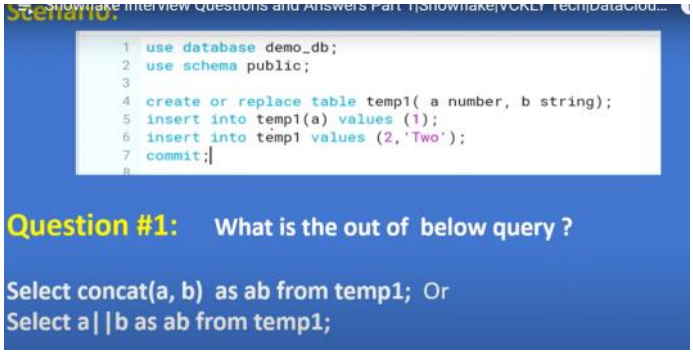
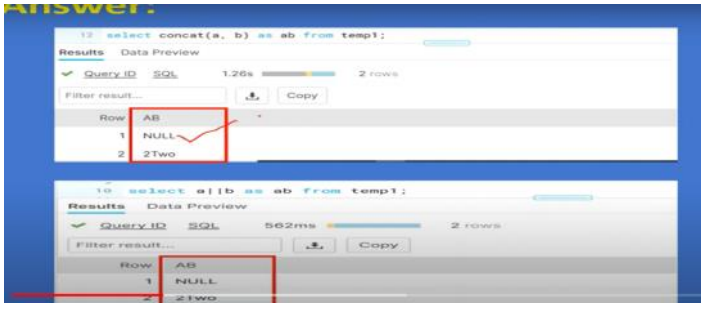
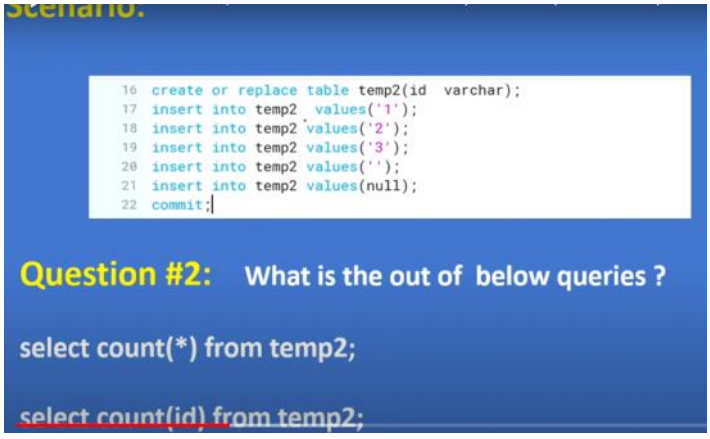
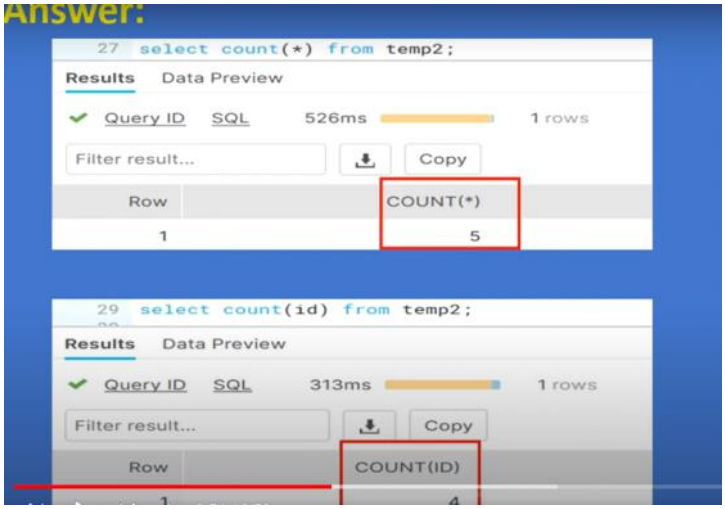
Snowflake interview

26 March 2024 13:44









Scenario:

```
30  CREATE OR REPLACE SEQUENCE SEQ1;
31
```

Question #3: What is the out of below queries ?

SELECT SEQ1.nextval, SEQ1.nextval;

SELECT SEQ1.currval;

Answer:

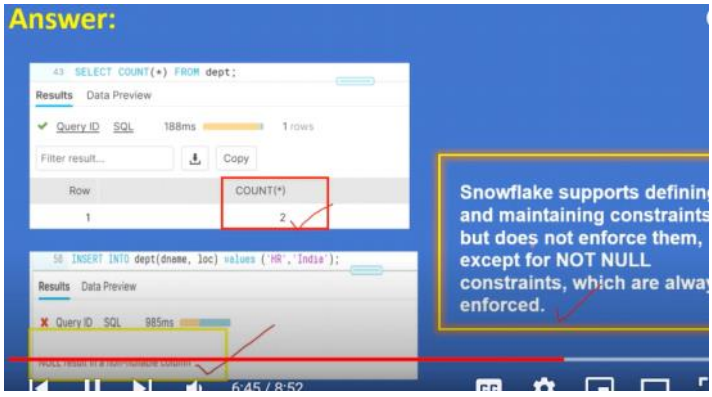
Scenario:

```
36 CREATE OR REPLACE TABLE DEPT( deptno number primary key, dname varchar, loc varchar);
37
38 INSERT INTO dept(deptno, dname, loc) values (10,'HR','India');
39 INSERT INTO dept(deptno, dname, loc) values (10,'HR','India');
40 INSERT INTO dept(dname, loc) values ('HR','India');
```

Question #4: What is the out of below query ?

select count(*) from dept;

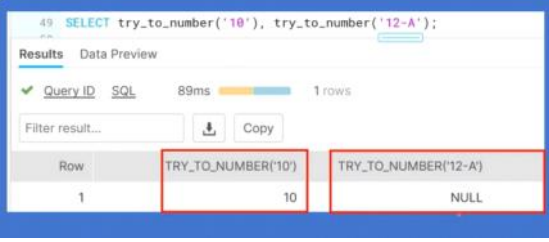
Answer:

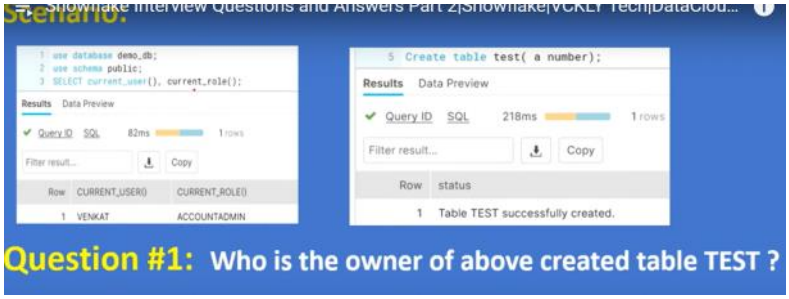


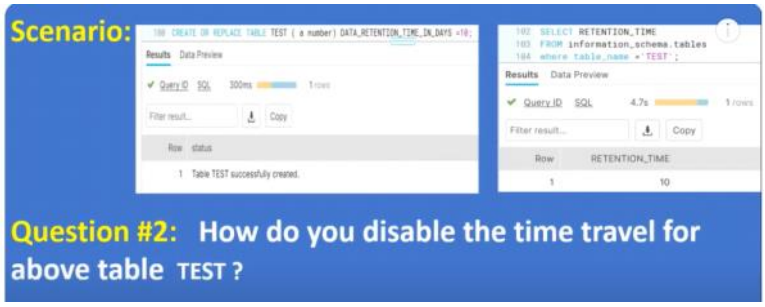
Question #5: What is the out of below query ?

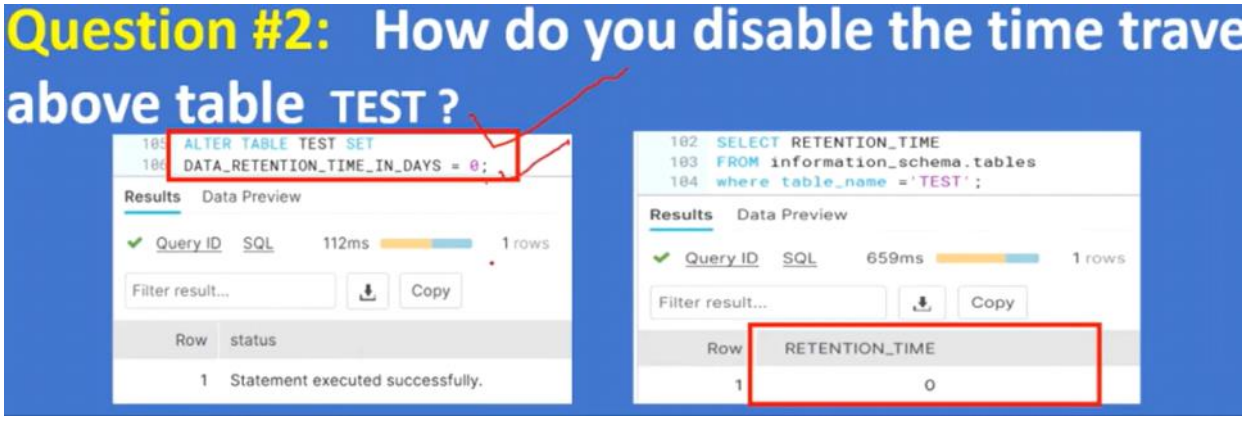
SELECT try_to_number('10'), try_to_number('12-A');

Answer:









If any table time trave want to remove then need to update day_retention_time_in_days=0

Question #3: How do you create a warehouse with maximized mode?

Answer: If both max_cluster_count and min_cluster_count parameters are equal, the warehouse runs in *Maximized* mode.

```
108 create or replace warehouse my_wh warehouse_size='x-small'
109 MAX_CLUSTER_COUNT =2
110 MIN_CLUSTER_COUNT =2
111 initially_suspended=true;
112
```

Results | Data Preview

Query ID | SQL | 202ms | 1 rows

Filter result... | Copy

Row	status
1	Warehouse MY_WH successfully created.

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this scenario - we can again
outside - in case sit near to

Reply

Question #4: How do you create a warehouse with Auto-scale mode?

Answer: If min_cluster_count is less than max_clustger_count , the warehouse runs in Auto-scale mode.

```
108 create or replace warehouse my_wh warehouse_size='x-small'
109 MAX_CLUSTER_COUNT =5
110 MIN_CLUSTER_COUNT =2
111 initially_suspended=true;
112
```

Results | Data Preview

Query ID | SQL | 340ms | 1 rows

Filter result... | Copy

Row	status
1	Warehouse MY_WH successfully created.

