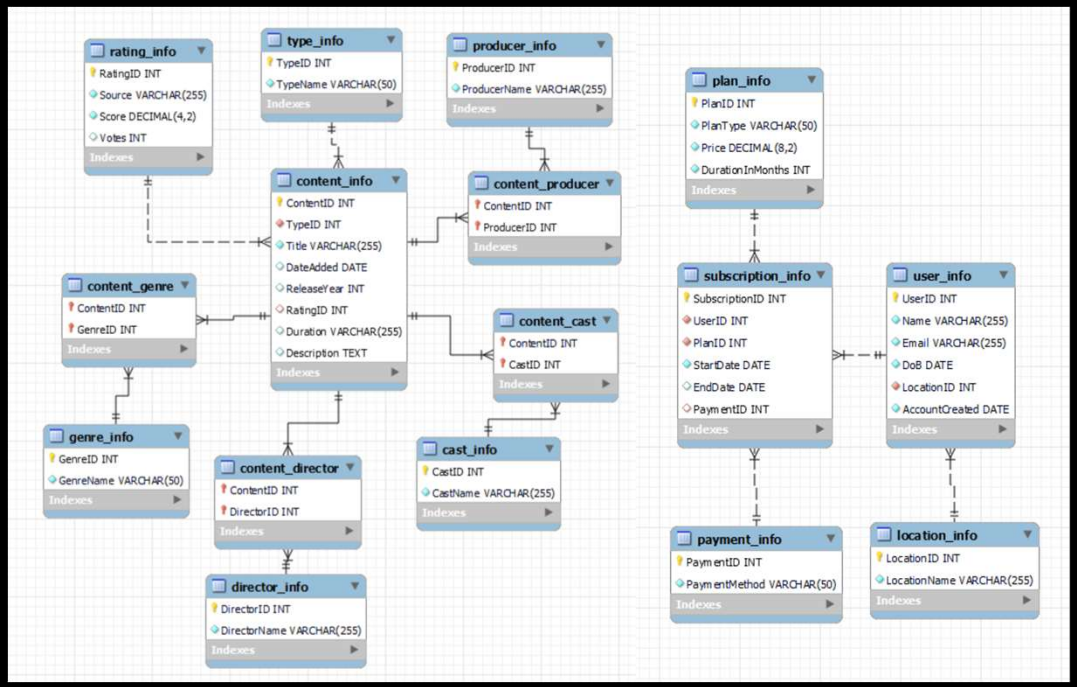
NETFLIX

Team14

Agenda

- ER Model and Implementation
- Business Application
- ETL Design
- Potential Opportunities

