Netflix Case study

This case study focuses on leveraging Apache Cassandra to manage a Netflix dataset containing user subscriptions, which includes details such as user demographics, subscription types, revenue, and device usage. It explores key aspects like creating a keyspace with appropriate replication strategies, designing a schema with suitable data types, and defining primary and clustering keys for efficient data retrieval. The study also covers CRUD operations (insert, update, delete), batch operations for optimizing data handling, and deriving actionable analytics.

Key Analytics

1. Total Revenue by Country: Analyzing total revenue contribution from different countries.
2. User Count by Device: Understanding which devices are most popular among users.
3. Subscription Type Popularity: Tracking the popularity of different subscription plans.
4. Churn Rate Analysis: Identifying users who haven't made a recent payment (using last_payment_date).
5. Demographic Insights: Understanding the age distribution and gender ratios of users.

User ID	Subscription Type	Monthly Revenue	Join Date	Last Payment Date	Country	Age	Gender	Device	Plan Duration
1	Basic	10	15-01-22	10/6/2023	United States	28	Male	Smartphone	1 Month
2	Premium	15	5/9/2021	22-06-23	Canada	35	Female	Tablet	1 Month
3	Standard	12	28-02-23	27-06-23	United Kingdom	42	Male	Smart TV	1 Month
4	Standard	12	10/7/2022	26-06-23	Australia	51	Female	Laptop	1 Month
5	Basic	10	1/5/2023	28-06-23	Germany	33	Male	Smartphone	1 Month
6	Premium	15	18-03-22	27-06-23	France	29	Female	Smart TV	1 Month
7	Standard	12	9/12/2021	25-06-23	Brazil	46	Male	Tablet	1 Month
8	Basic	10	2/4/2023	24-06-23	Mexico	39	Female	Laptop	1 Month
9	Standard	12	20-10-22	23-06-23	Spain	37	Male	Smartphone	1 Month
10	Premium	15	7/1/2023	22-06-23	Italy	44	Female	Smart TV	1 Month
11	Basic	10	16-05-22	22-06-23	United States	31	Female	Smartphone	1 Month
12	Premium	15	23-03-23	28-06-23	Canada	45	Male	Tablet	1 Month
13	Standard	12	30-11-21	27-06-23	United Kingdom	48	Female	Laptop	1 Month
14	Basic	10	1/8/2022	26-06-23	Australia	27	Male	Smartphone	1 Month
15	Standard	12	9/5/2023	28-06-23	Germany	38	Female	Smart TV	1 Month
16	Premium	15	7/4/2022	27-06-23	France	36	Male	Tablet	1 Month
17	Basic	10	24-01-22	25-06-23	Brazil	30	Female	Laptop	1 Month
18	Standard	12	18-10-21	24-06-23	Mexico	43	Male	Smartphone	1 Month
19	Premium	15	15-02-23	23-06-23	Spain	32	Female	Smart TV	1 Month
20	Basic	10	27-05-23	22-06-23	Italy	41	Male	Tablet	1 Month
21	Premium	15	10/6/2023	22-06-23	United States	26	Female	Laptop	1 Month
22	Basic	10	22-07-22	28-06-23	Canada	34	Male	Smartphone	1 Month
23	Standard	12	5/12/2021	27-06-23	United Kingdom	49	Female	Smart TV	1 Month
24	Standard	12	3/4/2022	26-06-23	Australia	31	Male	Tablet	1 Month
25	Basic	10	14-03-23	28-06-23	Germany	40	Female	Laptop	1 Month

1. Keyspace Creation

A keyspace in Cassandra is similar to a database in other RDBMS. It defines the scope for data replication and provides a namespace for tables.

Example:

```
CREATE KEYSPACE netflix_analytics
WITH replication = {'class': 'SimpleStrategy', 'replication_factor': '1'};
```

Explanation:

class: Defines the replication strategy (e.g., SimpleStrategy or NetworkTopologyStrategy).

replication_factor: The number of replicas for each data point.