Scenario:

```
145 create or replace table test_boolean( strng_val string, boolean_val boolean);
```

Results | Data Preview

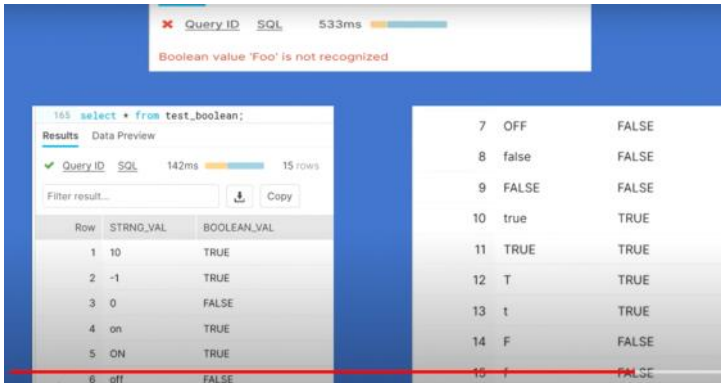
Query ID | SQL | 319ms | 1 rows

Filter result... | Copy

Row	status
1	Table TEST_BOOLEAN successfully created.

```
146 insert into test_boolean values ( 10,10);
147 insert into test_boolean values ('-1', -1);
148 insert into test_boolean values (0, 0);
149 insert into test_boolean values ('on', 'on');
150 insert into test_boolean values ('ON', 'ON');
151 insert into test_boolean values ('off', 'off');
152 insert into test_boolean values ('OFF', 'OFF');
153 insert into test_boolean values ('false', 'false');
154 insert into test_boolean values ('FALSE', FALSE);
155 insert into test_boolean values ('true', true);
156 insert into test_boolean values ('TRUE', 'TRUE');
157 insert into test_boolean values ('T', 'T');
158 insert into test_boolean values ('t', 't');
159 insert into test_boolean values ('F', 'F');
160 insert into test_boolean values ('f', 'f');
161 insert into test_boolean values ('Foo', 'Foo');
```

Question #5: What are all insert statements will give error while inserting to test_Boolean table?



Scenario:

```
1 use role accountadmin;
2 create warehouse wh12 warehouse_size ='x-small'
3 max_cluster_count=4
4 min_cluster_count=5;
```

Question #1: What is the problem with above create warehouse command?

Answer:

Query ID SQL 162ms

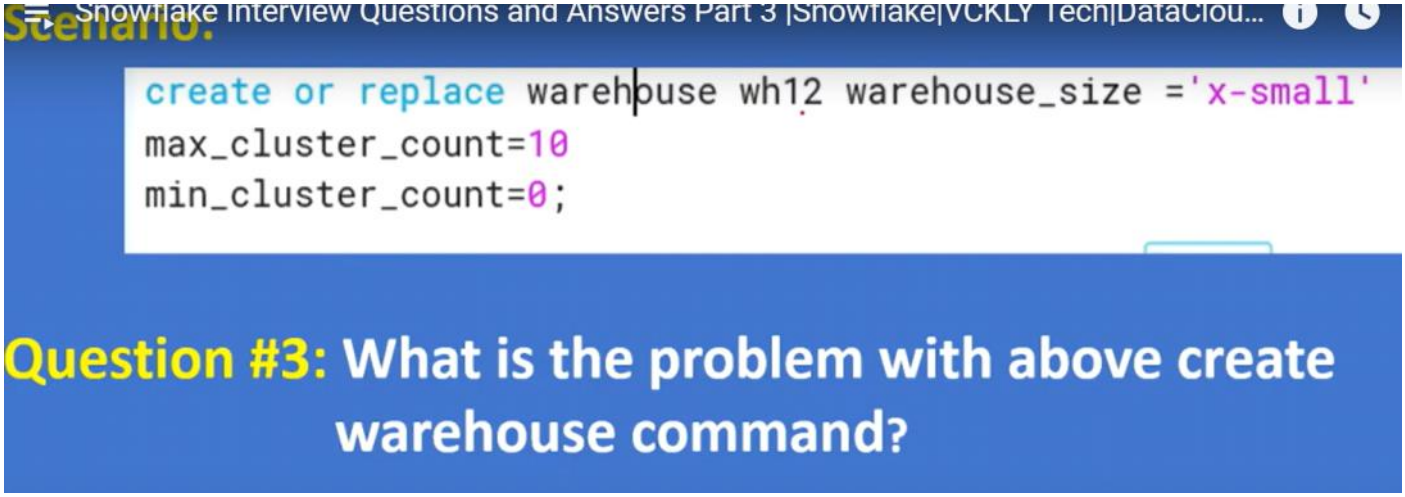
Maximum cluster count of warehouse 'WH12' cannot be lower than minimum cluster count

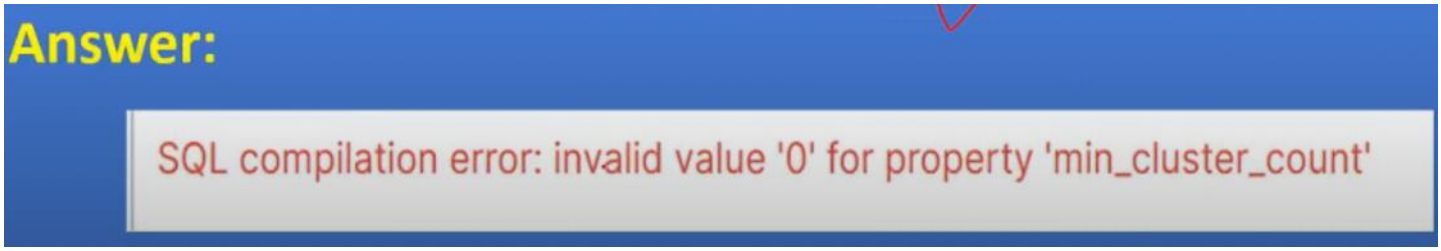
```
create or replace warehouse wh12 warehouse_size ='x-small'
max_cluster_count=12
min_cluster_count=2;
```

Question #2: What is the problem with above create warehouse command?

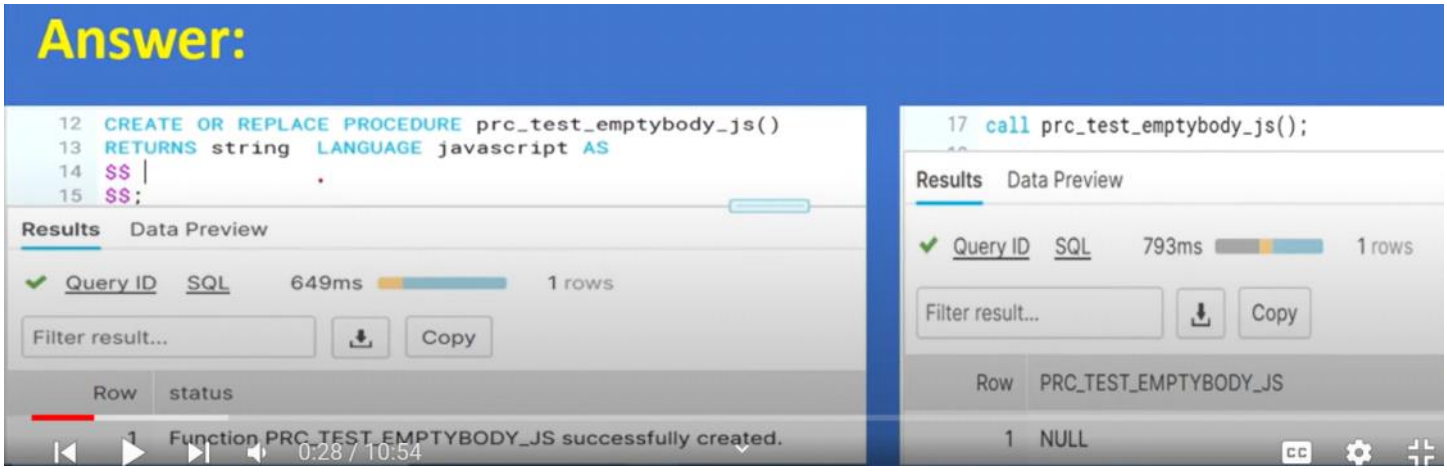
Answer:

Maximum number of clusters for warehouse 'WH12' exceeded, requested 12 and limit is 10.





Question #1: Is it possible to create snowflake stored procedure with empty body using javascript? If yes, then what would be the output when execute/call that procedure?



```
19 desc procedure prc_test_emptybody_js();
```

Results Data Preview

Query ID SQL 165ms 7 rows

Filter result... Copy

Row	property	value
1	signature	()
2	returns	VARCHAR(16777216)
3	language	JAVASCRIPT
4	null handling	CALLED ON NULL INPUT
5	volatility	VOLATILE
6	execute as	OWNER
7	body	

SQL is the default language of the procedure, if it provided any Language, then it will only SQL

Question #2: Is it possible to create snowflake stored procedure without returning any value from the its body? If yes, then what would be the output when execute/call that procedure? If no, why?

Answer: Yes, We can create , here is the case 1

```
5 CREATE OR REPLACE PROCEDURE PRC_TEST_NORETURN()
6 RETURNS number
7 AS $$   1   $$;
```

Results Data Preview

Query ID SQL 112ms 1 rows

Filter result... Copy

Row	status
1	Function PRC_TEST_NORETURN successfully created.

```
9 CALL PRC_TEST_NORETURN();
```

Results Data Preview

Query ID SQL 102ms 1 rows

Filter result... Copy

Row	PRC_TEST_NORETURN
1	1

Here is the case 2

```
CREATE OR REPLACE PROCEDURE PRC_TEST_NORETURN_JS()
RETURNS string LANGUAGE JAVASCRIPT
AS $$
    "With out return key word from body or definition"
$$;
```

Results | Data Preview

Query ID | SQL | 250ms | 1 rows

Filter result... | Copy

Row	status
1	Function PRC_TEST_NORETURN_JS successfully created.

```
call PRC_TEST_NORETURN_JS();
```

Results | Data Preview

Query ID | SQL | 901ms | 1 rows

Filter result... | Copy

Row	PRC_TEST_NORETURN_JS
1	NULL

```
select PROCEDURE_NAME,PROCEDURE_LANGUAGE,PROCEDURE_DEFINITION from information_schema.procedures
where procedure_name in ('PRC_TEST_NORETURN','PRC_TEST_NORETURN_JS');
```

Results | Data Preview | Open History

Query ID | SQL | 2.15s | 2 rows

Filter result... | Copy | Columns

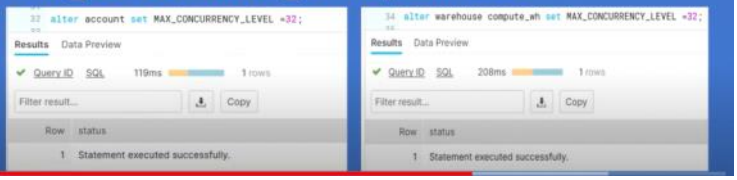
Row	PROCEDURE_NAME	PROCEDURE_LANGUAGE	PROCEDURE_DEFINITION
1	PRC_TEST_NORETURN	SQL	1
2	PRC_TEST_NORETURN_JS	JAVASCRIPT	"With out return key word from body or definition"

Question #3: Is it possible to load historic data files using snowflake Snowpipe from external stages? If yes, then how or No then why?

Answer: Yes, We can load historic data files using snowflake snowpipe by An ALTER PIPE ... REFRESH Statement which copies a set of data files staged within the previous 7 days to the Snowpipe ingest queue for loading into the target table.

Question #4: Is it possible to change the default value of MAX_CONCURRENCY_LEVEL parameter in snowflake?

