Cassandra

Day 3

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Day 3 - Overview

- Aggregate functions
  - COUNT
  - SUM
  - MIN
  - MAX
  - AVG
- Python Cassandra

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Insert Additional Record

```
INSERT INTO user (email, first_name, last_name, age, birth_city, birth_state, hobbies, created_datetime)
   VALUES ('max@gmail.com', 'Max', 'Jone', 38, 'Mumbai', 'Maharashtra', ['reading', 'cycling'], toUnixTimestamp(now())
);


INSERT INTO user (email, first_name, last_name, age, birth_city, birth_state, hobbies, created_datetime)
   VALUES ('krishna@gmail.com', 'Krishna', 'k', 22, 'Bhubaneswar', 'Odisha', ['coding', 'hiking'], toUnixTimestamp(now())
);

INSERT INTO user (email, first_name, last_name, age, birth_city, birth_state, hobbies, created_datetime)
   VALUES ('priya@gmail.com', 'Priya', 'K', 29, 'Mumbai', 'Maharashtra', ['skating', 'boxing'], toUnixTimestamp(now())
);

INSERT INTO user (email, first_name, last_name, age, birth_city, birth_state, hobbies, created_datetime)
   VALUES ('Rock@gmail.com', 'T', 'P', 42, 'Patna', 'Bihar', ['Coding', 'Cricket'], toUnixTimestamp(now())
);

INSERT INTO user (email, first_name, last_name, age, birth_city, birth_state, hobbies, created_datetime)
   VALUES ('Mala@gmail.com', 'Mala', 'S', 26, 'Patna', 'Bihar', ['Coding', 'Cricket'], toUnixTimestamp(now())
);

INSERT INTO user (email, first_name, last_name, age, birth_city, birth_state, hobbies, created_datetime)
   VALUES ('Mahesh@gmail.com', 'Mahesh', 'D', 18, 'Patna', 'Bihar', ['Coding', 'Cricket'], toUnixTimestamp(now())
);
```

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COUNT

SELECT COUNT(*) from user;

SELECT birth_state, birth_city, COUNT(*) from user GROUP BY birth_state, birth_city;

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SUM

SELECT SUM(age) from user;

SELECT birth_state, birth_city, SUM(age) from user GROUP BY birth_state, birth_city;

SELECT birth_state, birth_city, SUM(age) as total_age from user WHERE birth_state='Odisha' AND birth_city='Bhubaneswar';

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MAX

SELECT MAX(age) from user;

SELECT birth_state, birth_city, MAX(age) from user GROUP BY birth_state, birth_city;

SELECT birth_state, birth_city, MAX(age) as total_age from user WHERE birth_state='Odisha' AND birth_city='Bhubaneswar';

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MIN

SELECT MIN(age) from user;

SELECT birth_state, birth_city, MIN(age) from user GROUP BY birth_state, birth_city;

SELECT birth_state, birth_city, MIN(age) as total_age from user WHERE birth_state='Odisha' AND birth_city='Bhubaneswar';

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AVERAGE

SELECT AVG(age) from user;

SELECT birth_state, birth_city, AVG(age) from user GROUP BY birth_state, birth_city;

SELECT birth_state, birth_city, AVG(age) as total_age from user WHERE birth_state='Odisha' AND birth_city='Bhubaneswar';

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Sync your fork for Day 3 activities

Follow the below document to sync your fork and update local repository.

https://github.com/saurav-samantray/flask-microservices-training/blob/main/slides/Setup%20GIT%20in%20your%20Local%20system.pdf

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Python Cassandra

Open the below folder in Visual Studios

C:\workspace\flask-microservices-training\cassandra\simple-cassandra-app

Open a terminal in VScode and Create a virtual environment

python -m venv venv

Activate the virtual environment

.\venv\Scripts\activate

Install requirements

pip install -r requirements.txt

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Connecting to a Cassandra Cluster from Python

```
cluster = Cluster(['localhost'],port=9042)
session = cluster.connect()
```

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Executing Basic Queries from Python script

Refer simple_queries.py

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Executing Aggregation Queries from Python script

Refer aggregation_queries.py

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Task

- Create a new keyspace with Simple Strategy and replication factor as 1
- Create one tables in the keyspace - employee
- Columns
  - email - String - clustering
  - name - String
  - department - String - partition
  - experience - double
  - active - Boolean
  - skills - Set
- Insert 10 records
- Update a record with new skills
- Delete one particular skill from a record
- Update the experience of a record

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Q and A

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