University

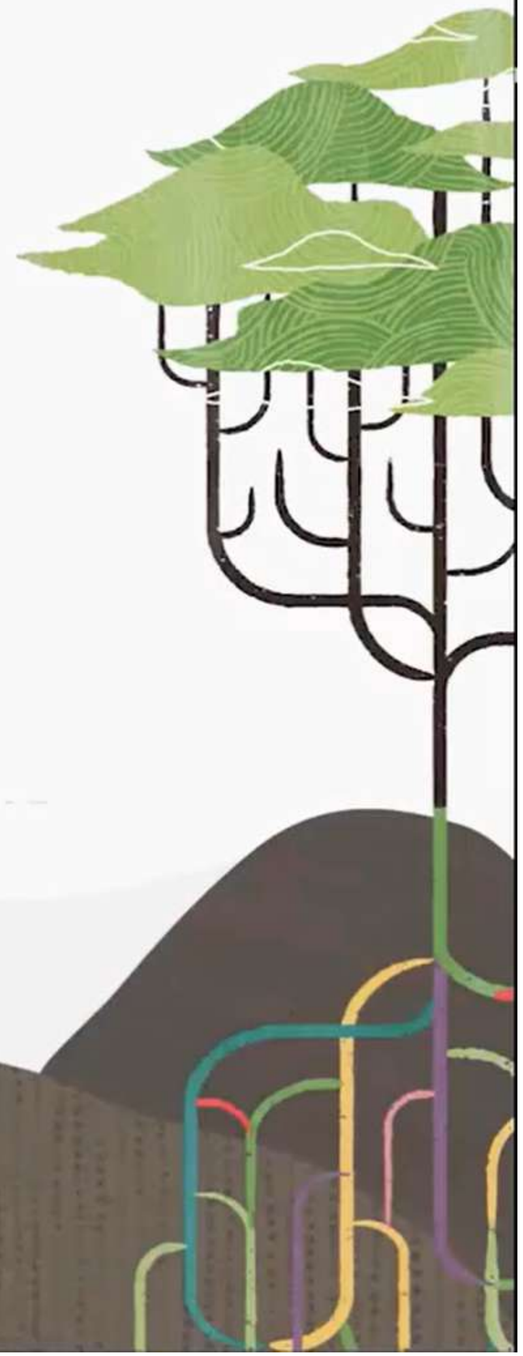
Michelle Malcher

DIRECTOR, PRODUCT MANAGEMENT
ORACLE

ORACLE
University

Natural Language Queries Just Ask Your Database

Use natural language to analyze your data using Select AI and GenAI.



Oracle can bring AI
to the enterprise
at every layer
of our stack.

