# CREATING TABLES

### MUSICIAN

CREATE T6ABLE MUSICIAN (SSN INT, NAME VARCHAR(30), ADDRESS VARCHAR(50), PHONE\_NO BIGINT, PRIMARY KEY (SSN));

### ALBUM

CREATE TABLE ALBUM(AID INT, TITLE VARCHAR(30), FORMAT VARCHAR(15), COPYRIGHT VARCHAR(30), SSN INT, PRIMARY KEY (AID), FOREIGN KEY (SSN) REFERENCES MUSICIAN(SSN));

### SONG

CREATE TABLE SONG(SID INT, TITLE VARCHAR(30), AUTHOR VARCHAR(30), AID INT, PRIMARY KEY(SID), FOREIGN KEY(AID) REFERENCES ALBUM(AID));

### INSTRUMENT

CREATE TABLE INSTRUMENT(UID INT, NAME VARCHAR(30), MUSICAL\_KEY VARCHAR(10), PRIMARY KEY (UID));

### MUS\_INS

CREATE TABLE MUS\_INS(SSN INT, UID INT, PRIMARY KEY(SSN, UID), FOREIGN KEY(SSN) REFERENCES MUSICIAN(SSN), FOREIGN KEY (UID) REFERENCES INSTRUMENT(UID));

### MUS\_SONG

CREATE TABLE MUS\_SONG(SSN INT, SID INT, PRIMARY KEY(SSN, SID), FOREIGN KEY(SSN) REFERENCES MUSICIAN(SSN), FOREIGN KEY (SID) REFERENCES SONG(SID));

# INSERTING VALUES INTO MUSICIAN TABLE

INSERT INTO MUSICIAN(SSN, NAME, ADDRESS, PHONE\_NO)VALUES(1301,’Peter’, ‘LA

California’, 9854623214);

INSERT INTO MUSICIAN(SSN, NAME, ADDRESS, PHONE\_NO)VALUES(1302, ‘Susan’,

‘Chicago Illinois’, 7895412450);

INSERT INTO MUSICIAN(SSN, NAME, ADDRESS, PHONE\_NO)VALUES(1303, ‘Edmund’,

‘Honolulu Hawaii’, 789654120);

INSERT INTO MUSICIAN(SSN, NAME, ADDRESS, PHONE\_NO)VALUES(1304, ‘Lucy’, ‘Fort

Worth Texas’, 8745693210);

INSERT INTO MUSICIAN(SSN, NAME, ADDRESS, PHONE\_NO)VALUES(1305, ‘Eustuce’,

‘Phoenix Arizona’, 7895412450);

INSERT INTO MUSICIAN(SSN, NAME, ADDRESS, PHONE\_NO)VALUES(1306, ‘Tamnus’,

‘Atlanta Georgia’, 9856412370);

INSERT INTO MUSICIAN(SSN, NAME, ADDRESS, PHONE\_NO)VALUES(1307, ‘William’,

‘Charlotte North Carolin’, 7865412390);

INSERT INTO MUSICIAN(SSN, NAME, ADDRESS, PHONE\_NO)VALUES(1308, ‘Anna’,

‘Denver Colorado’, 9856321470);

INSERT INTO MUSICIAN(SSN, NAME, ADDRESS, PHONE\_NO) VALUES (1309, ‘Tilda’,

‘Seattle Washington’, 8745912390);

INSERT INTO MUSICIAN(SSN, NAME, ADDRESS, PHONE\_NO)VALUES(1310, ‘Skander’,

‘Boston Massachusetts’, 8745693210);

# INSERTING INTO INSTRUMENT TABLE

INSERT INTO INSTRUMENT(UID, NAME, MUSICAL\_KEY)VALUES(901, “Piano”,”D#”); INSERT INTO INSTRUMENT(UID, NAME, MUSICAL\_KEY)VALUES(902, “Drums”,”C

Dominant”);

