4\_role.

```
begin;  
use database STOCK_DB;  
grant ownership  
on schema STOCK_SCHEMA  
to role P4_role;  
commit;
```

Q5.

The screenshot displays the Airbyte web interface. On the left is a sidebar with navigation links: Connections, Sources, Destinations, Builder, and Settings. The main panel is titled 'Connections' and shows a status of '1 healthy'. Below this is a search bar and several filter dropdowns: 'All connections', 'All statuses', 'All sources', 'All destinations', and 'Tags'. A table lists the connections, with one entry visible: 'Google Sheets -> Snowflake'. The table columns include NAME, SOURCE NAME, DESTINATION NAME, FREQUENCY, TAGS, LAST SYNC, and ENABLED. The 'Google Sheets -> Snowflake' connection is shown with a frequency of '24 hours' and a last sync time of '4 minutes ago'. The interface also includes a 'New connection' button in the top right corner and a 'Help' link in the bottom left corner.

Q6.

Airbyte

lthulasidhar@wisc.edu

Connections

Sources

Destinations

Builder

Settings

Help

Light mode

LEKSHMI THULASIDH...

Sources

+ New source

Q Search

All statuses

NAME	CONNECTOR	DESTINATION	LAST SYNC	STATUS
File (CSV, JSON, Excel, Feather, Parquet)	File (CSV, JSON, Excel, Feather, Parquet)			
File (CSV, JSON, Excel, Feather, Parquet)	File (CSV, JSON, Excel, Feather, Parquet)			
Google Sheets	Google Sheets	Snowflake	18 minutes ago	

Q7.

Airbyte

lthulasidhar@wisc.edu

Connections

Sources

Destinations

Builder

Settings

Help

Light mode

LEKSHMI THULASIDH...

Connections

3 healthy

+ New connection

Q Search

All connections

All statuses

All sources

All destinations

Tags

4

2

0

Thu, Mar 27

Fri, Mar 28

Sat, Mar 29

Sun, Mar 30

Mon, Mar 31

Tue, Apr 1

Wed, Apr 2

Thu, Apr 3

NAME	SOURCE NAME	DESTINATION NAME	FREQUENCY	TAGS	LAST SYNC	ENABLED
File (CSV, JSON, Excel, Feather, Parquet) → Snowf...	File (CSV, JSON, Excel, Feather, Parquet)	Snowflake	24 hours		55 minutes ago	
File (CSV, JSON, Excel, Feather, Parquet) → Snowf...	File (CSV, JSON, Excel, Feather, Parquet)	Snowflake	24 hours		54 minutes ago	
Google Sheets → Snowflake	Google Sheets	Snowflake	24 hours		1 hour ago	

Q8.