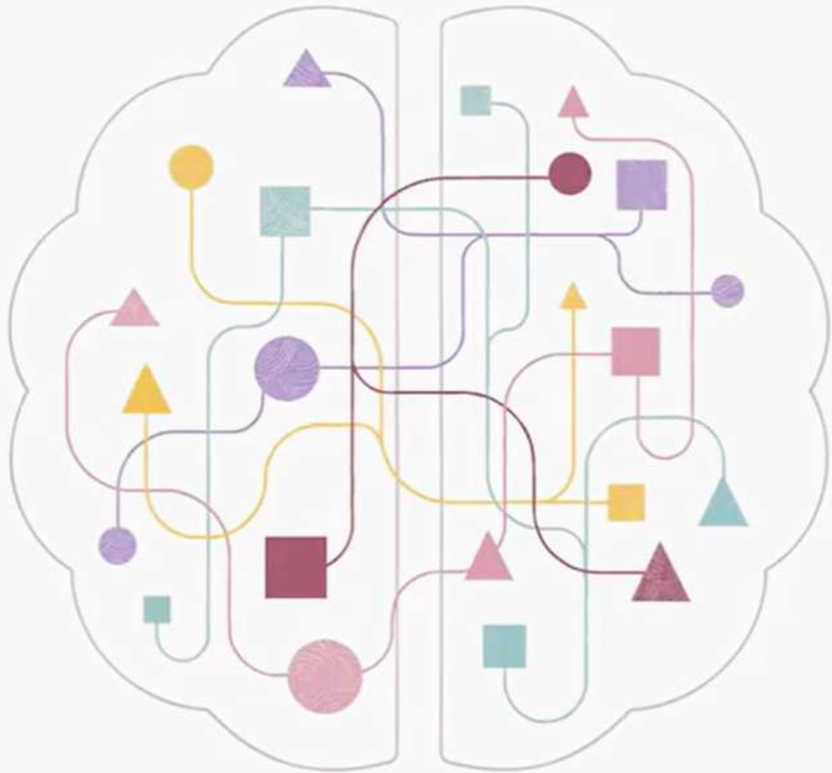
Agenda

- Select AI in Oracle Autonomous Database
- Easily query your data using natural language
- SQL query generation process flow

Autonomous Database Select AI

Simplest way to get answers about your business

- Use **your language** to query data.
- There is no need to understand where and how your data is stored to gain insights.