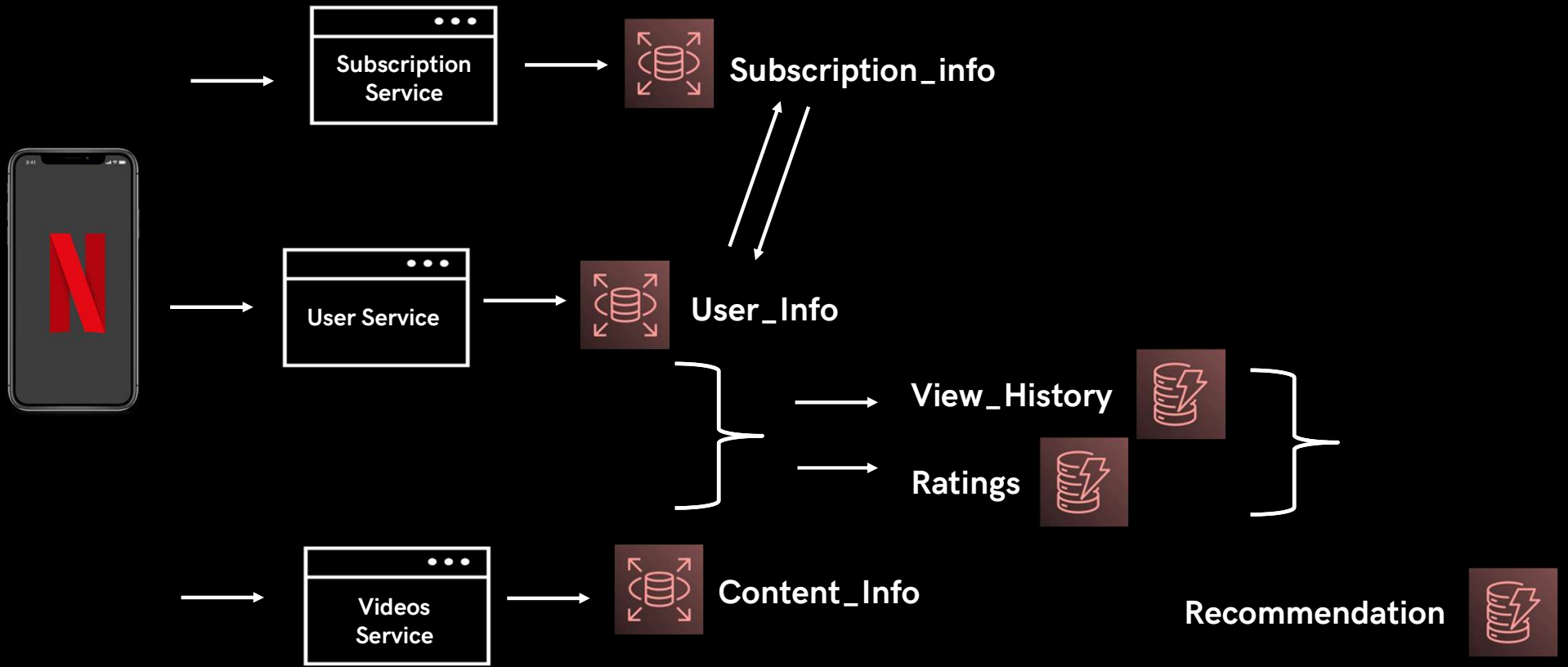
ER Model



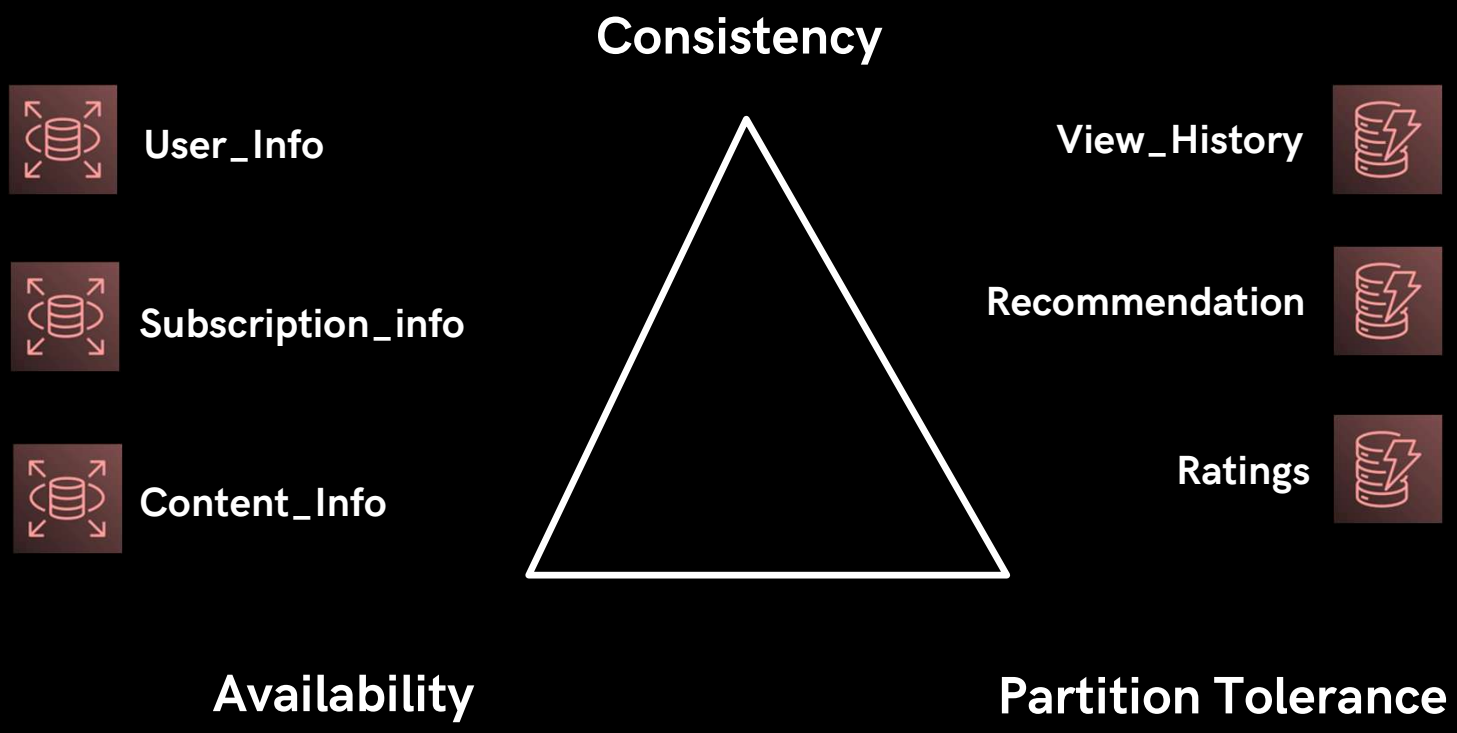
NETFLIX

- one of the world's leading entertainment services
- 283 million paid memberships
- over 190 countries
- 18,000 + titles

Backend Database System Workflow



CAP Theorem


Consistency
User_Info
Subscription_info