INSERT INTO INSTRUMENT(UID, NAME, MUSICAL\_KEY)VALUES(903, “Guitar”,”G”); INSERT INTO INSTRUMENT(UID, NAME, MUSICAL\_KEY)VALUES(904, “Trumpet”,”B

flat”);

INSERT INTO INSTRUMENT(UID, NAME, MUSICAL\_KEY)VALUES(905, “Flute”,”Long F”); INSERT INTO INSTRUMENT(UID, NAME, MUSICAL\_KEY)VALUES(906, “Saxophone”,”C

pitch”);

INSERT INTO INSTRUMENT(UID, NAME, MUSICAL\_KEY)VALUES(907, “Organ”,”C”); INSERT INTO INSTRUMENT(UID, NAME, MUSICAL\_KEY)VALUES(908, “Violin”,”F

Sharp”);

INSERT INTO INSTRUMENT(UID, NAME, MUSICAL\_KEY)VALUES(909,

“Harmonium”,”G”);

INSERT INTO INSTRUMENT(UID, NAME, MUSICAL\_KEY)VALUES(910, “Cello”,”A3”);

# INSERTING DATA INTO ALBUM TABLE

**CONDITIONS**

**1. should not contain all musician ssn , atleast one must not be included : query2**

INSERT INTO ALBUM(AID, TITLE, FORMAT, COPYRIGHT,

SSN)VALUES(101,Justice,Compact cassette,2019-01-15,1301);

INSERT INTO ALBUM(AID, TITLE, FORMAT, COPYRIGHT, SSN)VALUES(102,Taylor’s

Version,Compact disc,2020-05-25,1302);

INSERT INTO ALBUM(AID, TITLE, FORMAT, COPYRIGHT, SSN)VALUES(103,Rare,8-track tape,2021-04-18,1303);

INSERT INTO ALBUM(AID, TITLE, FORMAT, COPYRIGHT,

SSN)VALUES(104,Positions,Vinyl records,2022-02-27,1304);

INSERT INTO ALBUM(AID, TITLE, FORMAT, COPYRIGHT, SSN)VALUES(105,Diamonds

and Dancefloors,MP3,2018-09-30,1305);

# INSERTING DATA INTO SONG TABLE

INSERT INTO SONG(SID, TITLE, AUTHOR, AID)VALUES(1901,”Hold On”,”Peter”,101); INSERT INTO SONG(SID, TITLE, AUTHOR, AID)VALUES(1902,”Somebody”,”Susan”,101); INSERT INTO SONG(SID, TITLE, AUTHOR, AID)VALUES(1903,”Fearless”,”Lucy”,102); INSERT INTO SONG(SID, TITLE, AUTHOR, AID)VALUES(1904,”Fifteen”,”Edmund”,102); INSERT INTO SONG(SID, TITLE, AUTHOR, AID)VALUES(1905,”Ring”,”William”,103); INSERT INTO SONG(SID, TITLE, AUTHOR, AID)VALUES(1906,”Dance Again”,”Anna”,103); INSERT INTO SONG(SID, TITLE, AUTHOR, AID)VALUES(1907,”Motive”,”Skander”,104); INSERT INTO SONG(SID, TITLE, AUTHOR, AID)VALUES(1908,”West Side”,”Gergie”,104); INSERT INTO SONG(SID, TITLE, AUTHOR, AID)VALUES(1909,”Diamonds”,”Ben”,105); INSERT INTO SONG(SID, TITLE, AUTHOR, AID)VALUES(1910,”Dance”,”Daniel”,105); INSERT INTO SONG(SID, TITLE, AUTHOR, AID)VALUES(1911,”Day”,”Ronald”,105);