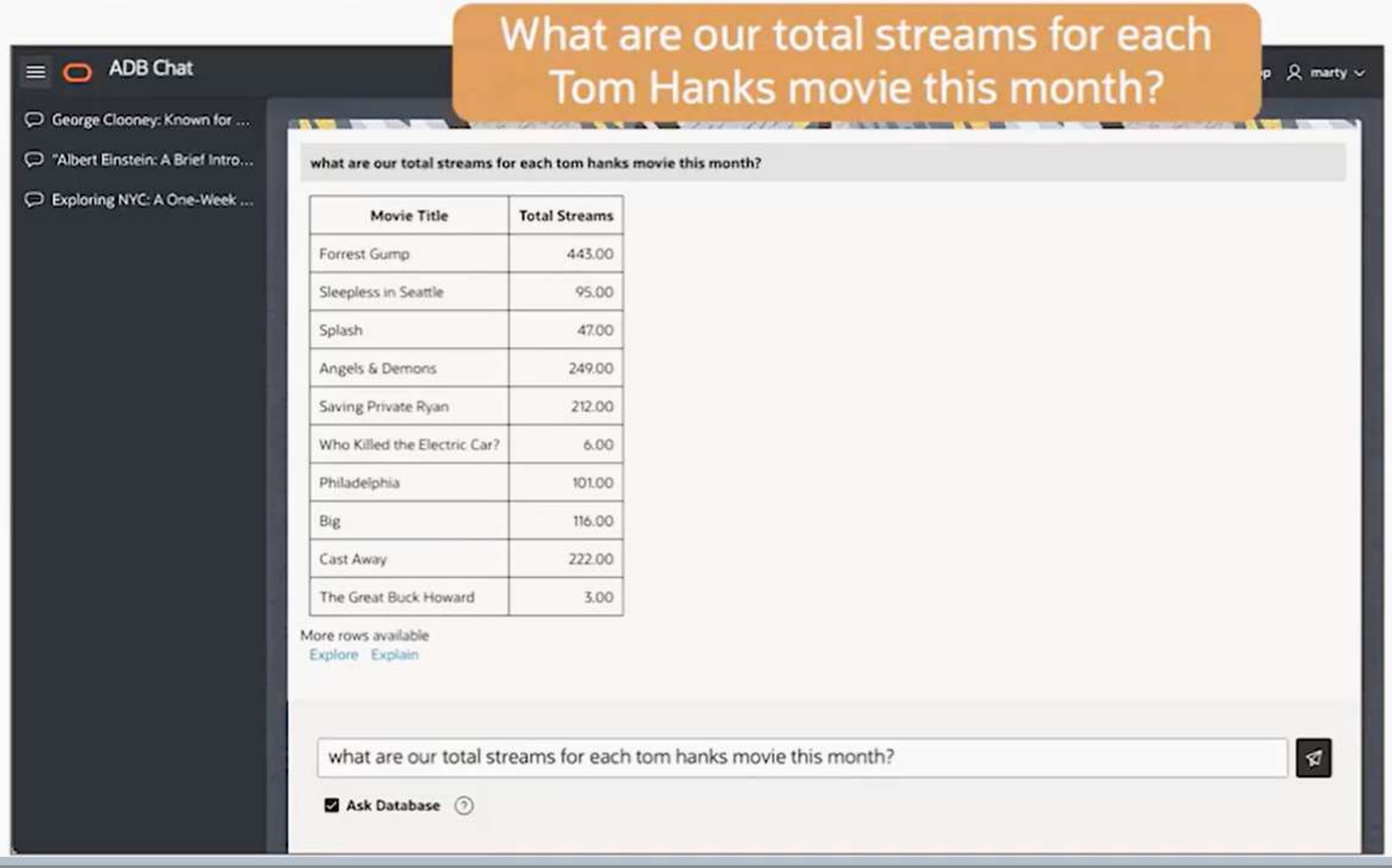


Select AI

Simplest way to get answers about your business

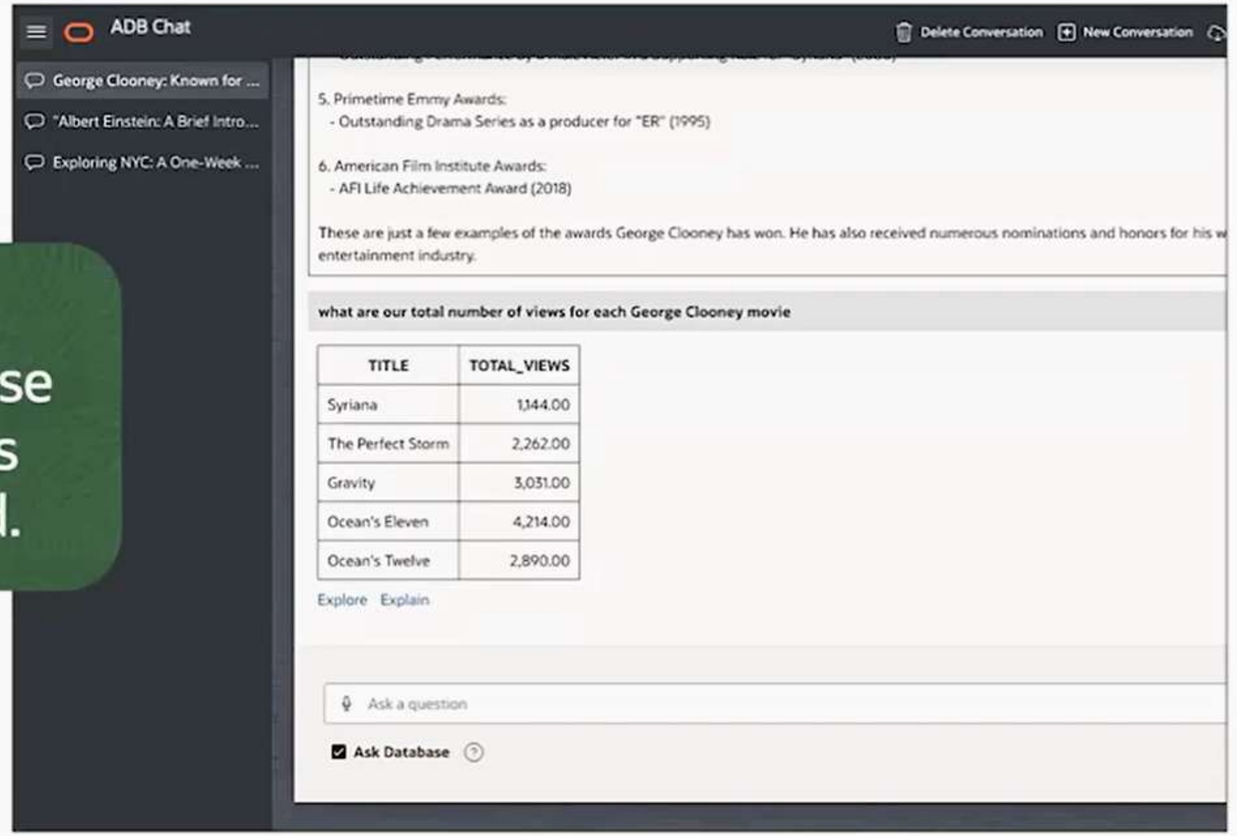
Just ask a question.