2. Create a Table

Creating a table involves defining the data types for each column.

Example:

```
CREATE TABLE netflix_analytics.subscriptions (
    user_id UUID PRIMARY KEY,
    subscription_type TEXT,
    monthly_revenue DECIMAL,
    join_date DATE,
    last_payment_date DATE,
    country TEXT,
    age INT,
    gender TEXT,
    device TEXT,
    plan_duration INT
);
```

Explanation:

UUID: Universally Unique Identifier, A 128-bit unique identifier ideal for globally unique values.

TEXT: Stores variable-length strings for text-based data. Used for string data (subscription_type, country, gender, device).

DECIMAL: Represents fixed-point numbers, suitable for precise financial values. For monetary values (monthly_revenue).

DATE: Stores only the date component (year, month, day). For date fields (join_date, last_payment_date).

INT: A 32-bit signed integer for numerical data without decimals. For integers (age, plan_duration).

3. Defining Primary Key, Partition Key, Clustering

Primary Key: A unique identifier for rows in a table.

Partition Key: Determines the distribution of data across nodes.

Clustering Columns: Define the order of data storage within a partition.

Example:

```
CREATE TABLE netflix_analytics.subscriptions (
   user_id UUID,
   country TEXT,
   device TEXT,
   subscription_type TEXT,
   monthly_revenue DECIMAL,
   join_date DATE,
   last_payment_date DATE,
   age INT,
   gender TEXT,
   plan_duration INT,
   PRIMARY KEY ((country, device), user_id)
);
```

Explanation:

Partition Key: (country, device) ensures data distribution based on country and device.

Clustering Key: user_id defines the ordering within the partition.

4. Insert Command and Batch Insert

Inserts data into the table.

Single Insert Example:

```
INSERT INTO netflix_analytics.subscriptions (
   user_id, country, device, subscription_type, monthly_revenue,
   join_date, last_payment_date, age, gender, plan_duration
) VALUES (
   uuid(), 'USA', 'Mobile', 'Premium', 15.99, '2023-01-01', '2024-01-01', 25, 'M', 12
);
```

Batch Insert Example:

```
BEGIN BATCH
INSERT INTO netflix_analytics.subscriptions (user_id, country, device, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration)
VALUES (uuid(), 'USA', 'Mobile', 'Premium', 15.99, '2023-01-01', '2024-01-01', 25, 'M', 12);

INSERT INTO netflix_analytics.subscriptions (user_id, country, device, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration)
VALUES (uuid(), 'Canada', 'Laptop', 'Standard', 12.99, '2023-02-01', '2024-02-01', 30, 'F', 6);
APPLY BATCH;
```

5. Update Command and Batch Update

Updates existing records.

Single Update Example:

```
UPDATE netflix_analytics.subscriptions
SET monthly_revenue = 19.99
WHERE country = 'USA' AND device = 'Mobile' AND user_id = some-uuid;
```

Batch Update Example:

```
BEGIN BATCH
UPDATE netflix_analytics.subscriptions
SET monthly_revenue = 19.99
WHERE country = 'USA' AND device = 'Mobile' AND user_id = some-uuid;

UPDATE netflix_analytics.subscriptions
SET plan_duration = 18
WHERE country = 'Canada' AND device = 'Laptop' AND user_id = another-uuid;
APPLY BATCH;
```

6. Delete Command

Removes records from the table.