Answer: Yes, We can change default value of MAX_CONCURRENCY_LEVEL parameter.



```
29 show parameters like 'MAX_CONCURRENCY_LEVEL' in account;
30
```

Results | Data Preview | Open History

Query ID | SQL | 68ms | 1 rows

Filter result... | Copy | Columns

Row	key	value	default	level	description	type
1	MAX_CONCURRENCY_LEVEL	32	8	ACCOUNT	Maximum number ...	NUMBER

```
34 show parameters in warehouse compute_wh;
35
```

Results | Data Preview | Open History

Query ID | SQL | 98ms | 3 rows

Filter result... | Copy | Columns

Row	key	value	default	level	description	type
1	MAX_CONCURRENCY_LEVEL	32	8	WAREHOUSE	Maximum number o...	NUMBER
2	STATEMENT_QUEUED_TIMEO...	0	0		Timeout in seconds...	NUMBER
3	STATEMENT_TIMEOUT_IN_SE...	172800	172800		Timeout in seconds...	NUMBER

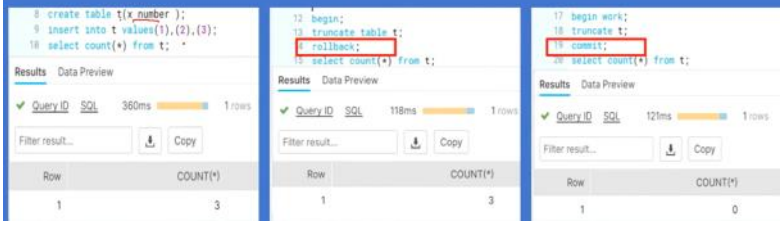
Question #5: What are different types of snowflake parameters?

Answer: Snowflake provides parameters that let you control the behavior of your account, individual user sessions, and objects.
All the parameters have default values, which can be set and then overridden at different levels depending on the parameter type

Parameters Types:
1. Account Parameters
2. Session Parameters
3. Object Parameters

Question #1: In Snowflake, Truncate command DDL or DML?

Answer: Truncate command is a DML in snowflake so we can execute commit or rollback after truncating data from table.



Question #2: What are the different types of stages in snowflake?

Answer: 2 types of stages are present in Snowflake. They are :
1) External Stage — list @<external_stage_name>
2) Internal Stages
   a) Table Stage — list @%<table_name>
   b) User Stage — list @~
   c) Internal Named Stage — list @<external_stage_name>

Question #3: What are all the scaling policies for Multi-Cluster warehouse in Snowflake?

Answer: Snowflake supports the 2 scaling policies: They are:

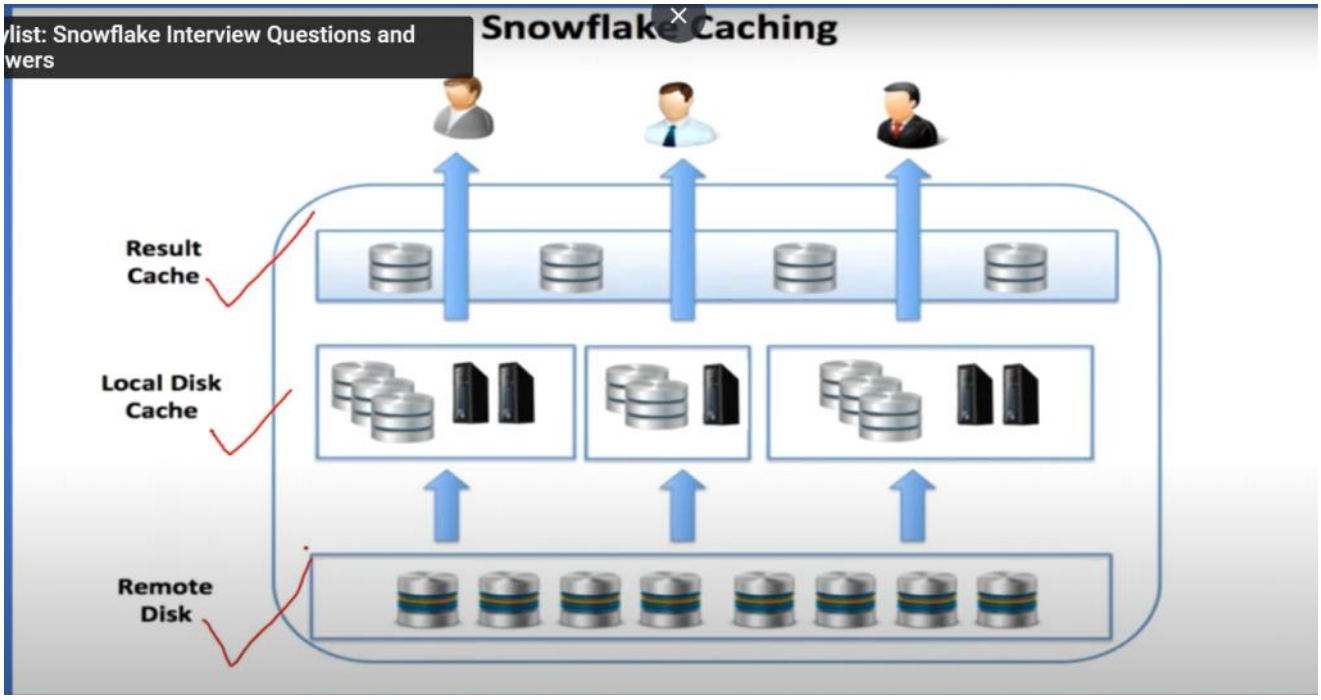
1. Standard Policy (Default)
2. Economy Policy

Policy	Description	Cluster Starts	Cluster Shuts Down
Standard (Default)	Prevents/minimizes queuing by favoring starting additional clusters over conserving credits.	The first cluster starts immediately when either a query is queued ***or*** the system detects that there's one more query than the currently-running clusters can execute. Each successive cluster waits to start 20 seconds after the prior one has started. For example, if your warehouse is configured with 10 max clusters, it can take a full 200+ seconds to start all 10 clusters.	After 2 to 3 consecutive successful checks (performed at 1 minute intervals), which determine whether the load on the least-loaded cluster could be redistributed to the other clusters without spinning up the cluster again.
Economy	Conserves credits by favoring keeping running clusters fully-loaded rather than starting additional clusters, which may result in queries being queued and taking longer to complete.	Only if the system estimates there's enough query load to keep the cluster busy for at least 6 minutes.	After 5 to 6 consecutive successful checks (performed at 1 minute intervals), which determine whether the load on the least-loaded cluster could be redistributed to the other clusters without spinning up the cluster again.

Question #4: What are all the different levels/layers of Caching in Snowflake Data Warehouse?

Answer: Snowflake supports 3 different cache layers/levels. They are:

1. **Result Cache:** Which holds the results of every query executed in the past 24 hours. These are available across virtual warehouses, so query results returned to one user is available to any other user on the system who executes the same query, provided the underlying data has not changed.
2. **Local Disk Cache:** Which is used to cache data used by SQL queries. Whenever data is needed for a given query it's retrieved from the Remote Disk storage, and cached in SSD and memory.
3. **Remote Disk:** Which holds the long term storage. This level is responsible for data resilience, which in the case of Amazon Web Services, means 99.999999999% durability. Even in the event of an entire data center failure.



Question #5: What is the command to list the tables and views for which you have access privileges?

Answer: SHOW OBJECTS command can be used to list the tables and views for a specified database or schema (or the current database/schema for the session), or your entire account.

```
24 use role accountadmin;
25 show objects in schema private;
```

Results | Data Preview

Query ID | SQL | 82ms | 11 rows

Filter result... | Copy

Row	created_on	name	database_name	schema_name	kind
1	2021-04-21 ...	EXTTABLE_P...	DEMO_DB	PRIVATE	TABLE
2	2021-04-22 ...	MV1_T	DEMO_DB	PRIVATE	VIEW
3	2021-04-22	MV2_T	DEMO_DB	PRIVATE	VIEW

```
27 use role public;
28 show objects in schema private;
```

Results | Data Preview

Query ID | SQL | 106ms | 4 rows

Filter result... | Copy

Row	created_on	name	database_name	schema_name	kind
1	2021-04-22 ...	MV1_T	DEMO_DB	PRIVATE	VIEW
2	2021-04-22 ...	SMV_MV1_T	DEMO_DB	PRIVATE	VIEW
3	2021-04-22	SV_SALES_D	DEMO_DB	PRIVATE	VIEW

Answer: INFORMATION_SCHEMA.Tables view can be used to list the tables and views for a specified database or schema (or the current database/schema for the session), or your entire account.

```
30 use role accountadmin;
31 select * from  information_schema.tables
32 where table_schema='PRIVATE';
```

Results | Data Preview

Query ID | SQL | 1.03s | 11 rows

Filter result... | Copy

Row	TABLE_CATALOG	TABLE_SCHEMA	TABLE_NAME
1	DEMO_DB	PRIVATE	EXTTABLE_P...
2	DEMO_DB	PRIVATE	MV1_T

```
34 use role public;
35 select * from  information_schema.tables
36 where table_schema='PRIVATE';
```

Results | Data Preview

Query ID | SQL | 975ms | 4 rows

Filter result... | Copy

Row	TABLE_CATALOG	TABLE_SCHEMA	TABLE_NAME
1	DEMO_DB	PRIVATE	MV1_T
2	DEMO_DB	PRIVATE	SMV_MV1_T

Question #1: If you want to scale up a virtual warehouse from S to XL size, do you need to stop or suspend the warehouse?

Answer: A warehouse does not need to be suspended to set or change any of its properties, including size.

Case 1: No queries are running.

```
1 use warehouse wh1;
2 show warehouses like 'wh1';
```

Results | Data Preview

Query ID | SQL | 77ms | 1 rows

Filter result... | Copy

Row	name	state	type	size	min_cluster_cou	max_cluster_cou	started_clusters
1	WH1	STARTED	STANDARD	X-Small	1	3	1

```
4 alter warehouse wh1 set warehouse_size ='X-LARGE';
5 show warehouses like 'wh1';
```

Results | Data Preview | Open History

Query ID | SQL | 74ms | 1 rows

Filter result... | Copy | Columns

Row	name	state	type	size	min_cluster_cou	max_cluster_cou	started_clusters	running
1	WH1	STARTED	STANDARD	X-Large	1	3	1	0

Case 2: Two queries are running.

```
9  show warehouses like 'wh1';
```

Results | Data Preview | Open History

Query ID | SQL | 132ms | 1 rows

Filter result... | Copy | Columns

Row	name	state	type	size	min_cluster_cou	max_cluster_cou	started_clusters	running
1	WH1	STARTED	STANDARD	Large	2	8	2	2

```
11  alter warehouse wh1 set warehouse_size ='Small';
12  show warehouses like 'wh1';
```

Results | Data Preview | Open History

Query ID | SQL | 80ms | 1 rows

Filter result... | Copy | Columns

Row	name	state	type	size	min_cluster_cou	max_cluster_cou	started_clusters	running
1	WH1	STARTED	STANDARD	Small	2	8	2	2

Question #2: What is the Failsafe period for Transient Table?

Answer: Zero or No Fail-safe period .