# INSERTING DATA INTO MUS\_INS TABLE

**CONDITIONS**

**1. Atleast one MUSICIAN must play all the instruments**

INSERT INTO MUS\_INS(SSN, UID)VALUES(1305,901); INSERT INTO MUS\_INS(SSN, UID)VALUES(1305,902); INSERT INTO MUS\_INS(SSN, UID)VALUES(1305,903); INSERT INTO MUS\_INS(SSN, UID)VALUES(1305,904);

INSERT INTO MUS\_INS(SSN, UID)VALUES(1305,905); INSERT INTO MUS\_INS(SSN, UID)VALUES(1305,906);

INSERT INTO MUS\_INS(SSN, UID)VALUES(1305,907); INSERT INTO MUS\_INS(SSN, UID)VALUES(1305,908); INSERT INTO MUS\_INS(SSN, UID)VALUES(1305,909); INSERT INTO MUS\_INS(SSN, UID)VALUES(1305,910);

# INSERTING DATA INTO MUS\_SONG TABLE

**Conditions**

1. atleast 1 song must have more than 3 musicians INSERT INTO MUS\_SONG(SSN, SID)VALUES(1301,1905); INSERT INTO MUS\_SONG(SSN, SID)VALUES(1302, 1905); INSERT INTO MUS\_SONG(SSN, SID)VALUES(1303, 1905); INSERT INTO MUS\_SONG(SSN, SID)VALUES(1304, 1905);

# QUERIES

## List musician name, title of the song which he has played, the album in which song has occurred.

Select M.NAME as Musician\_Name, S.TITLE as Song\_Title,

A.TITLE as Album\_Title

from MUSICIAN M, SONG S, ALBUM A where M.SSN = A.SSN and A.AID=S.AID;

## Retrieve the name of Musician who have not produced any Album

Select M.NAME as MUSICIAN\_NAME

from MUSICIAN M where M.SSN

not in

(Select M.SSN from MUSICIAN M, ALBUM A where M.SSN=A.SSN);

## List the details of songs which are performed by more than 3 musicians.

SELECT S.\* , COUNT(MS.SID) AS TOTAL\_MUSICIANS FROM SONG S, MUS\_SONG MS

WHERE S.SID=MS.SID GROUP BY(MS.SID) HAVING COUNT(MS.SID)>3;

## List the different instruments played by the musicians and the average number of musicians who play the instrument.

SELECT I.NAME,

COUNT(MI.UID),

COUNT(MI.UID)/(SELECT COUNT(\*) FROM MUSICIAN) FROM INSTRUMENT I, MUS\_INS MI

WHERE I.UID = MI.UID GROUP BY MI.UID HAVING COUNT(MI.UID);

PRACTICE QUERIES

SELECT I.NAME AS INTRUMENT\_NAME FROM INSTRUMENT I; SELECT M.NAME AS MUSICIAN\_NAME FROM MUSICIAN M; SELECT I.NAME AS INSTRUMENT\_NAME,

M.NAME AS MUSICIAN\_NAME

FROM INSTRUMENT I, MUSICIAN M, MUS\_INS MI WHERE I.UID=MI.UID AND M.SSN = MI.SSN;

SELECT S.\* , COUNT(MS.SID) AS TOTAL\_MUSICIANS FROM SONG S, MUS\_SONG MS

WHERE S.SID=MS.SID GROUP BY(MS.SID) ;

SELECT M.NAME AS MUSICIAN\_NAME, COUNT(MI.SSN) AS TOTAL\_INSTRUMENTS FROM MUSICIAN M, MUS\_INS MI

WHERE M.SSN=MI.SSN GROUP BY(MI.SSN);

## Retrieve album title produced by the producer who plays guitar as well as flute and has produced no of songs greater than the average songs produced by all producers.

1. List the details of musicians who can play all the instruments present.

SELECT M.\* , COUNT(MI.SSN)

FROM MUSICIAN M, MUS\_INS MI WHERE M.SSN=MI.SSN

GROUP BY(MI.SSN)

HAVING COUNT(MI.SSN) = (SELECT COUNT(\*) FROM INSTRUMENT);