Example:

```
DELETE FROM netflix_analytics.subscriptions
WHERE country = 'USA' AND device = 'Mobile' AND user_id = some-uuid;
```

7. Analytics Derived from the Dataset

You can derive various insights such as:

Monthly Revenue Per Country:

```
SELECT country, SUM(monthly_revenue) AS total_revenue
FROM netflix_analytics.subscriptions
GROUP BY country, device;
```

Active Users by Device Type:

```
SELECT device, COUNT(*) AS user_count
FROM netflix_analytics.subscriptions
GROUP BY country, device;
```

Average Age of Subscribers:

```
SELECT AVG(age) AS average_age
FROM netflix_analytics.subscriptions;
```

Subscription Types Distribution:

```
SELECT subscription_type, COUNT(*) AS subscription_count
FROM netflix_analytics.subscriptions
GROUP BY country, device;
```

Revenue Trends Over Time:

```
SELECT join_date, SUM(monthly_revenue) AS daily_revenue
FROM netflix_analytics.subscriptions
```

```sql
GROUP BY country, device;
```

User-Based Analysis within Country and Device

```sql
SELECT user_id, subscription_type, monthly_revenue, join_date
FROM netflix_analytics.subscriptions
WHERE country = 'USA' AND device = 'Mobile'
ORDER BY user_id;
```

Tracking User Subscription Changes Over Time

```sql
SELECT user_id, subscription_type, monthly_revenue, join_date
FROM netflix_analytics.subscriptions
WHERE country = 'USA' AND device = 'Mobile'
ORDER BY user_id DESC;
```

More Data Types

Data Type	Purpose	Example
int	Stores a 32-bit integer value.	age int (Stores age as an integer)
bigint	Stores a 64-bit signed integer value (2^64-1).	amount bigint (Stores large monetary values)
float	Stores a 32-bit single precision floating-point number.	price float (Stores a price like 19.99)
double	Stores a 64-bit double precision floating-point number.	temperature double (Stores temperature with higher precision)
text	Stores a string of text with variable length.	title text (Stores book title, e.g., "The Catcher in the Rye")
varchar	Stores a variable-length string.	name varchar (Stores employee name, e.g., "John Doe")
uuid	Stores a universally unique identifier (UUID).	order_id uuid (Stores order ID as UUID)
timeuuid	Stores a UUID that is time-based, useful for generating ordered UUIDs.	event_id timeuuid (Stores event ID based on time)
boolean	Stores a boolean value (true/false).	is_active boolean (Stores if a user is active or not)
date	Stores a date (year, month, day) without the time component.	meeting_date date (Stores date, e.g., "2024-11-08")
timestamp	Stores a date and time, including milliseconds.	log_time timestamp (Stores timestamp, e.g., "2024-11-08 14:30:00")
time	Stores the time of day without the date.	start_time time (Stores time, e.g., "14:30:00")
inet	Stores an IP address (either IPv4 or IPv6).	ip_address inet (Stores IP address, e.g., "192.168.1.1")
decimal	Stores arbitrary precision decimal numbers.	price decimal (Stores price with precision for financial calculations)
set<type>	Stores a collection of unique values of a specified type.	subjects set<text> (Stores unique subjects, e.g., {"Math", "Science"})
list<type>	Stores an ordered collection of values of a specified type.	chapters list<text> (Stores an ordered list of chapters, e.g., ['Introduction', 'Chapter 1', 'Chapter 2'])
map<key_type, value_type>	Stores a collection of key-value pairs.	preferences map<text, text> (Stores key-value pairs, e.g., {"color": "blue", "language": "English"})
User-Defined Type (UDT)	Groups related fields together as a custom data type.	address frozen<address> (Defines address UDT for users, stores street, city, state, zip_code)

Example

```
CREATE TYPE address (
    street text,
    city text,
    state text,
    zip_code text
);
CREATE TABLE example_table (
    id UUID,
    age int,
    amount bigint,
    price float,
    temperature double,
    title text,
    name varchar,
    order_id uuid,
    event_id timeuuid,
    is_active boolean,
    meeting_date date,
    log_time timestamp,
    start_time time,
    ip_address inet,
    price_decimal decimal,
    subjects set<text>,
    chapters list<text>,
    preferences map<text, text>,
    address frozen<address>,
    PRIMARY KEY (id, log_time)
);
```