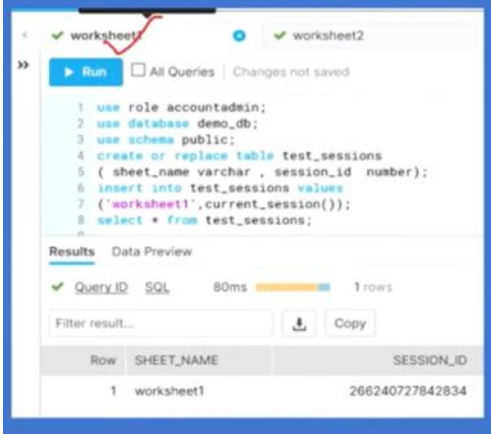
Table Type	Failsafe Period
Transient Table	0
Permanent Table	7
Temporary Table	0

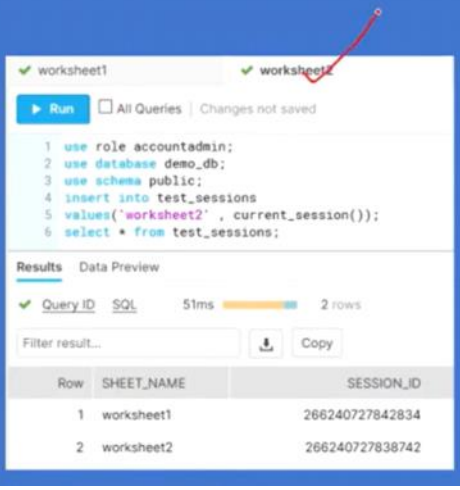
Note:

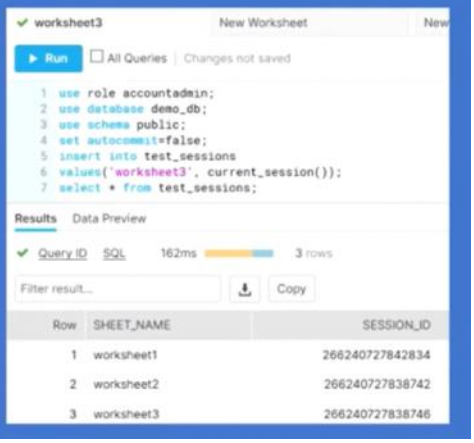
Transient and temporary tables have no Fail-safe period. As a result, no additional data storage charges are incurred beyond the Time Travel retention period.

Question #3: Assume that I have opened 3 worksheets. Can I maintain separate session for each opened worksheet ?

Answer: Yes



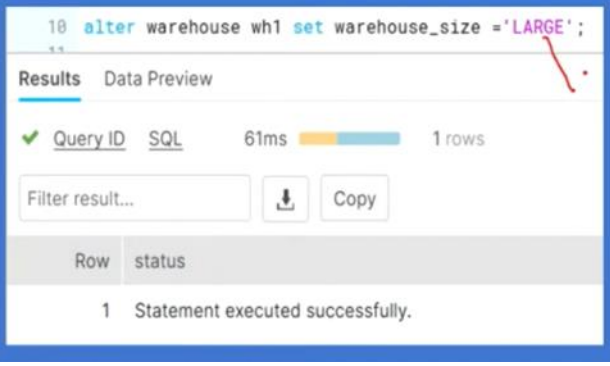


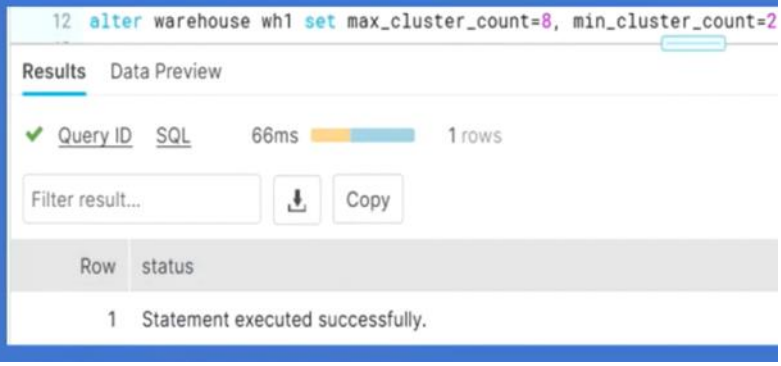


Question #4: What is the difference between Scaling Up and Scaling Out in Snowflake warehouses?

Answer: Snowflake supports two ways to scale warehouses:

- Scale up by resizing a warehouse
- Scale out by adding clusters to a warehouse (requires Snowflake Enterprise Edition or higher).





Question #5: What is the FLATTEN in Snowflake?

Answer:

- FLATTEN is a table function that takes a VARIANT, OBJECT, or ARRAY column and produces a lateral view (i.e. an inline view that contains correlation referring to other tables that precede it in the FROM clause).
- Flattens (explodes) compound values into multiple rows.
- FLATTEN can be used to convert semi-structured data to a relational representation.

```
16 select * from table(flatten(input => parse_json('[1,10 ,77]'))) f;
```

Results | Data Preview | Open History

Query ID | SQL | 376ms | 3 rows

Filter result... | Copy | Columns

Row	SEQ	KEY	PATH	INDEX	VALUE	THIS
1	1	NULL	[0]	0	1	[1, 10, 77]
2	1	NULL	[1]	1	10	[1, 10, 77]
3	1	NULL	[2]	2	77	[1, 10, 77]

Question #1: What is the output of the below query?

```
SELECT GREATEST(3,12,NULL,2);
```

Answer:

```
8 SELECT GREATEST(3,12,NULL,2);
```

Results | Data Preview

Query ID | SQL | 34ms | 1 rows

Filter result... | Copy

Row	GREATEST(3,12,NULL,2)
1	NULL

```
12 SELECT GREATEST(3,12,2);
```

Results | Data Preview

Query ID | SQL | 41ms | 1 rows

Filter result... | Copy

Row	GREATEST(3,12,2)
1	12

```
12 SELECT GREATEST(3,12,2,'ABC');
```

Results | Data Preview

Query ID | SQL | 69ms

Numeric value 'ABC' is not recognized

Scenario: Select * from customer;

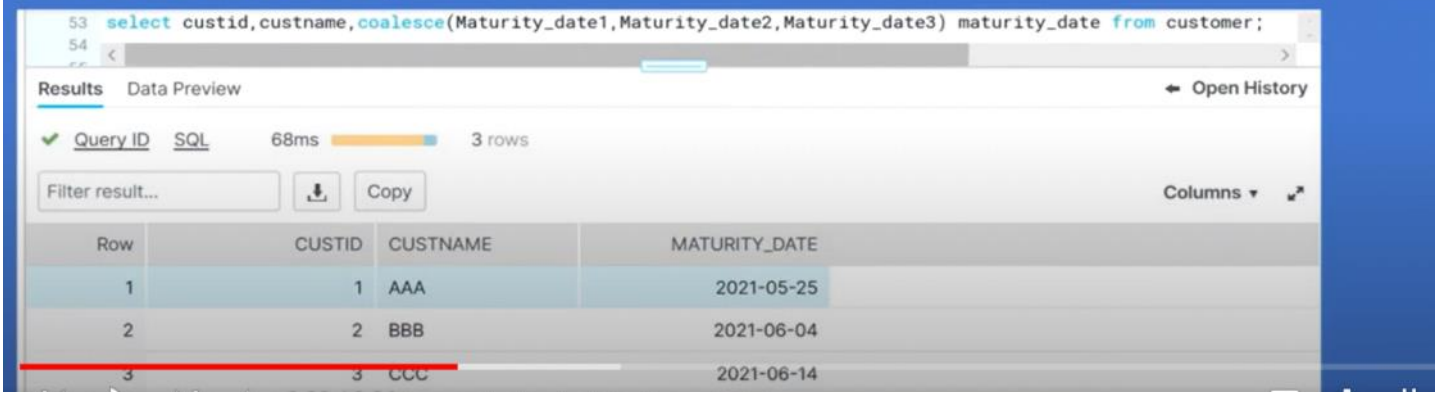
CUSTID	CUSTNAME	MATURITY_DATE1	MATURITY_DATE2	MATURITY_DATE3
1	AAA	2021-05-25	NULL	NULL
2	BBB	NULL	2021-06-04	NULL
3	CCC	NULL	NULL	2021-06-14

Question #2: Write a query to get below given output by using snowflake built-in functions?

CUSTID	CUSTNAME	MATURITY_DATE
1	AAA	2021-05-25
2	BBB	2021-06-04
3	CCC	2021-06-14

Answer:

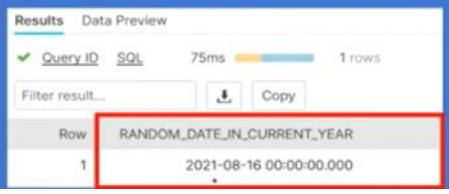
```
SELECT custid, custname,
coalesce(Maturity_date1,Maturity_date2,Maturity_date3) as
Maturity_Date
FROM customer;
```

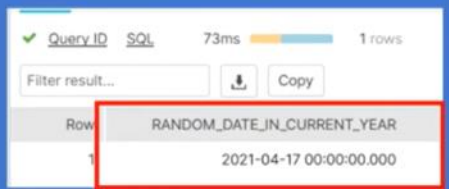


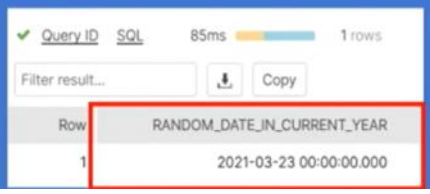
Question #3: Write a query to get any random date for the current year by using snowflake built-in functions?

Answer:

```
SELECT CASE WHEN  extract ('YEAR',sysdate() ) % 4 =0
            AND extract ('YEAR',sysdate() ) % 400= 0 = TRUE THEN
             dateadd(day,  uniform(0, 366, random()) , date_trunc('Year',sysdate() ) )
ELSE
     dateadd(day,  uniform(0, 365, random()) , date_trunc('Year',sysdate() ) )
END random_date_in_current_year;
```







Scenario: Select * from emp;

EMPNO	EMAIL_ID
1	aaa@gmail.com
2	bbbbb@yahoo.co.in
3	ccccccc@yahoo.com

Question #4: Write a query to get below given output by using snowflake built-in functions?

EMPNO	EMAIL_ID	NAME
1	aaa@gmail.com	aaa
2	bbbbb@yahoo.co.in	bbbbb
3	ccccccc@yahoo.com	ccccccc

Answer:

SELECT empno, email_id, substr(email_id, 1, (regexp_instr(email_id, '@',1) -1)) name FROM emp;

```
SELECT empno, email_id, substr(email_id, 1, (regexp_instr(email_id, '@',1) -1)) name FROM emp;
```

lts Data Preview ← Open History

Query ID SQL 96ms 3 rows

r result... Copy Columns

Row	EMPNO	EMAIL_ID	NAME
1	1	aaa@gmail.com	aaa
2	2	bbbbb@yahoo.co.in	bbbbb
3	3	ccccccc@yahoo.com	ccccccc

Question #5: What are all different types of objects in snowflake account?

Answer:

In snowflake account, we can broadly divide the objects into 2 categories. They are:

1) Account level objects
2) Schema level object

1) Account level objects:
   - ✓ Virtual warehouses
   - ✓ Roles
   - ✓ Users
   - ✓ Integrations
   - ✓ Databases
   - ✓ Data Shares

1) Schema level objects:

- ✓ Schemas
- ✓ Tables/Views/Secure Views/Mviews/Secure Mviews
- ✓ Constraints
- ✓ Sequences
- ✓ Table Clustering Keys
- ✓ Stages and Fileformats
- ✓ Pipes
- ✓ Stored Procedures/ UDF/UDTF
- ✓ External Tables
- ✓ External Functions
- ✓ Masking Policy

Snowflake Interview Questions and Answers - Part 8 | Snowflake | VCKLY Tech|Data ...

Question #1: Is it possible to suspend a specific cluster in a multi-cluster virtual warehouse rather than whole virtual warehouse is suspended?

Answer: No

```
CREATE WAREHOUSE wh1 WITH WAREHOUSE_SIZE = 'XSMALL' WAREHOUSE_TYPE = 'STANDARD'
AUTO_SUSPEND = 300 AUTO_RESUME = TRUE MIN_CLUSTER_COUNT = 1 MAX_CLUSTER_COUNT = 3 SCALING_POLICY = 'ECONOMY';

ALTER WAREHOUSE wh1 SUSPEND ;
```

Question #2: When loading data through COPY command it is a requirement that your table and the file from which the data is being loaded should have same order of columns?