Autonomous Database manages the entire query process to produce your answer.



Demonstration

Speak “Human” to Autonomous Database to get your business questions answered.



Ask Oracle

Delete Conversation | New Conversation | marty

- Top 10 Streamed Movies
- "Albert Einstein: A Brief Intro...
- Exploring NYC: A One-Week ...
- Summary of the movie "Big"
- Harrison Ford's Notable Achi...

Captain Marvel	33,587.00
The Lion King	33,064.00
Star Wars Episode IX: The Rise of Skywalker	31,331.00
Aladdin	29,779.00
Spider-Man: Far from Home	29,021.00
Aquaman	20,357.00
Avengers: Infinity War	18,813.00
Toy Story 4	17,426.00
Bohemian Rhapsody	16,936.00

Explore SQL

who starred in Avengers: Endgame?

ACTOR
Stan Lee
Ava Russo
James Lin
Joe Russo
Ken Jeong
Lee Moore
Lexi Rabe
Mike Lutz
Paul Rudd
Sean Gunn

More rows available

Ask a question

Ask Database

2:32 / 7:55

1x HD

Top 10 Streamed Movies
"Albert Einstein: A Brief Intro...
Exploring NYC: A One-Week ...
Summary of the movie "Big"
Harrison Ford's Notable Achi...

Captain America: The Winter Soldier
Captain Marvel
Guardians of the Galaxy
Guardians of the Galaxy Vol. 2
Iron Man
Jay & Silent Bob's Super Groovy Cartoon Movie

More rows available
Explore SQL

What are the total streams for each Paul Rudd or Stan Lee movies?

TITLE	TOTAL_STREAMS
Spider-Man 3	4,013.00
Night at the Museum	2,222.00
Avengers: Endgame	162,148.00
Avengers: Age of Ultron	9,310.00
Iron Man 3	5,488.00
Captain America: Civil War	17,514.00
Jay & Silent Bob's Super Groovy Cartoon Movie	10.00
Iron Man	8,319.00
Spider-Man: Homecoming	11,340.00
The Avengers	13,435.00

More rows available
Explore SQL

Ask a question

Ask Database

Ask Oracle

Delete Conversation | New Conversation | marty

- Top 10 Streamed Movies
- "Albert Einstein: A Brief Intro...
- Exploring NYC: A One-Week ...
- Summary of the movie "Big"
- Harrison Ford's Notable Achi...

SQL

Update SQL

```
SELECT m.TITLE, COUNT(s.DAY_ID) AS TOTAL_STREAMS
FROM MOVIESTREAM.MOVIES m
JOIN MOVIESTREAM.STREAMS s ON m.MOVIE_ID = s.MOVIE_ID
JOIN MOVIESTREAM.ACTORS a ON m.MOVIE_ID = a.MOVIE_ID
WHERE a.ACTOR IN ('Paul Rudd', 'Stan Lee')
GROUP BY m.TITLE
```

Release 1.0

Select AI

Simplest way to get answers about your business

Perfect for getting answers when you're on the move

Select AI Translates Your Language into Oracle SQL Language

Processes question using an AI large language model (LLM)