Insert 10 Records

```
INSERT INTO example_table (id, age, amount, price, temperature, title, name, order_id, event_id, is_active, meeting_date, log_time, start_time, ip_address, price_decimal, subjects, chapters, preferences, address) VALUES (uuid(), 25, 5000, 19.99, 22.5, 'To Kill a Mockingbird', 'Alice Smith', uuid(), now(), true, '2024-11-08', '2024-11-08 09:30:00', '09:30:00', '192.168.1.100', 29.99, {'Math', 'English'}, ['Introduction', 'Chapter 1'], {'color': 'red', 'language': 'English'}, {street: '456 Oak St', city: 'Denver', state: 'CO', zip_code: '80202'});

INSERT INTO example_table (id, age, amount, price, temperature, title, name, order_id, event_id, is_active, meeting_date, log_time, start_time, ip_address, price_decimal, subjects, chapters, preferences, address) VALUES (uuid(), 40, 100000, 29.99, 35.8, '1984', 'Bob Johnson', uuid(), now(), false, '2024-11-09', '2024-11-09 10:00:00', '10:00:00', '192.168.1.101', 39.99, {'Science', 'History'}, ['Introduction', 'Chapter 1', 'Chapter 2'], {'color': 'blue', 'language': 'French'}, {street: '789 Pine St', city: 'Los Angeles', state: 'CA', zip_code: '90001'});
INSERT INTO example_table (id, age, amount, price, temperature, title, name, order_id, event_id, is_active, meeting_date, log_time, start_time, ip_address, price_decimal, subjects, chapters, preferences, address) VALUES (uuid(), 28, 20000, 15.49, 18.7, 'Pride and Prejudice', 'Catherine Lee', uuid(), now(), true, '2024-11-10', '2024-11-10 12:30:00', '12:30:00', '192.168.1.102', 24.99, {'History', 'Literature'}, ['Introduction', 'Chapter 1', 'Chapter 2'], {'color': 'green', 'language': 'Spanish'}, {street: '123 Maple Ave', city: 'Chicago', state: 'IL', zip_code: '60606'});

INSERT INTO example_table (id, age, amount, price, temperature, title, name, order_id, event_id, is_active, meeting_date, log_time, start_time, ip_address, price_decimal, subjects, chapters, preferences, address) VALUES (uuid(), 35, 300000, 99.99, 40.1, 'The Great Gatsby', 'David Green', uuid(), now(), true, '2024-11-11', '2024-11-11 14:00:00', '14:00:00', '192.168.1.103', 49.99, {'Math', 'Art'}, ['Introduction', 'Chapter 1'], {'color': 'yellow', 'language': 'German'}, {street: '321 Birch Rd', city: 'Miami', state: 'FL', zip_code: '33101'});

INSERT INTO example_table (id, age, amount, price, temperature, title, name, order_id, event_id, is_active, meeting_date, log_time, start_time, ip_address, price_decimal, subjects, chapters, preferences, address) VALUES (uuid(), 50, 150000, 9.99, 30.2, 'Moby Dick', 'Eve White', uuid(), now(), false, '2024-11-12', '2024-11-12 15:00:00', '15:00:00', '192.168.1.104', 59.99, {'Art', 'Philosophy'}, ['Introduction', 'Chapter 1', 'Chapter 2'], {'color': 'purple', 'language': 'Italian'}, {street: '654 Elm St', city: 'New York', state: 'NY', zip_code: '10001'});

INSERT INTO example_table (id, age, amount, price, temperature, title, name, order_id, event_id, is_active, meeting_date, log_time, start_time, ip_address, price_decimal, subjects, chapters, preferences, address) VALUES (uuid(), 26, 25000, 25.99, 20.0, 'Frankenstein', 'Grace Brown', uuid(), now(), true, '2024-11-13', '2024-11-13 16:30:00', '16:30:00', '192.168.1.105', 34.99, {'Biology', 'Chemistry'}, ['Introduction', 'Chapter 1', 'Chapter 2'], {'color': 'black', 'language': 'Portuguese'}, {street: '987 Cedar St', city: 'Austin', state: 'TX', zip_code: '73301'});

INSERT INTO example_table (id, age, amount, price, temperature, title, name, order_id, event_id, is_active, meeting_date, log_time, start_time, ip_address, price_decimal, subjects, chapters, preferences, address) VALUES (uuid(), 45, 50000, 19.49, 25.5, 'Jane Eyre', 'Helen Carter', uuid(), now(), false, '2024-11-14', '2024-11-14 17:00:00', '17:00:00', '192.168.1.106', 39.99, {'Music', 'Literature'}, ['Introduction', 'Chapter 1'], {'color': 'orange', 'language': 'English'}, {street: '234 Oak St', city: 'Boston', state: 'MA', zip_code: '02108'});

INSERT INTO example_table (id, age, amount, price, temperature, title, name, order_id, event_id, is_active, meeting_date, log_time, start_time, ip_address, price_decimal, subjects, chapters, preferences, address) VALUES (uuid(), 33, 70000, 17.99, 32.0, 'Wuthering Heights', 'Fiona Clark', uuid(), now(), true, '2024-11-15', '2024-11-15 18:00:00', '18:00:00', '192.168.1.107', 44.99, {'Science', 'Philosophy'}, ['Introduction', 'Chapter 1'], {'color': 'pink', 'language': 'Arabic'}, {street: '321 Pine Rd', city: 'Seattle', state: 'WA', zip_code: '98101'});

INSERT INTO example_table (id, age, amount, price, temperature, title, name, order_id, event_id, is_active, meeting_date, log_time, start_time, ip_address, price_decimal, subjects, chapters, preferences, address) VALUES (uuid(), 38, 120000, 35.99, 28.4, 'War and Peace', 'Isaac Williams', uuid(), now(), false, '2024-11-16', '2024-11-16 19:00:00', '19:00:00', '192.168.1.108', 79.99, {'Engineering', 'History'}, ['Introduction', 'Chapter 1', 'Chapter 2'], {'color': 'brown', 'language': 'Russian'}, {street: '876 Birch St', city: 'San Francisco', state: 'CA', zip_code: '94102'});
```