Answer: No

```
1  c4,c2,c1,c3
2  4,3 ,two,One
3  One, Tow, 3, 4
```

Column Name	Ordinal	Type	Nullable	Default
C1	1	VARCHAR(16777216)	true	NULL
C2	2	VARCHAR(16777216)	true	NULL
C3	3	NUMBER(38,0)	true	NULL
C4	4	NUMBER(38,0)	true	NULL

```
copy into test_copy from @%load1/data1/
    files=('test_copy.csv')
```

Load Results

Loaded	File	Rows Parsed	Rows Load...	First Error
PARTIALLY_LOADED	test_copy.csv	2	1	Numeric value 'two' is not recognized

Load Results

Loaded	File	Rows Parsed	Rows Load...	First Error
PARTIALLY_LOADED	test_copy.csv	2	1	Numeric value 'two' is not recognized

```
copy into test_copy(c4,c2,c1,c3)
from (select $1,$2,$3,$4 from @%load1/data1/test_copy.csv (file_format => myformat) t);
```

Scenario:

```
create or replace table dim_date_test(year number, month number, month_end_date date);
insert into dim_date_test(year, month) values (2020, 2);
insert into dim_date_test(year, month) values (2021, 2);
insert into dim_date_test(year, month) values (2020, 4);
insert into dim_date_test(year, month) values (2021, 3);
select * from dim_date_test;
```

Row	YEAR	MONTH	MONTH_END_DATE
1	2020	2	NULL
2	2021	2	NULL
3	2020	4	NULL
4	2021	3	NULL

Question #3: Write a update statement to update month_end_date column value as valid month end date by using Year and month columns from dim_date_test table?

Expected Output:

Row	YEAR	MONTH	MONTH_END_DATE
1	2020	2	2020-02-29
2	2021	2	2021-02-28
3	2020	4	2020-04-30
4	2021	3	2021-03-31

Answer:

```
Update dim_date_test set month_end_date =

last_day(to_date('01'||lpad(month,2,'0')||year,'DDMMYYYY')
);
```

Row	YEAR	MONTH	MONTH_END_DATE
1	2020	2	2020-02-29
2	2021	2	2021-02-28
3	2020	4	2020-04-30
4	2021	3	2021-03-31

Question #4: The "load metadata" (which maintains which files have already been loaded) for a table expires after how many days?

Answer: 64 Days (LAST_MODIFIED).

Load Metadata:

Snowflake maintains detailed metadata for each table into which data is loaded, including:

- Name of each file from which data was loaded
- File size
- ETag for the file
- Number of rows parsed in the file
- Timestamp of the last load for the file
- Information about any errors encountered in the file during loading

Question #5: what are the different types of streams in snowflake?

Answer: 3 types and they are:

1) **Standard :** A standard (i.e. delta) table stream tracks all DML changes to the source table, including inserts, updates, and deletes (including table truncates).
2) **Append-only :** An append-only table stream tracks row inserts only.
3) **Insert –only :** Supported on external tables only. An insert-only stream tracks row inserts only.

Question #1: What would be the issue with below code

```
1 CREATE OR REPLACE PROCEDURE SP_TEST(p_acct_id number)
2 RETURNS string
3 LANGUAGE javascript
4 AS
5 $$
6    return P_ACCT_ID;
7 $$;
```

Answer: We are going to get the compilation error due to input argument data type number.

```
Language JAVASCRIPT does not support type 'NUMBER(38,0)' for argument or return type.
```

JavaScript doesn't support NUMBER datatype, so instead we can use float or string.

Question #2: What would be the below task state?

```
CREATE TABLE mytable (ts timestamp);
CREATE TASK mytask
WAREHOUSE = compute_wh
AS
INSERT INTO mytable(ts) VALUES(CURRENT_TIMESTAMP);
```

Row	status
1	Task MYTASK successfully created.

Answer: suspended

```
SHOW TASKS LIKE 'mytask';
DESC TASK mytask;
```

Question #3:What would be issue with below task while change its state to resume?

```
CREATE TABLE mytable (ts timestamp);

CREATE TASK mytask
WAREHOUSE = compute_wh
AS
INSERT INTO mytable(ts) VALUES(CURRENT_TIMESTAMP);

ALTER TASK mytask resume;
```

Answer:

Task should have a SCHEDULE or AFTER to be resumed.

Snowflake Interview Questions and Answers - Part 9 | Snowflake | VCKLY Tech Data...

Question #4: What is the output of below query?

```
SELECT 1 as a, a+2 as b,  a + b as c;
```

Answer:

A	B	C
1	3	4

Question #5: Is there any issue with below function?

```
CREATE OR REPLACE FUNCTION SF_TEST(p_acct_id NUMBER)
RETURNS NUMBER
LANGUAGE SQL
AS
$$
   SELECT P_ACCT_ID
$$;
```

Answer: No issue. We can use number data type as argument in Snowflake SQL Function.

Scenario: Assume that you have dev/test/prod snowflake environments and each environment has its own snowflake account?

Dev --> XX75906.ap-south-1
Test --> XX75888.ap-south-1
Prod --> XX75999.ap-south-1

Question #1: How do you compare any particular table structure and its data between Dev vs Test / Dev vs Prod?

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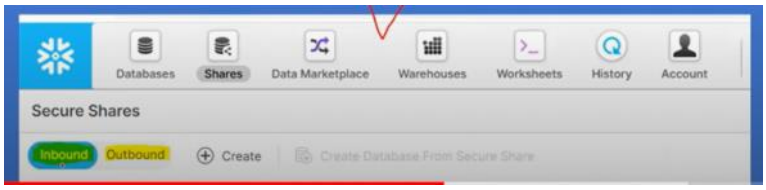
Answer: Using any programing language like Python, we can write a script to connect to both accounts and then read table structure and its data. Finally compare table structure and its data to find out any differences.

Question #2: What are different types of shares in snowflake?

Answer: There are 2 types of Secure shares in Snowflake and they are:

1. Outbound Shares
2. Inbound Shares



Even with Snowpipe also not able to use "where" command.

Question #4: What Copy Command options are not supported along with Snowpipe?

Answer: All COPY INTO <table> copy options are supported except for the following:

- **FILES** = ('file_name1' [, 'file_name2', ...])
- **ON_ERROR** = ABORT_STATEMENT
- **SIZE_LIMIT** = num
- **PURGE** = TRUE | FALSE (i.e. automatic purging while loading)
- **FORCE** = TRUE | FALSE
- **RETURN_FAILED_ONLY** = TRUE | FALSE
- **VALIDATION_MODE** = RETURN_n_ROWS | RETURN_ERRORS | RETURN_ALL_ERRORS

So, these command we cannot use with snowpipe.

Question #5: Does snowflake enforce NOT NULL Constrains on External Tables?

Answer: No. Snowflake does not enforce integrity constraints on external tables. In particular, unlike normal tables, Snowflake does not enforce NOT NULL constraints on external tables.

Scenario:

```
create or replace TABLE DEMO_DB.PUBLIC.DEPT (
    DEPTNO NUMBER(38,0),
    DNAME VARCHAR(16777216),
    LOC VARCHAR(16777216)
);
```

```
CREATE OR REPLACE VIEW DEMO_DB.PUBLIC.vw_dept AS
SELECT * FROM dept;
```

Question #1: Is it possible to perform DML operations on view vw_dept in snowflake?

Answer: No.

```
update vw_dept set loc ='USA' where deptno=10;
```
SQL compilation error: UPDATE statement's target must be a table

```
delete from vw_dept  where deptno=10;
```
SQL compilation error: DELETE statement's target must be a table

```
insert into vw_dept values(10,'HR','USA');
```
SQL compilation error: INSERT statement's target must be a table

```
truncate table vw_dept;
```
SQL compilation error: Object found is of type 'VIEW', not specified type 'TABLE'.

Question #2: Is it possible to create a view without source object (Table/view) in snowflake?

```
create or replace force view force_view AS
select * from without_table;
```

```
create or replace  view force_view AS
select * from without_table;
```

Answer: No

SQL compilation error: Object 'DEMO_DB.PUBLIC.WITHOUT_TABLE' does not exist or not authorized.

Question #3: Does external table inherit the file format, if any, in the stage definition?

Answer: No.

We *must* explicitly specify any file format options for the external table using the FILE_FORMAT parameter.

```
create or replace stage my_csv_stage
file_format = mycsvformat
url = 's3://snowflake-docs';
```

```
create or replace external table myscsv_exttbl(
 id number not null as (value:id::number)
 ,last_name varchar as ( value:last_name::varchar)
 ) location=@my_csv_stage/tutorials/dataloading/
  auto_refresh = true  pattern='.*contacts.*[.]csv';
```

SQL compilation error: Missing option(s): file_format

To overcome this issue, we need to use

```
39 create or replace external table myscsv_exttbl(
40  id number not null as (value:id::number)
41  ,last_name varchar as ( value:last_name::varchar)
42  ) location=@my_csv_stage/tutorials/dataloading/
43   auto_refresh = true  pattern='.*contacts.*[.]csv'
44   file_format = (type = csv);
```

Results Data Preview

Query ID SQL 681ms 1 rows

Filter result... Copy

Row	status
1	Table MYSCSV_EXTTBL successfully created.

1 / 8:05

Question #4: What are all the different languages currently supports to create/write UDF's in snowflake?

Answer: Snowflake currently supports the following languages for creating/writing UDFs :

1. SQL
2. JavaScript
3. Java

1. SQL
2. JavaScript
3. Java

```
CREATE FUNCTION add_pi(PARAM_1 FLOAT)
    RETURNS FLOAT
    LANGUAGE SQL
    AS $$
        PARAM_1 + 3.1415926::FLOAT
    $$;
```

```
CREATE OR REPLACE FUNCTION add5(n double)
  RETURNS double
  LANGUAGE JAVASCRIPT
  AS 'return N + 5;';
```

```
create or replace function echo_varchar(x varchar)
returns varchar
language java
called on null input
handler='TestFunc.echo_varchar'
target_path='@~/testfunc.jar'
as
'class TestFunc {
  public static String echo_varchar(String x) {
    return x;
  }
}';
```

Snowflake Interview Questions and Answers - Part 11| Snowflake | VCKLY TechData...

Question #5: Is it possible to create a external table using snowflake internal stages?

Answer: No.

External tables support external (i.e. S3, Azure, or GCS) stages only; internal (i.e. Snowflake) stages are not supported.

Question #1: Is it possible to delete rows from a table using merge statement in snowflake?

Answer: Yes.

```
merge into t1 using t2 on t1.t1key = t2.t2key
    when matched and t2.marked = 'D' then delete
    when matched  then update set marked = t2.marked, isnewstatus = t2.isnewstatus
    when not matched then insert (t1key, marked,isnewstatus)
       values (t2.t2key, t2.marked,isnewstatus);
```

Row	number of rows inserted	number of rows updated	number of rows deleted
1	1	1	1

Question #2: What is the output of the below select statement ?

```
select object_construct('Key1','Val1', 'Key2');
```

Answer: SQL compilation error.

OBJECT_CONSTRUCT IS A SEMI STRUCTURED FUNCTION

SQL compilation error: error line 1 at position 7 invalid number of arguments for [object_construct], expected 4, got 3

Question #3: What is the output of the below select statement ?

```
select object_construct('Key1','Val1', 'Key1','Val2');
```

Answer:

Duplicate field key 'Key1'

Value can duplicate but key cannot

Question #4: Can we create a task without using warehouse (virtual warehouse) ?

