



HOME



TABLE OF CONTENTS



PLAYLIST

01

*Explanation of  
the DB and  
Use Case*

02

*Demo on  
how to setup  
the DB*

03

*Description of  
Data  
Requirements*

04

*Demo of data  
querying*



THANKS!



# Song Database Presentation

DIZO, MONTEMAYOR, OCAMPO, SHU TOO, YUMOL



**CSCI 112-B**

Dizo, Montemayor,  
Ocampo, Shu Too, Yumol



2:54

3:49



01

# Brief Explanation of the Database and Use Case



**CSCI 112-B**

Dizo, Montemayor,  
Ocampo, Shu Too, Yumol

2:54



3:49



# About our Database

Song database for an online streaming service

- Streams filtered according to song, user, date
- General artist, album, song information
- Songs filtered according to producers and genres



**CSCI 112-B**

Dizo, Montemayor,  
Ocampo, Shu Too, Yumol

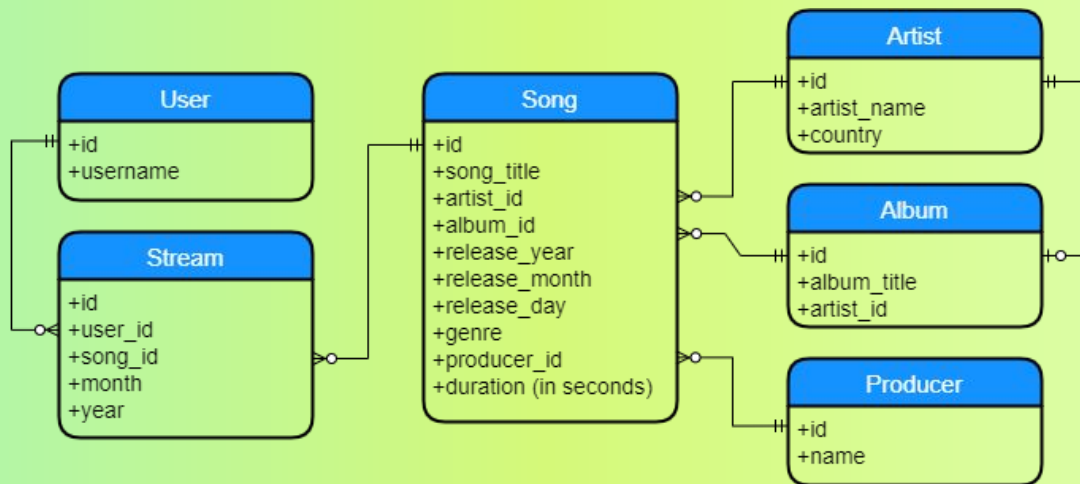
2:54



3:49



# Entity Relationship Diagram



CSCI 112-B

Dizo, Montemayor,  
Ocampo, Shu Too, Yumol

2:54



3:49



# Table Schema, Access Patterns, and Target Audience



**CSCI 112-B**

Dizo, Montemayor,  
Ocampo, Shu Too, Yumol

2:54



3:49



## Table Schema, Access Patterns, and Target Audience

### ACCESS PATTERNS SHEETS



**CSCI 112-B**

Dizo, Montemayor,  
Ocampo, Shu Too, Yumol

2:54



3:49



# Table Schema, Access Patterns, and Target Audience

## Access Pattern 1

- Base table

### Access Patterns & Target Audience

#### USERS

Search for a song and display all pertinent information regarding it.

#### ARTISTS

View how many times their song has been streamed on the platform (in all time or during a specific time period).



**CSCI 112-B**

Dizo, Montemayor,  
Ocampo, Shu Too, Yumol

2:54



3:49



# Table Schema, Access Patterns, and Target Audience

## Access Pattern 2

- LSI
  - Concatenated stream attributes as a compound SK

### Access Patterns & Target Audience

#### USERS

View how many times they have streamed a specific song (in all time or during a specific time period).



**CSCI 112-B**

Dizo, Montemayor,  
Ocampo, Shu Too, Yumol

2:54



3:49





# Table Schema, Access Patterns, and Target Audience

## Access Pattern 3

- GSI
  - Modified inverted index

### Access Patterns & Target Audience

#### DEVELOPERS

Gauge the activity of the streaming service on a specific time period.