Question		Inference
what are our		
Total streams	→	Total number of movie views
For each	→	Breakout views by movie
Tom Hanks **movie**	→	Tom Hanks is an actor.
this month?	→	Understanding of time

Select AI Translates Your Language into Oracle SQL Language

Processes question using an AI large language model (LLM)

Question		Inference		
what are our				
Total streams	→	Total number of movie views	→	`SELECT m.title AS movie_title, COUNT(s.views) AS total_streams`
For each	→	Breakout views by movie	→	`FROM movie m JOIN activity s ON m.movie_id = s.movie_id JOIN actors a ON m.movie_id = a.movie_id`
Tom Hanks **movie**	→	Tom Hanks is an actor.	→	`WHERE a.actor = 'Tom Hanks'`
this month?	→	Understanding of time	→	`AND EXTRACT(MONTH FROM s.day_id) = EXTRACT(MONTH FROM SYSDATE) GROUP BY m.title`

Developing Apps with Select AI

Simple

Designed so that you can easily build generative AI capabilities into new or existing applications

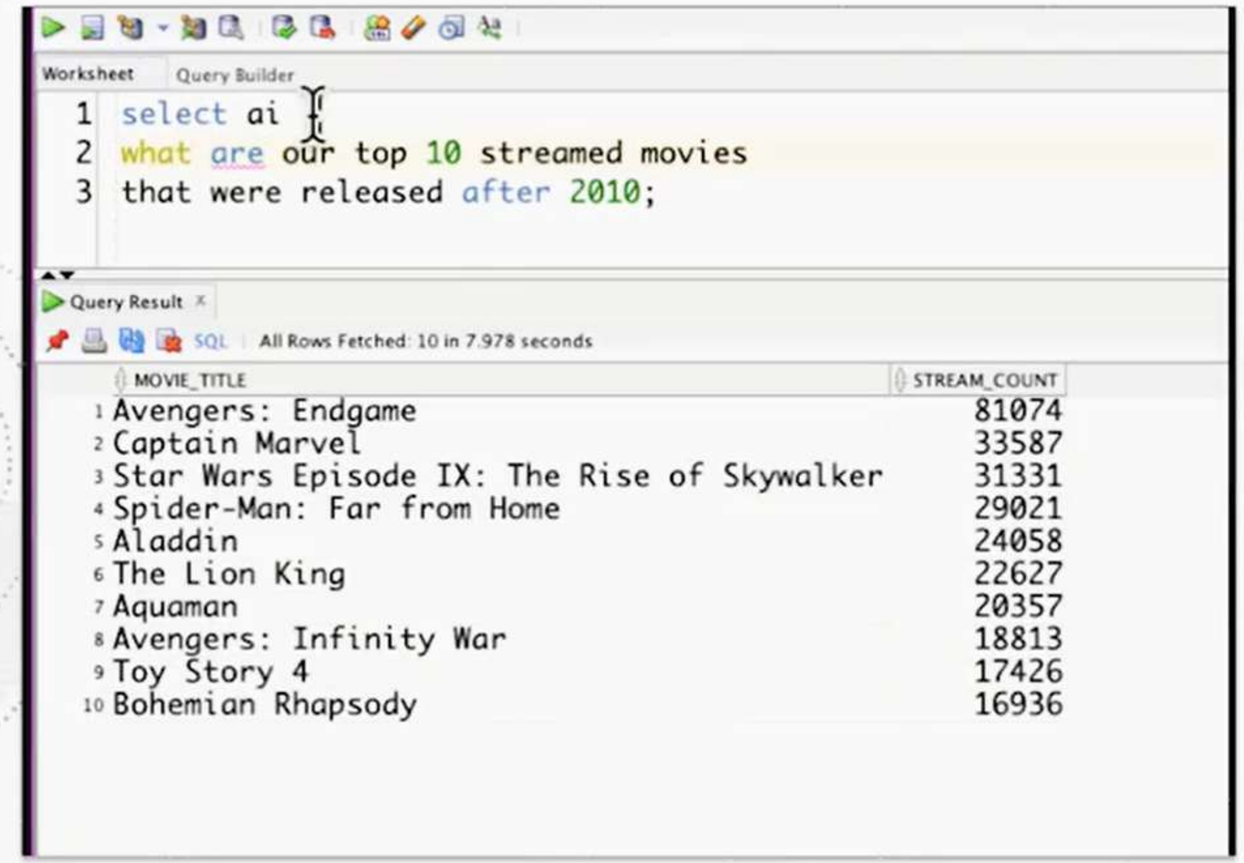
Future-enabled

Choose from an array of large language models. Pick the model that is best suited to your business.

Secure

Rely on the same Oracle Database security that protects your data. Plus, when using OCI Generative AI, your data will not be sent to the LLM provider or seen by other customers.

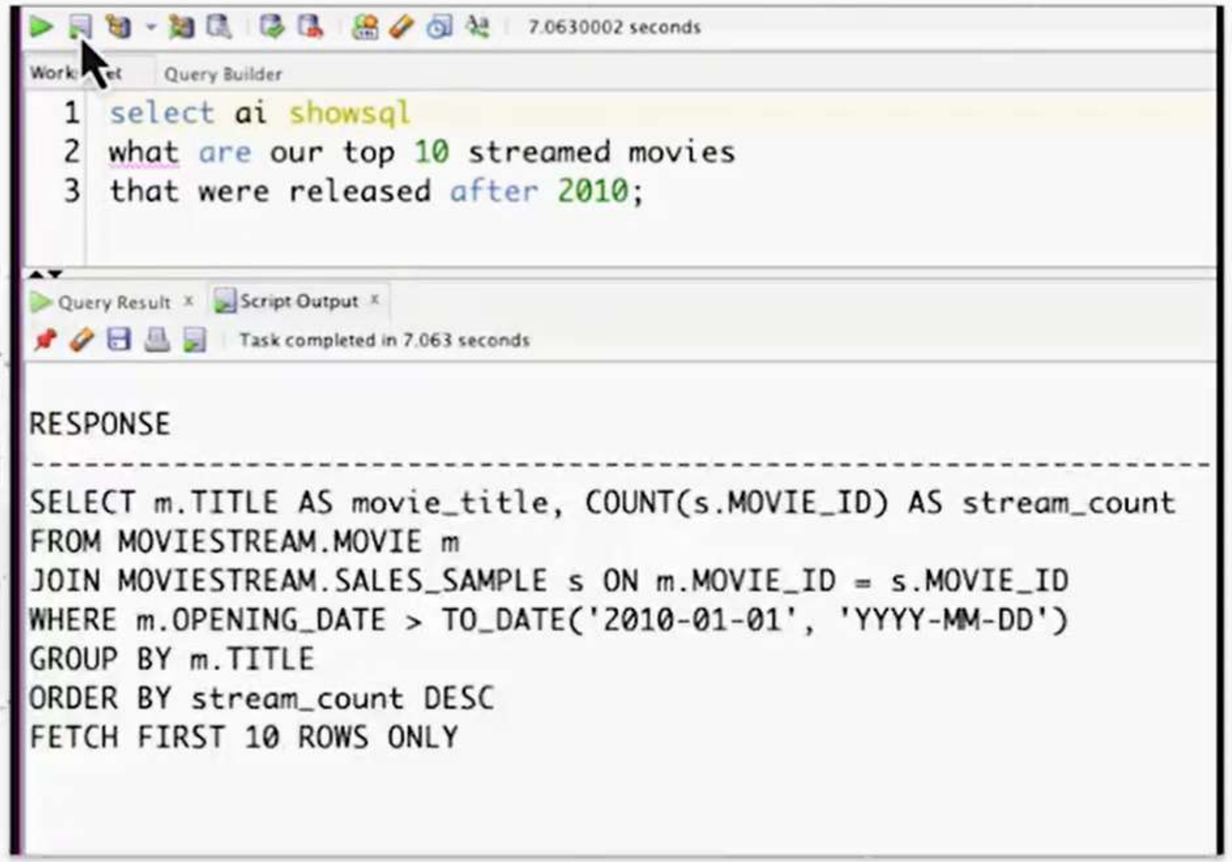
Easy to Extend and Build New Natural Language Apps