Content_Info
View_History
Recommendation
Ratings
Availability
Partition Tolerance

Business Application

Recommendation System

For Watch Parties

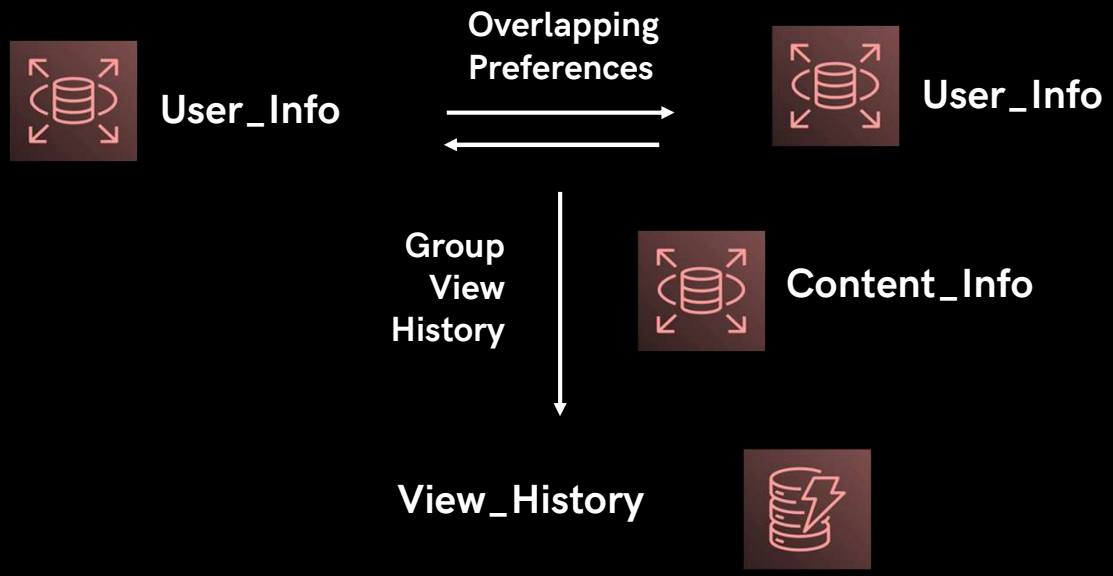
+ +
Data Utilization
User Engagement
Retention +

Recommending content that

aligns with the shared interests of two or more users.