Display Records

```
select name, age, address, subjects, chapters, preferences, address from example_table;
```

Alter Table

```
ALTER TABLE example_table Drop age;

ALTER TABLE example_table ADD age INT;
```

Insert Data from External Sources and To External Sources

Export Data to CSV

```
COPY example_table TO 'example_table.csv' WITH HEADER = true;
```

Export Data From CSV

Step1: Do the basic configuration in Docker

Mounting a folder in the docker

```
docker run -d --name data_mount -v
D:/Projects/HeroVired_Online_Teaching/Lectures/Cassandra_Training/cassandra/datasets:/data
cassandra
```

Execute the cqlsh command to get the terminal

```
docker exec -it data_mount cqlsh
```

Step2. Let's First Create the Table

```
CREATE KEYSPACE netflix with replication = {'class': 'SimpleStrategy', 'replication_factor':1};

CREATE TABLE netflix .netflix_shows (

  show_id TEXT,

  type TEXT,

  title TEXT,

  director TEXT,

  cast TEXT,

  country TEXT,

  date_added TEXT,

  release_year TEXT,

  rating TEXT,

  duration TEXT,

  listed_in TEXT,

  description TEXT,

  PRIMARY KEY (show_id, type)

);
```

Insert data from the external sources 'CSV File'

```
COPY netflix.netflix_shows (show_id, type, title, director, cast, country, date_added, release_year, rating,
duration, listed_in, description) FROM 'data/netflix_titles.csv' WITH HEADER = true;
```