Answer: Yes

```
47 CREATE TASK mytask2
48   SCHEDULE = '5 minute'
49 AS
50   SELECT 'Serverless task';
```

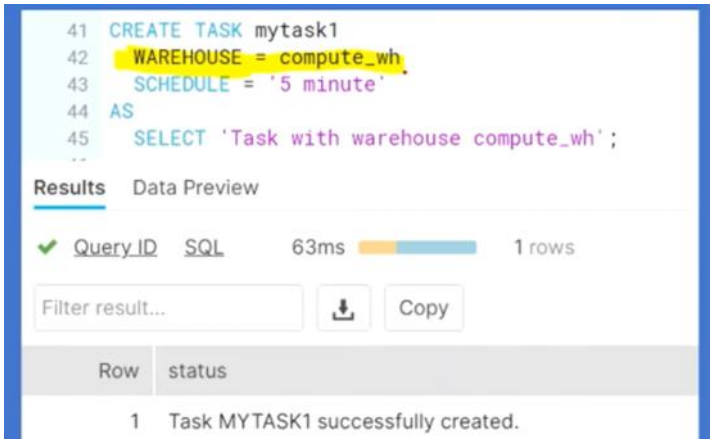
Results Data Preview

Query ID SQL 64ms 1 rows

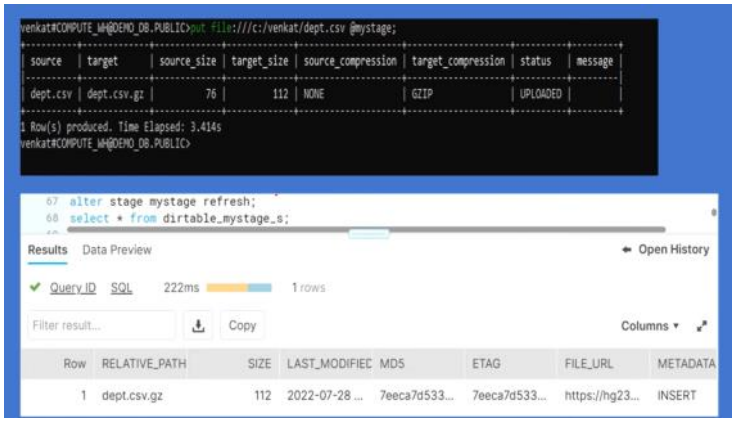
Filter result... Copy

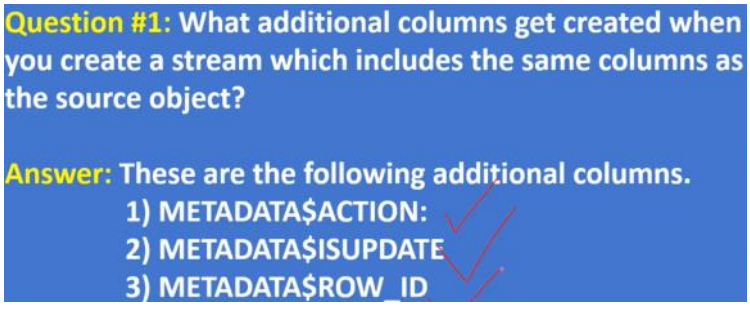
Row	status
1	Task MYTASK2 successfully created.

But this is not in running phase, this feature is under testing



So, profit to create a stream on directory or a stage is





Let suppose you are creating one employee table with id, name, salary. So stream will create SIX column with these three additional column.

Scenario: Assume that you have created a table called "CUSTOMER" and loaded data into this table.

```
select * from DEMO_DB.INFORMATION_SCHEMA.TABLE_STORAGE_METRICS
where table_name = 'CUSTOMER' and table_catalog ='DEMO_DB';
```

Row	TABLE_CATALOG	TABLE_SCHEMA	TABLE_NAME	ID	CLONE_GROUP_ID	IS_TRANSIENT	ACTIVE_BYTES
1	DEMO_DB	PUBLIC	CUSTOMER	27660	27660	NO	718175744

After this , you have Cloned a table called "CUSTOMER_CLONE" using table "CUSTOMER".

```
create table customer_clone clone customer;
```

Question #2: What is the CLONE_GROUP_ID for Cloned table "CUSTOMER_CLONE"?

Answer: CLONE_GROUP_ID is same as CUSTOMER tabl CLONE_GROUP_ID

```
select * from DEMO_DB.INFORMATION_SCHEMA.TABLE_STORAGE_METRICS
where table_name = 'CUSTOMER_CLONE' and table_catalog ='DEMO_DB';
```

Row	TABLE_CATALOG	TABLE_SCHEMA	TABLE_NAME ↑	ID	CLONE_GROUP_ID	IS_TRANSI
1	DEMO_DB	PUBLIC	CUSTOMER_CLONE	26642	27660	NO

Question #3: What are the metadata columns for Staged Files?

Answer: There are 2 metadata columns for Staged Files:

1. METADATA$FILENAME
2. METADATA$FILE_ROW_NUMBER

These might be internal or external stage, these column value not present in file.

Metadata Columns

Currently, the following metadata columns can be queried or copied into tables:

METADATA$FILENAME
Name of the staged data file the current row belongs to. Includes the path to the data file in the stage.

METADATA$FILE_ROW_NUMBER
Row number for each record in the container staged data file.

Question #4: What are Managed access schemas in snowflake?

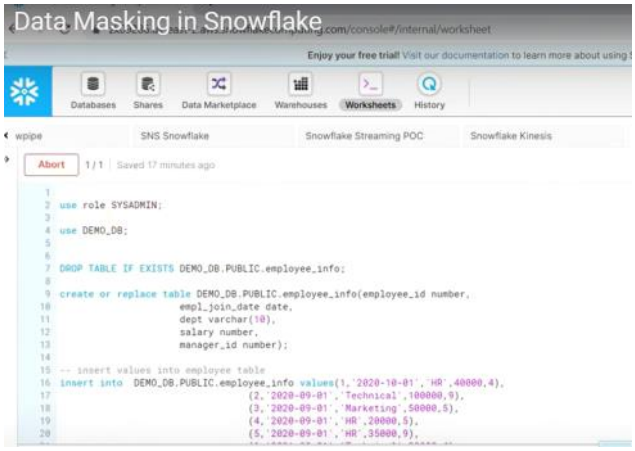
Answer: Managed access schemas centralize privilege management with the schema owner.

In regular schemas, the owner of an object (i.e. the role that has the OWNERSHIP privilege on the object) can grant further privileges on their objects to other roles.

In managed schemas, the schema owner manages all privilege grants, including future grants, on objects in the schema. Object owners retain the OWNERSHIP privileges on the objects; however, only the schema owner can manage privilege grants on the objects to other roels, but has no other privileges (USAGE, SELECT, DROP, etc.) on the objects.

Snowflake Interview Questions and Answers Part 13| Snowflake |VCKLY Tech| DataCloud|

Snowflake DWH




```
use role SYSADMIN;
use DEMO_DB;

DROP TABLE IF EXISTS DEMO_DB.PUBLIC.employee_info;

create or replace table DEMO_DB.PUBLIC.employee_info(employee_id number,
                    empl_join_date date,
                    dept varchar(10),
                    salary number,
                    manager_id number);

-- insert values into employee table
insert into  DEMO_DB.PUBLIC.employee_info values(1,'2020-10-01','HR',40000,4),
                                (2,'2020-09-01','Technical',100000,9),
                                (3,'2020-09-01','Marketing',50000,5),
                                (4,'2020-09-01','HR',20000,5),
                                (5,'2020-09-01','HR',35000,9),
                                (6,'2021-09-01','Technical',90000,4),
                                (7,'2021-09-01','Marketing',10000,1);

insert into  DEMO_DB.PUBLIC.employee_info values
                                (8,'2021-09-01','R&D',20000,230);


select * from  DEMO_DB.PUBLIC.employee_info;

USE ROLE ACCOUNTADMIN;

--Currently Snowflake does not support different input output datatype for Masking Policy
create or replace masking policy sensitive_info_masking_numbers as (val STRING) returns STRING ->
  case
    when current_role() in ('ACCOUNTADMIN') then val
    else '***************'
```

```
USE ROLE ACCOUNTADMIN;

--Currently Snowflake does not support different input output datatype for Masking Policy
create or replace masking policy sensitive_info_masking_numbers as (val STRING) returns STRING ->
  case
    when current_role() in ('ACCOUNTADMIN') then val
    else '***************'
  end;

create or replace masking policy sensitive_info_masking_numbers as (val NUMBER) returns STRING ->
  case
    when current_role() in ('ACCOUNTADMIN') then to_char(val)
    else '***************'
```

```
create or replace masking policy sensitive_info_masking_numbers as (val NUMBER) returns STRING ->
  case
    when current_role() in ('ACCOUNTADMIN') then to_char(val)
    else '***************'
  end;



-- apply masking policy to a table column
ALTER TABLE IF EXISTS DEMO_DB.PUBLIC.employee_info MODIFY COLUMN dept SET MASKING POLICY sensitive_info_masking_numbers;

select * from  DEMO_DB.PUBLIC.employee_info ;
```

```
use role SYSADMIN;

SELECT * from DEMO_DB.PUBLIC.employee_info;


Create or replace view  DEMO_DB.PUBLIC.employee_set as select * from DEMO_DB.PUBLIC.employee_info;

select * from DEMO_DB.PUBLIC.employee_set;

use role ACCOUNTADMIN;


--Describe Masking Policy

DESC MASKING POLICY sensitive_info_masking_numbers;
```

```
--Describe Masking Policy

DESC MASKING POLICY sensitive_info_masking_numbers;


--RECREATE MASKING POLICY
create or replace masking policy sensitive_info_masking_numbers as (val STRING) returns STRING ->
  case
    when current_role() not in ('ACCOUNTADMIN') then val
    else '***************'
  end;

--UNSET MASKING POLICY

ALTER TABLE IF EXISTS DEMO_DB.PUBLIC.employee_info MODIFY COLUMN dept UNSET MASKING POLICY;
```

ults Data Preview

Query ID SQL 85ms

L compilation error: Policy SENSITIVE_INFO_MASKING_NUMBERS cannot be dropped/replaced as it is associated with one or more entities.

Question #1: What is the output of below query?

```
select 0 partNumber, split_part('111.222.333', '.', 0) union
select 1 partNumber, split_part('111.222.333', '.', 1) union
select 2 partNumber, split_part('111.222.333', '.', 2) union
select 3 partNumber, split_part('111.222.333', '.', 3) union
select 4 partNumber, split_part('111.222.333', '.', 4) ;
```

Answer:

Query ID SQL 56ms 5 rows

Filter result... Copy

Row	PARTNUMBER	SPLIT_PART('111.222.333', '.', 0)
1	0	111
2	1	111
3	2	222
4	3	333
5	4	

Scenario:

```
list @my_azure_stage_opt1;
```

esults Data Preview Open History

Query ID SQL 5.29s 4 rows

Filter result... Copy Columns

Row	name	size	md5	last_modified
1	azure://saforsnowflake.blob.core.windows.net/landing/dept.csv	90	739c96a48a28c0ec33d9...	Sun, 14 Aug 2022 05:09:0...
2	azure://saforsnowflake.blob.core.windows.net/landing/dept1.csv	108	a05d1d4c4dfa572b60f31...	Sun, 14 Aug 2022 08:05:1...
3	azure://saforsnowflake.blob.core.windows.net/landing/dept_20220801.csv	108	a05d1d4c4dfa572b60f31...	Sun, 14 Aug 2022 08:59:5...
4	azure://saforsnowflake.blob.core.windows.net/landing/dept_20220802.csv	112	14acb73d3496e7336885...	Sun, 14 Aug 2022 08:59:5...

```
create or replace external table dept_ext_tbl (
  date_part date as to_date(substr(split_part(split_part(metadata$filename,'_',2),'.',1) , 1, 8), 'YYYYMMDD'),
  ts timestamp as (value:time::timestamp),  deptno varchar as (value:c1::varchar),
  dname varchar as (value:c2::varchar),  loc varchar as ( value:c3::varchar)
) partition by (date_part)  location=@my_azure_stage_opt1
  auto_refresh = false  file_format=(type=csv skip_header =1);
```

Results Data Preview Open History

Query ID SQL 1.53s 1 rows

Filter result... Copy Columns

Row	status
1	Table DEPT_EXT_TBL successfully created.