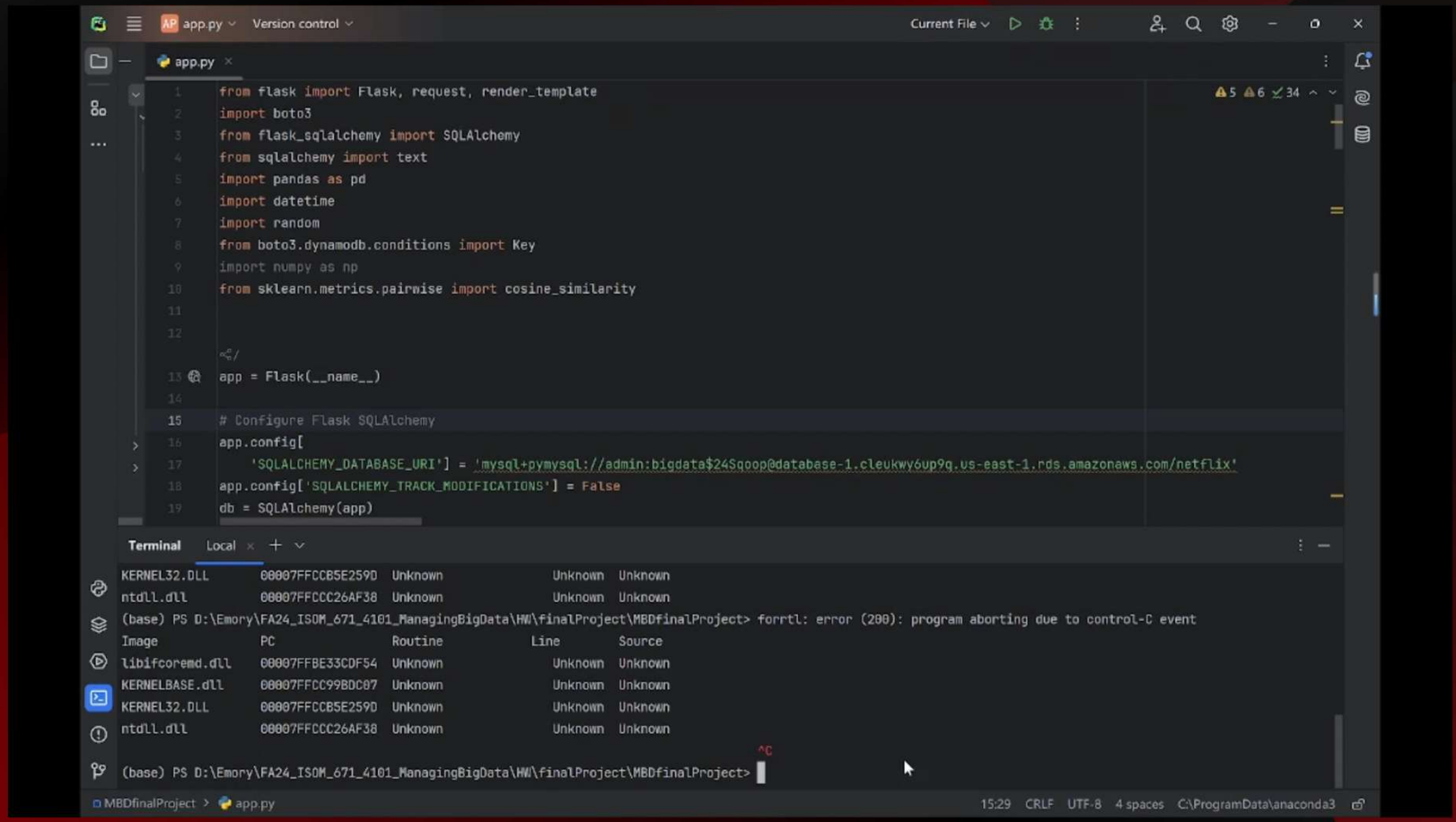
- Users also can manually influence recommendations by specifying their current interests.
- Quickly find something they both enjoy without endless scrolling.