Few Records for the analytics

```
INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('USA', 'Mobile', uuid(), 'Standard', 12.99, '2023-01-10', '2023-12-01', 28, 'M', 12);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('USA', 'Mobile', uuid(), 'Basic', 8.99, '2022-11-12', '2023-11-10', 35, 'F', 24);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('Canada', 'Laptop', uuid(), 'Premium', 16.99, '2021-08-22', '2023-12-05', 42, 'M', 36);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('Canada', 'Tablet', uuid(), 'Standard', 12.99, '2023-06-17', '2023-12-03', 29, 'F', 12);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('UK', 'Mobile', uuid(), 'Basic', 8.99, '2023-02-01', '2023-11-28', 25, 'F', 6);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('UK', 'Smart TV', uuid(), 'Premium', 16.99, '2022-12-05', '2023-11-30', 37, 'M', 18);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('Australia', 'Tablet', uuid(), 'Standard', 12.99, '2023-03-10', '2023-12-04', 22, 'M', 12);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('Australia', 'Smart TV', uuid(), 'Basic', 8.99, '2021-07-11', '2023-11-22', 30, 'F', 24);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('India', 'Mobile', uuid(), 'Premium', 16.99, '2023-01-21', '2023-12-02', 32, 'M', 12);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('India', 'Laptop', uuid(), 'Standard', 12.99, '2022-04-10', '2023-11-29', 26, 'F', 18);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('India', 'Smart TV', uuid(), 'Basic', 8.99, '2023-02-01', '2023-12-05', 27, 'M', 6);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('USA', 'Tablet', uuid(), 'Premium', 16.99, '2021-05-15', '2023-12-01', 39, 'F', 24);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('USA', 'Smart TV', uuid(), 'Standard', 12.99, '2023-03-12', '2023-12-02', 33, 'M', 12);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('Canada', 'Laptop', uuid(), 'Basic', 8.99, '2022-09-05', '2023-11-10', 26, 'M', 18);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('Canada', 'Smart TV', uuid(), 'Standard', 12.99, '2023-01-19', '2023-12-03', 32, 'F', 12);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('UK', 'Tablet', uuid(), 'Premium', 16.99, '2022-06-14', '2023-11-30', 40, 'M', 36);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('UK', 'Mobile', uuid(), 'Basic', 8.99, '2023-08-11', '2023-12-05', 25, 'M', 6);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('Australia', 'Mobile', uuid(), 'Standard', 12.99, '2023-01-28', '2023-12-05', 28, 'F', 12);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('Australia', 'Smart TV', uuid(), 'Premium', 16.99, '2021-11-15', '2023-12-02', 34, 'M', 24);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('India', 'Laptop', uuid(), 'Basic', 8.99, '2023-07-17', '2023-11-30', 29, 'M', 12);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('India', 'Tablet', uuid(), 'Standard', 12.99, '2023-01-06', '2023-12-03', 31, 'F', 18);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('USA', 'Smart TV', uuid(), 'Premium', 16.99, '2022-03-25', '2023-12-02', 41, 'M', 24);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('USA', 'Mobile', uuid(), 'Standard', 12.99, '2023-01-10', '2023-12-01', 28, 'M', 12);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('USA', 'Mobile', uuid(), 'Basic', 8.99, '2022-11-12', '2023-11-10', 35, 'F', 24);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('Canada', 'Laptop', uuid(), 'Premium', 16.99, '2021-08-22', '2023-12-05', 42, 'M', 36);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('Canada', 'Tablet', uuid(), 'Standard', 12.99, '2023-06-17', '2023-12-03', 29, 'F', 12);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('UK', 'Mobile', uuid(), 'Basic', 8.99, '2023-02-01', '2023-11-28', 25, 'F', 6);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('UK', 'Smart TV', uuid(), 'Premium', 16.99, '2022-12-05', '2023-11-30', 37, 'M', 18);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('Australia', 'Tablet', uuid(), 'Standard', 12.99, '2023-03-10', '2023-12-04', 22, 'M', 