Use a **standard `SELECT` statement followed by AI and your question.**

Process the result as you would any other SQL result set.

Easy to Extend and Build New Natural Language Apps



Use a **standard `SELECT` statement followed by AI and your question.**

Process the result as you would any other SQL result set.

Have a Conversation to Get Your Questions Answered

sql-scripts > conversations.sql > ...

```
35  -- Have a Conversation with your data
36  -- Ask an initial question and then build on that - just like a normal conversation
37
38  -- Begin with a high level question
39  select ai Start with our total streams;
40
41  -- Give me more details
42  select ai Break that out by genre;
43
44  -- Which customer segments are watching the genres?
45  select ai Add customer segment;
46
```

PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL PORTS QUERY RESULT SCRIPT OUTPUT SQ

All rows fetched: 1 in 0.088 seconds

	TOTAL_STREAMS
1	2503281

Your first question is not your last!

Keep refining your questions until you get the answer you need.

Future-Enabled: Easy to Configure Your Data for Natural Language Queries

Use one or more **Select AI Profiles** that is best for your business.

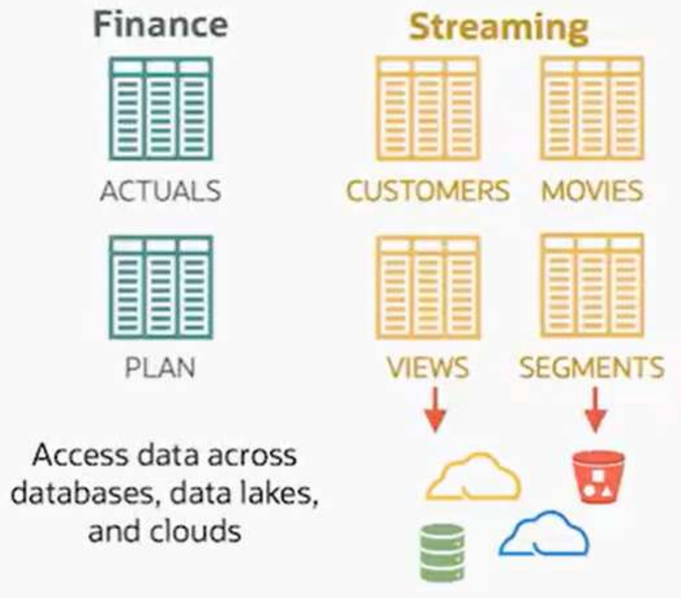
1

Choose an LLM to generate a database query from natural language.

- OCI Generative AI
- OpenAI
- Cohere
- Azure OpenAI

2

Specify schemas, tables and/or views to participate in processing.



Access data across databases, data lakes, and clouds

Easy to Configure Your Data for Natural Language Queries

Use one or more AI profiles that is best for your business.

1. Choose an LLM to generate a database query from natural language.

2. Specify schemas, tables and/or views to participate in processing.

Simple PL/SQL API creates AI profile:

```
dbms_cloud_ai.create_profile(
  profile_name => 'movie_nl_processing',
  attributes =>
  '{"provider": ”genai",
    "credential_name": ”GENAI_CRED",
    "object_list": [{"owner": "myschema",
                     "name":  "movie"},
                    {"owner": "myschema",
                     "name":  "sales_sample"},
                    {"owner": "myschema",
                     "name":  "customer"} ]
    }'
);
```

SQL Query Generation Process Flow