Database Involved & Information Gathered



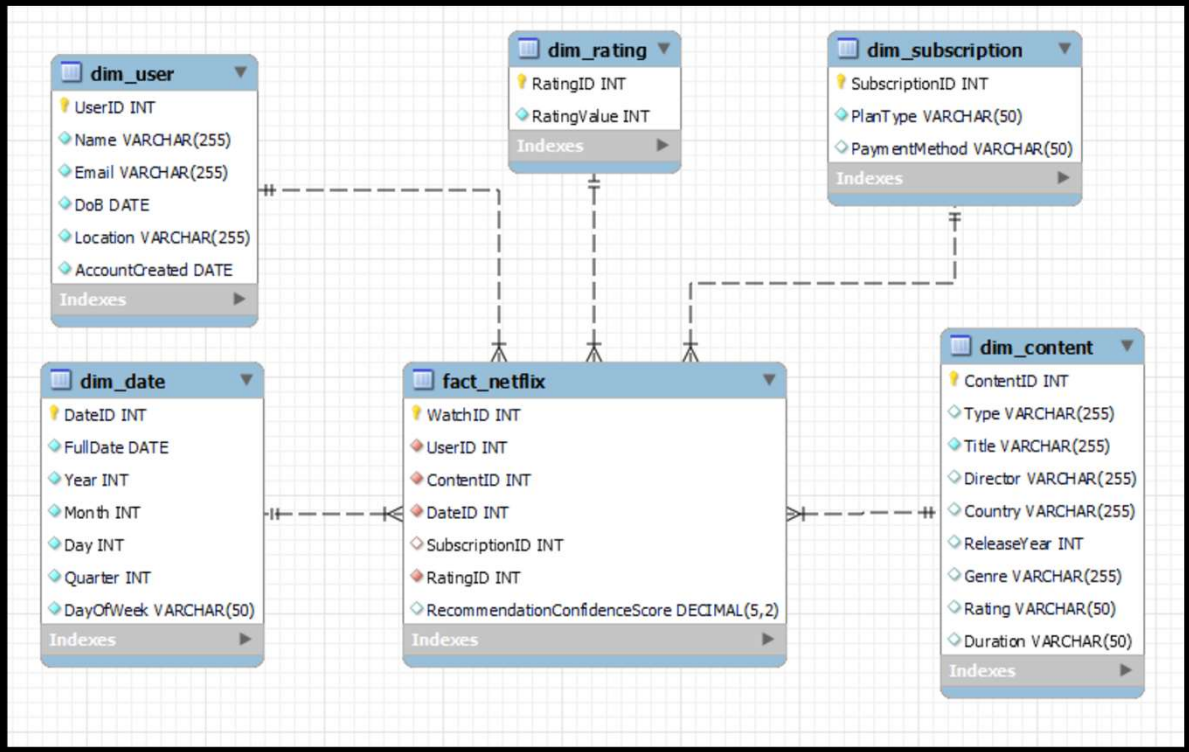
Recommendation System

Take input from two sides and then recommend a movie based on the similarity score



Star Schema

Star Schema

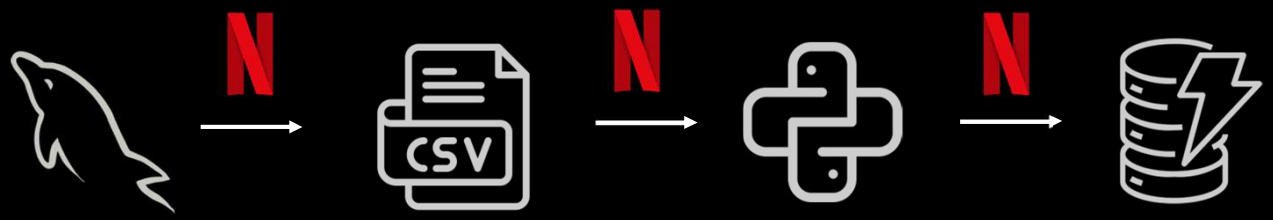


1 Fact Table + 5 Dimension Tables

- Each row in the fact table represents a single interaction between a user and a piece of content at a specific point in time
- Find the recommendations for a specific user

Business Insights

- Watch Party Dynamics
- Recommendation System Effectiveness
- User Preferences and Behavior



PartiQL editor

Operations performed using the PartiQL editor might incur charges. Learn more

Tables (2)

Find tables

1

- Ratings
- ViewHistory
  - UserID — Partition key
  - ViewID — Sort key

Query 1

```
SELECT *
FROM "ViewHistory"
WHERE "UserID" = 1552
ORDER BY "ViewID" DESC;
```

Run | Clear

Table view | JSON view

Completed

Started on 2024/12/5 21:01:10

Elapsed time 59ms

Completed

Started on 2024/12/5 21:01:10

Elapsed time 59ms

Items returned (10)

Download results to CSV

Find items

1

Timestamp	UserID	WatchDuration	ContentID	ViewID
2024-12-05T19:27:55.520535	1552	65	1454	-1909237360623872179
2024-12-05T19:27:52.864301	1552	94	971	-6601929556289297046
2024-12-05T19:19:18.748185	1552	49	1244	-6725098846415252495
2024-12-05T19:19:15.080490	1552	6	971	2201929323602511908
2024-12-05T18:42:13.049721	1552	61	971	-117278735021957530
2024-12-05T17:38:15.884396	1552	50	9	-7107499744067817484
2024-12-05T17:37:18.047571	1552	83	971	-6194414030302661343

Challenge & Innovation

No Mutual Interest

- System would randomly list five options for them.
- the system could propose popular content that falls outside of their preferences

Preference weighting system

- Users assign different weights by their preferences to the titles.
- Prioritizes features or aspects of the idea that bring the most value result.

Adaptive group profile

- Users assign different weights by their preferences to the titles.
- Prioritizes features or aspects of the idea that bring the most value result.

Thank you!