Access all songs, albums, artists, producers, and genres in the database.



**CSCI 112-B**

Dizo, Montemayor,  
Ocampo, Shu Too, Yumol

2:54



3:49



# Table Schema, Access Patterns, and Target Audience

## Access Pattern 4

- GSI
  - Artist as a PK
  - Song, album as a SK

### Access Patterns & Target Audience

#### USERS

Search for a particular artist and display their songs, albums, and other pertinent details.



**CSCI 112-B**

Dizo, Montemayor,  
Ocampo, Shu Too, Yumol

2:54



3:49



# Table Schema, Access Patterns, and Target Audience

## Access Pattern 5

- GSI
  - Concatenated artist name and album name as a compound PK
  - Song title as a SK

### Access Patterns & Target Audience

#### USERS

Look for an artist and album, and reveal all the songs in the said album.



**CSCI 112-B**

Dizo, Montemayor,  
Ocampo, Shu Too, Yumol

2:54



3:49



# Table Schema, Access Patterns, and Target Audience

## Access Pattern 6

- GSI
  - Producer name as PK
  - Concatenated song release year and song ID as a compound SK

### Access Patterns & Target Audience

#### MUSIC INDUSTRY

Identify active producers in the industry by determining their activity (in all time or during a specific time period).



**CSCI 112-B**

Dizo, Montemayor,  
Ocampo, Shu Too, Yumol

2:54



3:49



# Table Schema, Access Patterns, and Target Audience

## Access Pattern 7

- GSI
  - Song genre as PK
  - Concatenated artist name and song name as a compound SK

### Access Patterns & Target Audience

#### **MUSIC INDUSTRY**

Identify music production trends through the number of songs produced per genre.



**CSCI 112-B**

Dizo, Montemayor,  
Ocampo, Shu Too, Yumol

2:54



3:49



02

# Demo on How to Setup the Database



**CSCI 112-B**

Dizo, Montemayor,  
Ocampo, Shu Too, Yumol

2:54



3:49



# Demo on How to Setup the Database

Please run the codes in this order:

- createtable
- tableops
- queryops
- populatetable
  - Upload the CSV files
- samplequeries



**CSCI 112-B**

Dizo, Montemayor,  
Ocampo, Shu Too, Yumol

2:54



3:49



03

# Description of Data Requirements



**CSCI 112-B**

Dizo, Montemayor,  
Ocampo, Shu Too, Yumol

2:54



3:49





### I. ARTIST ENTITY

|             |   |         |   |
|-------------|---|---------|---|
| Artist ID   | S | Country | S |
| Artist Name | S |         |   |

### II. PRODUCER ENTITY

|             |   |               |   |
|-------------|---|---------------|---|
| Producer ID | S | Producer Name | S |
|-------------|---|---------------|---|

### III. ALBUM ENTITY

|            |   |                 |   |
|------------|---|-----------------|---|
| Album ID   | S | Artist Name (I) | S |
| Album Name | S |                 |   |



## CSCI 112-B

Dizo, Montemayor,  
Ocampo, Shu Too, Yumol

2:54



3:49



#### IV. SONG ENTITY

|                    |   |                           |   |
|--------------------|---|---------------------------|---|
| Song ID            | S | Album Name (III)          | S |
| Song Name          | S | Release Year, Month, Day* | S |
| Artist Name (I)    | S | Genre                     | S |
| Producer Name (II) | S | Duration                  | N |



### CSCI 112-B

Dizo, Montemayor,  
Ocampo, Shu Too, Yumol

2:54



3:49



#### V. USER ENTITY

|         |   |          |   |
|---------|---|----------|---|
| User ID | S | Username | S |
|---------|---|----------|---|

#### VI. STREAM ENTITY

|                     |   |              |   |
|---------------------|---|--------------|---|
| Stream ID           | S | Song ID (IV) | S |
| Stream Year, Month* | S | Username (V) | S |
| Song (IV)           | S |              |   |

- Some values were originally obtained as numbers but have been concatenated to become strings.



**CSCI 112-B**

Dizo, Montemayor,  
Ocampo, Shu Too, Yumol

2:54



3:49



04

# Demo of Data Querying



**CSCI 112-B**

Dizo, Montemayor,  
Ocampo, Shu Too, Yumol

2:54



3:49