Question #2: What is the output of below query?

```
Alter external table dept_ext_tbl refresh;
```

Answer:

```
alter external table dept_ext_tbl refresh;
```

Results | Data Preview

Query ID | SQL | 1.72s | 2 rows

Filter result... | Copy

Row	file	status	description
1	dept1.csv	REGISTER_FAILED	File registration failed: Error evaluating partition column DATE_PART.
2	dept.csv	REGISTER_FAILED	File registration failed: Error evaluating partition column DATE_PART.

Scenario:

```
use role sysadmin;
create database db1;
```

```
SELECT current_database();
```

Results | Data Preview

Query ID | SQL | 48ms | 1 rows

Filter result... | Copy

Row	CURRENT_DATABASE()
1	DB1

```
create database db2;
```

Results | Data Preview

Query ID | SQL | 103ms | 1 rows

Filter result... | Copy

Row	status
1	Database DB2 successfully created.

Question #3: What is the current database for this session?

Answer:

```
SELECT current_database();
```

Results | Data Preview

Query ID | SQL | 37ms | 1 rows

Filter result... | Copy

Row	CURRENT_DATABASE()
1	DB2

Question #4: What is the output of below query ?

```
select date_from_parts(2022, 2, 1) dt1,
date_from_parts(2022, 2, 0) dt2,
date_from_parts(2022, 2, -1) dt3,
date_from_parts(2022, -1, -1) dt4;
```

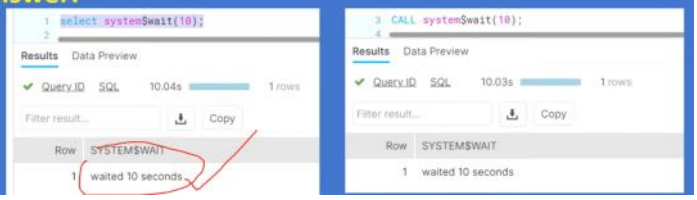
Answer:

Row	DT1	DT2	DT3	DT4
1	2022-02-01	2022-01-31	2022-01-30	2021-10-30

Question #5: What is the output of below queries ?

```
select system$wait(10);
CALL system$wait(10);
```

Answer:

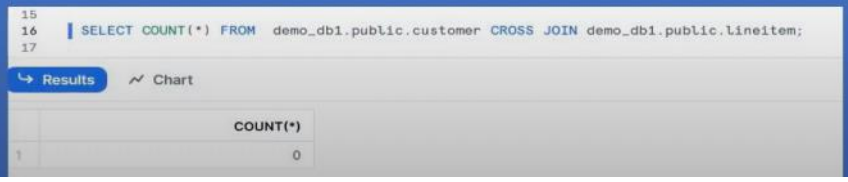


Scenario: Assume that there are 2 tables - CUSTOMER with 100 rows and LINEITEM with 0 rows in snowflake database.

Question #1: What is the output of below query?

```
SELECT COUNT(*) FROM  demo_db1.public.customer CROSS
JOIN demo_db1.public.lineitem;
```

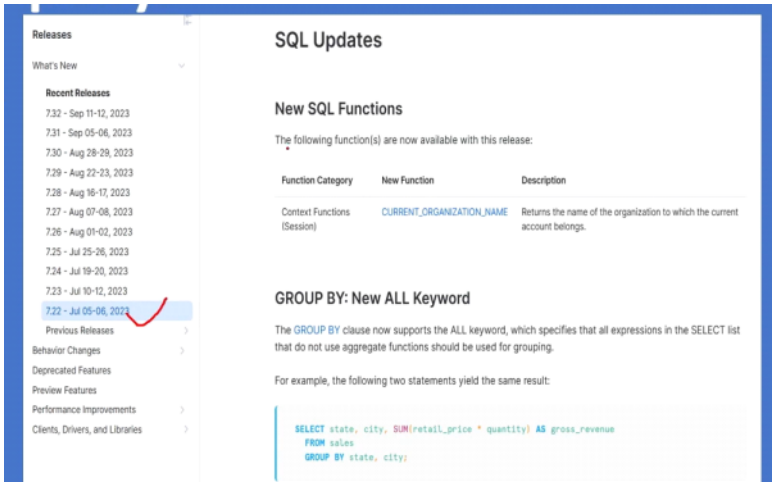
Answer: 0



Question #2: Is the below query valid or Invalid?

```
SELECT deptno,count(*) from
demo_db1.public.emp1  group by all;
```

Answer: Yes. It is a valid query.



Question #3: Is it possible to send email notifications from snowflake?

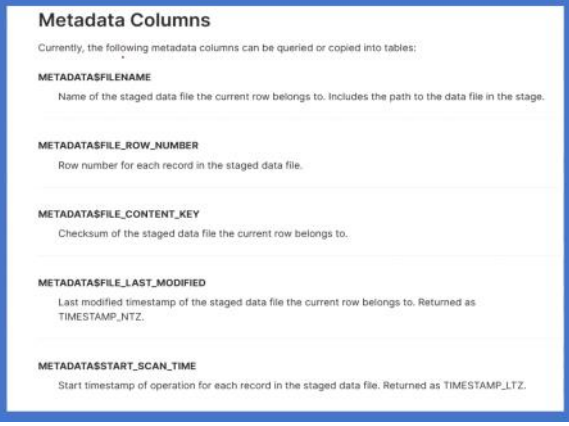
Answer: Yes. We can send email notifications from snowflake using the SYSTEM$SEND_EMAIL stored procedure .

```
CREATE NOTIFICATION INTEGRATION my_email_int
    TYPE=EMAIL
    ENABLED=TRUE
    ALLOWED_RECIPIENTS=('first.last@example.com','first2.last2@example.com');
```

```
CALL SYSTEM$SEND_EMAIL(
    'my_email_int',
    'first.last@example.com, first2.last2@example.com',
    'Email Alert: Task A has finished.',
    'Task A has successfully finished.\nStart Time: 10:10:32\nEnd Time: 12:15:45\nTotal Reco
);
```

Question #4: What are the metadata column names that can be queried or copied into tables?

Answer:



Question #5: Do we need to use a warehouse to run the below query?

```
SELECT MAX(SAL) FROM demo_db1.public.emp1;
```

Answer: No

Snowflake use result cheche instead of WH.

Scenario: Assume that you have created a sequence S1 just now in your snowflake database.

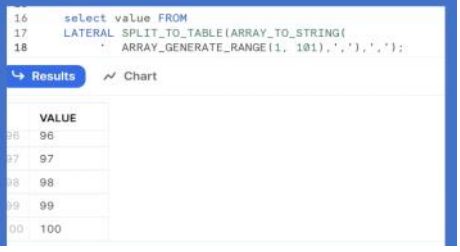
Question #1: What is the output of below query?

```
SELECT DEMO_DB.PUBLIC.S1.NEXTVAL,
DEMO_DB.PUBLIC.S1.NEXTVAL;
```

Answer:

Question #2: Write a query to print numbers 1 to 100 in snowflake?

Answer: There are multiple ways to write a query that prints the numbers 1 to 100.
Here are some ways :



```
WITH RECURSIVE numbers (num) AS (
    SELECT 1 as num
    UNION  ALL
    SELECT num + 1 as num
    FROM numbers
    WHERE num < 100  )
SELECT * FROM NUMBERS;
```

Results | Chart

	NUM
96	96
97	97
98	98
99	99
100	100

Question #3: Do we need to use a warehouse to run the below query?

```
SELECT MAX(ENAME) FROM DEMO_DB.PUBLIC.EMP;
```

Answer: Yes

```
ALTER SESSION SET USE_CACHED_RESULT=FALSE;
SELECT CURRENT_WAREHOUSE();
SHOW WAREHOUSES like '%COMPUTE_WH%';
ALTER WAREHOUSE COMPUTE_WH SUSPEND;
SELECT MAX(ENAME) FROM DEMO_DB.PUBLIC.EMP;
SHOW WAREHOUSES like '%COMPUTE_WH%';
```

Results | Chart

	name	state	type	size	min_cluster_count
1	COMPUTE_WH	STARTED	STANDARD	X-Small	1

Scenario : Assume that you have crated table emp and inserted some rows into table as mentioned below.

```
DESC TABLE DEMO_DB.PUBLIC.EMP;
```

Results | Chart

	name	type	kind	null?	default
2	ENAME	VARCHAR(10)	COLUMN	Y	null
3	JOB	VARCHAR(9)	COLUMN	Y	null
4	MGR	NUMBER(4,0)	COLUMN	Y	null
5	HIREDATE	DATE	COLUMN	Y	null
6	SAL	VARCHAR(16777216)	COLUMN	Y	null
7	COMM	NUMBER(7,2)	COLUMN	Y	null
8	DEPTNO	NUMBER(2,0)	COLUMN	Y	null

```
SELECT COUNT(*) FROM DEMO_DB.PUBLIC.EMP;
```

Results | Chart

COUNT(*)
4

```
SELECT DISTINCT SAL FROM EMP;
```

Results | Chart

	SAL
1	5000
2	2850
3	2450
4	2975

Question #4 : Is it possible to change the data type of SAL column from varchar to number(30,2) ?

Answer: Yes, However directly altering not possible

```
ALTER TABLE DEMO_DB.PUBLIC.EMP ALTER COLUMN  SAL NUMBER(30,2);
```

Results | Chart

⚠ cannot change column SAL from type VARCHAR(16777216) to NUMBER(30,2)

```
ALTER TABLE DEMO_DB.PUBLIC.EMP RENAME COLUMN SAL TO SAL_RN;
ALTER TABLE DEMO_DB.PUBLIC.EMP ADD COLUMN  SAL NUMBER(30,2);
UPDATE DEMO_DB.PUBLIC.EMP SET SAL = SAL_RN;
ALTER TABLE DEMO_DB.PUBLIC.EMP DROP COLUMN  SAL_RN;
```

Question #5: Is ON_ERROR Copy Option Supports All File Formats for the COPY INTO <table> command with either parsing or transformation errors?

Answer: Yes.

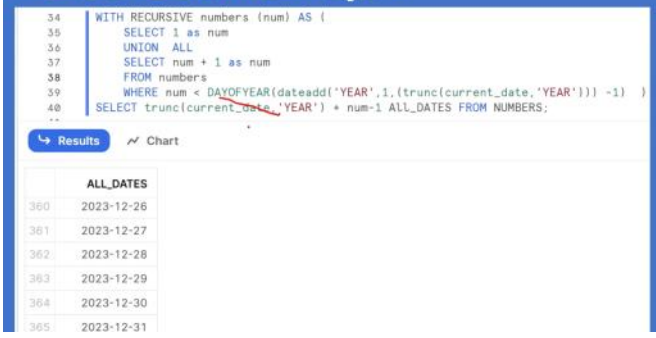
Question #1: Is it possible to change schema from regular schema to managed schema in snowflake?