Name: Lekshmi Thulasidharan

SURVEY_DATABASE / SURVEY_SCHEMA / TRADING_BOOKS								
<div> <div>Table</div> <div>ACCOUNTADMIN</div> <div>17 minutes ago</div> <div>30</div> <div>7.0K</div> </div>								
<div> <div>Table Details</div> <div>Columns</div> <div>Data Preview</div> <div>Copy History</div> <div>Lineage</div> </div>								
<div> <div>COMPUTE_WH</div> <div>30 Rows • Updated just now</div> </div>								
	NOTES	PRICE	TICKER	QUANTITY	TRADE_ID	TRADE_DATE	TRADE_TYPE	TRADER_NAME
	Initiated position based on strong earnings report	175.5	AAPL	100	1001	2024-03-01	BUY	John Smith
2	Taking profits after 15% gain	178.25	AAPL	100	1002	2024-03-01	SELL	John Smith
3	Positioning for ECB rate decision	1.085	EUR/USD	100000	1003	2024-03-01	BUY	Sarah Johnson
4	Closing position after ECB announcement	1.092	EUR/USD	100000	1004	2024-03-01	SELL	Sarah Johnson
5	Adding to position on AI momentum	405.75	MSFT	50	1005	2024-03-01	BUY	Michael Chen
6	Quick profit on AI news	408.5	MSFT	50	1006	2024-03-01	SELL	Michael Chen
7	Technical breakout signal	1.265	GBP/USD	75000	1007	2024-03-01	BUY	Lisa Wong
8	Target reached	1.272	GBP/USD	75000	1008	2024-03-01	SELL	Lisa Wong
9	Strong search revenue growth	141.25	GOOGL	75	1009	2024-03-01	BUY	David Kim
10	Profit taking	142.5	GOOGL	75	1010	2024-03-01	SELL	David Kim
11	Re-entering on pullback	176.25	AAPL	150	1011	2024-03-04	BUY	John Smith
12	Technical resistance hit	179.5	AAPL	150	1012	2024-03-04	SELL	John Smith
13	Strong economic data	1.088	EUR/USD	125000	1013	2024-03-04	BUY	Sarah Johnson
14	Profit taking on data	1.095	EUR/USD	125000	1014	2024-03-04	SELL	Sarah Johnson
15	Cloud growth acceleration	407.25	MSFT	75	1015	2024-03-04	BUY	Michael Chen
16	Target reached	410.75	MSFT	75	1016	2024-03-04	SELL	Michael Chen
17	BOE rate decision	1.268	GBP/USD	100000	1017	2024-03-04	BUY	Lisa Wong
18	Position closed after decision	1.275	GBP/USD	100000	1018	2024-03-04	SELL	Lisa Wong
19	Ad revenue growth	142.25	GOOGL	100	1019	2024-03-04	BUY	David Kim
20	Technical target hit	144.5	GOOGL	100	1020	2024-03-04	SELL	David Kim
21	Strong iPhone sales	177.5	AAPL	200	1021	2024-03-05	BUY	John Smith
22	Profit taking	180.25	AAPL	200	1022	2024-03-05	SELL	John Smith

Name: Lekshmi Thulasidharan

**Q9.**

**Q17.**

Name: Lekshmi Thulasidharan

**Q23.**

+ Create

Home

Search

Projects

Data

Databases

Add Data

Migrations

Data Products

AI & ML

Monitoring

Admin

\$394 credits left

Trial ends in 28 days

Upgrade

LT

Lekshmi Thulas...

ACCOUNTADMIN

Search

FOREX\_TRACKING\_CURRENCY\_EXCHAN...

SNOWFLAKE

SNOWFLAKE\_SAMPLE\_DATA

STOCK\_DB

STOCK\_TRACKING\_US\_STOCK\_PRICES...

SURVEY\_DATABASE

INFORMATION\_SCHEMA

PUBLIC

SURVEY\_SCHEMA

Tables

FACT\_TAB\_TRADING

SURVEY

TRADING\_BOOKS

WEIGHTS\_TABLE

Views

STAGING\_BUY\_SELL\_JOINT

STAGING\_VALID\_FX\_INFO

STAGING\_VALID\_FX\_TICKERS

STAGING\_VALID\_STOCK\_INFO

STAGING\_VALID\_STOCK\_TICK...

TRANSFORM\_SURVEY

airbyte\_internal

SURVEY\_DATABASE / SURVEY\_SCHEMA / FACT\_TAB\_TRADING

Table ACCOUNTADMIN 4 minutes ago 15 2.0KB

Table Details Columns Data Preview Copy History Lineage

COMPUTE\_WH 15 Rows Updated just now

	TRADE_ID	BUY_MONEY	SELL_MONEY	PROFIT
	1001	17550	17825	275
2	1003	108500	109200	700
3	1005	20287.5	20425	137.5
4	1007	94875	95400	525
5	1009	10593.75	10687.5	93.75
6	1011	26437.5	26925	487.5
7	1013	136000	136875	875
8	1015	30543.75	30806.25	262.5
9	1017	126800	127500	700
10	1019	14225	14450	225
11	1021	35500	36050	550
12	1023	163500	164700	1200
13	1025	40950	41325	375
14	1027	158750	159750	1000
15	1029	17968.75	18281.25	312.5