12);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('Australia', 'Smart TV', uuid(), 'Basic', 8.99, '2021-07-11', '2023-11-22', 30, 'F', 24);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('India', 'Mobile', uuid(), 'Premium', 16.99, '2023-01-21', '2023-12-02', 32, 'M', 12);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('India', 'Laptop', uuid(), 'Standard', 12.99, '2022-04-10', '2023-11-29', 26, 'F', 18);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('India', 'Smart TV', uuid(), 'Basic', 8.99, '2023-02-01', '2023-12-05', 27, 'M', 6);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('USA', 'Tablet', uuid(), 'Premium', 16.99, '2021-05-15', '2023-12-01', 39, 'F', 24);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('USA', 'Smart TV', uuid(), 'Standard', 12.99, '2023-03-12', '2023-12-02', 33, 'M', 12);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('Canada', 'Laptop', uuid(), 'Basic', 8.99, '2022-09-05', '2023-11-10', 26, 'M', 18);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('Canada', 'Smart TV', uuid(), 'Standard', 12.99, '2023-01-19', '2023-12-03', 32, 'F', 12);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('UK', 'Tablet', uuid(), 'Premium', 16.99, '2022-06-14', '2023-11-30', 40, 'M', 36);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('UK', 'Mobile', uuid(), 'Basic', 8.99, '2023-08-11', '2023-12-05', 25, 'M', 6);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('Australia', 'Mobile', uuid(), 'Standard', 12.99, '2023-01-28', '2023-12-05', 28, 'F', 12);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('Australia', 'Smart TV', uuid(), 'Premium', 16.99, '2021-11-15', '2023-12-02', 34, 'M', 24);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('India', 'Laptop', uuid(), 'Basic', 8.99, '2023-07-17', '2023-11-30', 29, 'M', 12);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('India', 'Tablet', uuid(), 'Standard', 12.99, '2023-01-06', '2023-12-03', 31, 'F', 18);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('USA', 'Smart TV', uuid(), 'Premium', 16.99, '2022-03-25', '2023-12-02', 41, 'M', 24);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('USA', 'Mobile', uuid(), 'Basic', 8.99, '2023-07-14', '2023-12-05', 24, 'M', 12);
INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('Canada', 'Smart TV', uuid(), 'Premium', 16.99, '2023-05-11', '2023-11-29', 38, 'F', 36);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('India', 'Mobile', uuid(), 'Standard', 12.99, '2022-02-18', '2023-12-03', 31, 'F', 24);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('Australia', 'Mobile', uuid(), 'Premium', 16.99, '2023-04-22', '2023-12-01', 29, 'F', 12);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('USA', 'Tablet', uuid(), 'Premium', 16.99, '2022-10-30', '2023-11-25', 33, 'M', 18);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('Canada', 'Mobile', uuid(), 'Standard', 12.99, '2023-02-07', '2023-11-26', 36, 'M', 12);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('UK', 'Smart TV', uuid(), 'Premium', 16.99, '2023-03-09', '2023-11-15', 44, 'F', 12);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('Australia', 'Laptop', uuid(), 'Basic', 8.99, '2021-12-19', '2023-11-25', 31, 'M', 36);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('India', 'Smart TV', uuid(), 'Basic', 8.99, '2023-05-20', '2023-11-29', 28, 'M', 6);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('USA', 'Tablet', uuid(), 'Standard', 12.99, '2023-08-15', '2023-12-01', 26, 'F', 12);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('Canada', 'Laptop', uuid(), 'Premium', 16.99, '2021-09-13', '2023-12-02', 45, 'M', 24);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('UK', 'Tablet', uuid(), 'Standard', 12.99, '2023-03-03', '2023-12-05', 33, 'F', 18);

INSERT INTO netflix_analytics.subscriptions (country, device, user_id, subscription_type, monthly_revenue, join_date, last_payment_date, age, gender, plan_duration) VALUES ('USA', 'Smart TV', uuid(), 'Basic', 8.99, '2023-04-09', '2023-11-26', 22, 'M', 6);
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