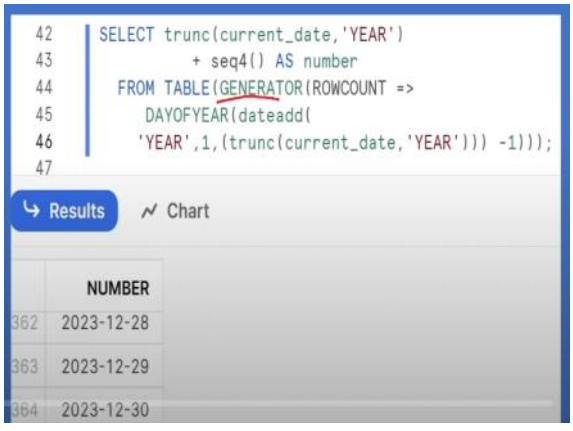
Answer: Yes.

Question #2: Write a query to print all the dates from the current year.

Answer: There are multiple ways to write a query that prints the dates from the current year.

Here are some ways :





Question #3: Can we create an external stage with 2 different locations?

Answer: No.

```
59    CREATE STAGE my_ext_stage1
60      URL= ('s3://load/files/','s3://load/files_2/')
61      CREDENTIALS=(AWS_KEY_ID='1a2b3c' AWS_SECRET_KEY='4x5y6z');
62
```

Results | Chart

002007 (0A000): SQL compilation error:

More than one location (2 locations) specified for stage area.

We can create **stage integration** more than 1 location.

Scenario : Assume that you have created 2 tables with same name but with different table types. One is a temporary table and the other one is a transient table, and you have inserted 2 rows as mentioned below.

```
CREATE OR REPLACE TEMPORARY TABLE DEMO_DB.PUBLIC.mytable (id NUMBER, creation_date DATE);
CREATE OR REPLACE TRANSIENT TABLE DEMO_DB.PUBLIC.mytable (id NUMBER, creation_date DATE);
insert into DEMO_DB.PUBLIC.mytable values (1 ,current_date());
insert into DEMO_DB.PUBLIC.mytable values (2 ,current_date());
```

```
107   SELECT * FROM DEMO_DB.PUBLIC.mytable;
```

Results | Chart

	ID	CREATION_DATE
1	1	2023-09-29
2	2	2023-09-29

Question #4 : If you retrieve the rows using a SELECT statement, from what table will the rows come from?

Answer: The rows will be retrieved from the TEMPORARY table.

```
112   select table_name, table_type,is_transient, row_count
113     from information_schema.tables
114    where table_name  = upper('mytable') and row_count > 0;
```

Results | Chart

	TABLE_NAME	TABLE_TYPE	IS_TRANSIENT	ROW_COUNT
1	MYTABLE	LOCAL TEMPORARY	null	2

Question #5: Explain how to get the list of columns which are used as part of primary key constraint for the given table?

Answer: As we know that we can get all columns from information_schema.columns view .
We cat get only constraint name from information_schema.table_constraints view.
So we have to use the desc <table_table > and then use RESULT_SCAN with LAST_QUERY_ID.

```
create or replace  table demo_db.public.test( col1 number,
  col2 number, col3 number, col4 string
, primary key (col1, col3));

desc table demo_db.public.test;

SELECT "name" as pk_column_list FROM (
SELECT * FROM TABLE(RESULT_SCAN(LAST_QUERY_ID()))  )
WHERE "primary key" ='Y';
```

Results | Chart

	PK_COLUMN_LIST
1	COL1
2	COL3

Scenario :

```
create or replace table demo_db.public.orders(order_id number, order_date date);

insert into demo_db.public.orders values(1,'2023-09-01');

insert into demo_db.public.orders values(2,'2023-09-01');
insert into demo_db.public.orders values(2,'2023-09-03');

insert into demo_db.public.orders values(3,'2023-09-10');
insert into demo_db.public.orders values(3,'2023-09-12');
insert into demo_db.public.orders values(3,'2023-09-15');
```

```
select * from demo_db.public.orders;
```

Results | Chart

	ORDER_ID	ORDER_DATE
1	1	2023-09-01
2	2	2023-09-01
3	2	2023-09-03
4	3	2023-09-10
5	3	2023-09-12
6	3	2023-09-15

Only 1 row for order_id : 1

2 rows for order_id : 2 and days in difference between min and max of order date : 2

3 rows for order_id : 3 and days in difference between min and max of order date : 5

Question #1 : Write a query to get the below output using the demo_db.public.orders table mentioned in previous slide.

	ORDER_ID	ORDER_DATE	MIN_ORDER_DATE	MAX_ORDER_DATE	NEW_ORDER_DATE
1	1	2023-09-01	2023-09-01	2023-09-01	2023-09-01
2	2	2023-09-01	2023-09-01	2023-09-03	2023-09-01
3	2	2023-09-01	2023-09-01	2023-09-03	2023-09-02
4	2	2023-09-01	2023-09-01	2023-09-03	2023-09-03
5	3	2023-09-10	2023-09-10	2023-09-15	2023-09-10
6	3	2023-09-10	2023-09-10	2023-09-15	2023-09-11
7	3	2023-09-10	2023-09-10	2023-09-15	2023-09-12
8	3	2023-09-10	2023-09-10	2023-09-15	2023-09-13
9	3	2023-09-10	2023-09-10	2023-09-15	2023-09-14
10	3	2023-09-10	2023-09-10	2023-09-15	2023-09-15

Answer : Here is the query to get the expected output.

```
WITH a AS (
  SELECT order_id,MIN(order_date) as min_order_date, MAX(order_date) as max_order_date
        ,ARRAY_GENERATE_RANGE(0,DATEDIFF(day,min_order_date,max_order_date+1 )) as days
   FROM demo_db.public.orders group by all
)
SELECT a.order_id,a.min_order_date order_date, min_order_date, max_order_date
       ,min_order_date + to_number(t.value) as new_order_date
FROM a, TABLE(FLATTEN(a.days) ) t;
```

Note : This is one of the way to get the expected output. You can write same in other ways also.

Question #2: Is it possible to apply Row Access Policy/ Masking Policy on VIRTUAL Column in snowflake?

Answer: No.

```
23 | desc table demo_db.public.T1;
```

Results | Chart

	name	type	kind	null?
1	I	NUMBER(38,0)	COLUMN	Y
2	CALC	NUMBER(38,0)	VIRTUAL	Y

```
34 | alter table demo_db.public.T1
35 | add row access policy demo_db.public.rap_int on (calc);
```

Results | Chart

003557 (0A000): SQL compilation error: Row access policy cannot be attached to a VIRTUAL_COLUMN column.

```
73 | alter table demo_db.public.T1
74 | MODIFY COLUMN calc SET MASKING POLICY demo_db.public.mp_int;
```

Results | Chart

003557 (0A000): SQL compilation error: Masking policy cannot be attached to a VIRTUAL_COLUMN column.

Question #3: Is it possible to apply Row Access Policy and Masking Policy on same Column in snowflake?

Answer: No.

```
43 | alter table demo_db.public.T1
44 | add row access policy demo_db.public.rap_int on (i);
```

Results | Chart

Column 'I' cannot be used as policy argument because it is masked by another policy.

```
80 | alter table demo_db.public.T1
81 | MODIFY COLUMN i SET MASKING POLICY demo_db.public.mp_int;
```

Results | Chart

Column 'I' cannot be masked because it is used as argument by one or more masking/row-access policies.

Question #4: How many email notifications can we define for a given snowflake account?

Answer: 10.

We can define a maximum of 10 email notification integrations for a given account.

If more than 10 , will get error

SQL compilation error: Value for parameter integrations of type=email exceeds maximum allowable value (10).

Question #5: How to get the list of primary keys for the specified table, or for all tables in the current or specified schema, or for all tables in the current or specified database, or for all tables in the current account.?

Answer:

```
show primary keys;

show primary keys in account;

show primary keys in database;

show primary keys in database my_database;

show primary keys in schema;

show primary keys in schema my_schema;

show primary keys in schema my_database.my_schema;

show primary keys in my_table;

show primary keys in my_database.my_schema.my_table;
```

```
show primary keys in database;
SELECT * FROM table(RESULT_SCAN(LAST_QUERY_ID()));
```

Results | Chart

	database_name	schema_name	table_name	column_name	key_sequence	constraint_name
1	DEMO_DB	PUBLIC	DEPT	DEPTNO	1	PK_DEPT
2	DEMO_DB	PUBLIC	EMP	EMPNO	1	PK_EMP
3	DEMO_DB	PUBLIC	EMP1	EMPNO	1	PK_EMP
4	DEMO_DB	PUBLIC	TEST	COL1	1	SYS_CONSTRAINT_52
5	DEMO_DB	PUBLIC	TEST	COL3	2	SYS_CONSTRAINT_52

Scenario : Please read the following statements.

```
CREATE OR REPLACE TRANSIENT DATABASE test_db
DEFAULT_DDL_COLLATION = 'en-ci';
```

Results | Chart

	status
1	Database TEST_DB successfully created.

```
create schema if not exists test_db.sch1;
```

Results | Chart

status
Schema SCH1 successfully created.

```
create or replace table test_db.sch1.t1( a number, b string);
```

Results | Chart

	status
1	Table T1 successfully created.

```
insert into test_db.sch1.t1 values(1,'One'),(2,'Two');
```

Results | Chart

	number of rows inserted
1	2

Question #1 : What is the output of the below query?

select a, regexp_like(b,'o') from test_db.sch1.t1;

Answer :

```
15  select a, regexp_like(b,'o') from test_db.sch1.t1;
16
```

Results | Chart

002401 (0A000): SQL compilation error: error line 1 at position 10

Function REGEXP_LIKE does not support collation.

Scenario : Please read the following statements.

```
create or replace table test_db.sch1.customer(custid number , cname varchar);
insert into customer values ( 1, 'aaa');

create or replace view test_db.sch1.vw_customer
as select * from test_db.sch1.customer;
```

```
29  select * from test_db.sch1.vw_customer;
```

Results | Chart

	CUSTID	CNAME
1	1	aaa

```
31  alter table test_db.sch1.customer add (address varchar);
```

Results | Chart

	status
1	Statement executed successfully.

Question #2 : What is the output of the below query?

select * from test_db.sch1.vw_customer;

Answer :

```
33  select * from test_db.sch1.vw_customer;
34
```

Results | Chart

View definition for 'TEST_DB.SCH1.VW_CUSTOMER' declared 2 column(s), but view query produces 3 column(s).

Question #3: Can we perform insert, update,delete and Undrop operations on a dynamic table in snowflake?

Answer: No.

Scenario : Please read the following statements.

```
create or replace table public.stg_names (id number, fname varchar, lname varchar);
create or replace stream  public.names_s on table public.stg_names;
```

```
select * from  public.names_s;
```

Results | Chart

ID	FNAME	LNAME	METADATA$ACTION	METADATA$ISUPDATE	METAD

Query produced no results

```
46  create or replace table public.stg_names (id number, fname varchar, lname varchar);
47
```

Results | Chart

	status
1	Table STG_NAMES successfully created.

Question #4: What is going to happen when you run the below query?

Select * from public.names_s;

Answer:

```
select * from  public.names_s;
```

Results | Chart

Base table 'DEV_DB.PUBLIC.STG_NAMES' dropped, cannot read from stream 'NAMES_S' in line 1 position 15.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