```
SQL> @C:/Users/siddh/Downloads/Music.sql
SQL>
SQL> DROP TABLE SUNGBY;

Table dropped.

SQL> DROP TABLE ARTIST;

Table dropped.

SQL> DROP TABLE SONG;

Table dropped.

SQL> DROP TABLE ALBUM;

Table dropped.

SQL> DROP TABLE STUDIO;

Table dropped.

SQL> DROP TABLE MUSICIAN;

Table dropped.

SQL>
SQL> REM ****** Musician Database
SQL>
SQL> CREATE TABLE MUSICIAN(
  2        MUSICIAN_ID NUMBER(5),
  3        MUSICIAN_NAME VARCHAR2(20),
  4        BIRTHPLACE VARCHAR2(20),
  5        CONSTRAINT music_pk PRIMARY KEY (MUSICIAN_ID)
  6  );

Table created.

SQL>
SQL> REM ****** Studio Database
SQL>
SQL> CREATE TABLE STUDIO(
  2        STUDIO_NAME VARCHAR2(20) CONSTRAINT studio_pk PRIMARY KEY,
  3        STUDIO_ADDRESS VARCHAR2(20),
  4        STUDIO_PHONE NUMBER(10)
  5  );

Table created.

SQL>
SQL> REM ****** Album Database
SQL> CREATE TABLE ALBUM(
  2        ALBUM_ID NUMBER(5) CONSTRAINT album_pk PRIMARY KEY,
  3        ALBUM_NAME VARCHAR2(20),
  4        YEAR_RELEASE NUMBER(4) CONSTRAINT check_year
           CHECK(YEAR_RELEASE>1945),
  5        NO_TRACKS NUMBER(3) CONSTRAINT album_track_null NOT NULL,
  6        STUDIO VARCHAR2(20) CONSTRAINT album_studio_fk REFERENCES
           STUDIO(STUDIO_NAME),
  7        GENRE VARCHAR2(3) CONSTRAINT check_genre  CHECK(genre in
           ('CAR','DIV','MOV','POP')),
  8        MUSICIAN NUMBER(5) CONSTRAINT album_musician_fk REFERENCES
           MUSICIAN(MUSICIAN_ID)
  9  );

Table created.

SQL>
SQL> REM ******* Song Database
SQL>
SQL> CREATE TABLE SONG(
  2        TRACK_NO NUMBER(3),
  3        ALBUM_ID NUMBER(5) CONSTRAINT song_fk REFERENCES
           ALBUM(ALBUM_ID),
  4        SONG_NAME VARCHAR2(20),
  5        SONG_LENGTH NUMBER(3),
  6        SONG_GENRE VARCHAR2(3) CONSTRAINT check_song CHECK(SONG_GENRE
           IN('REL','PHI','LOV','DEV','PAT')),
  7        CONSTRAINT song_pk PRIMARY KEY(ALBUM_ID,TRACK_NO),
  8        CONSTRAINT check_length CHECK(SONG_GENRE!='PAT' OR
           SONG_LENGTH>7)
  9  );

Table created.

SQL> REM ****** Artist Database
SQL>
SQL> CREATE TABLE ARTIST(
  2        ARTIST_ID NUMBER(5) CONSTRAINT artist_pk PRIMARY KEY,
  3        ARTIST_NAME VARCHAR2(20)
  4  );

Table created.
SQL> REM ****** SungBy Database
SQL> CREATE TABLE SUNGBY(
  2        ALBUM_ID NUMBER(5),
  3        ARTIST_ID NUMBER(5),
  4        TRACK_NO NUMBER(3),
  5        RECORDING_DATE DATE,
  6        CONSTRAINT sungby_pk PRIMARY
           KEY(ALBUM_ID,ARTIST_ID,TRACK_NO),
  7        CONSTRAINT sungby_fk FOREIGN KEY(ALBUM_ID,TRACK_NO)
           REFERENCES SONG(ALBUM_ID,TRACK_NO),
  8        CONSTRAINT sungby_fk1 FOREIGN KEY(ARTIST_ID) REFERENCES
           ARTIST(ARTIST_ID)
  9  );

Table created.
```

```
SQL>

SQL> REM ****** Populating Musician Database
SQL>
SQL> INSERT INTO MUSICIAN VALUES( 1,'SPB','CHENNAI');

1 row created.

SQL> INSERT INTO MUSICIAN VALUES( 2,'MSV','MUMBAI');

1 row created.

SQL> INSERT INTO MUSICIAN VALUES( 3,'KJY','KERALA');

1 row created.

SQL>
SQL>
SQL> REM ****** Populating Studio Database
SQL>
SQL> INSERT INTO STUDIO VALUES( 'A','CHENNAI',1234567890);

1 row created.

SQL> INSERT INTO STUDIO VALUES( 'B','MUMBAI', 9876543210);

1 row created.

SQL> INSERT INTO STUDIO VALUES( 'C','KERALA', 2345678910);

1 row created.

SQL>
SQL> REM ****** Populating Album Database
SQL>
SQL> INSERT INTO ALBUM VALUES( 1,'INDIGO',2019,30,'A','POP',2);

1 row created.

SQL> INSERT INTO ALBUM VALUES( 2,'BOMBAY',1996,8,'B','DIV',3);

1 row created.

SQL> INSERT INTO ALBUM VALUES( 3,'BIGIL',2017,3,'C','MOV',1);

1 row created.

SQL>
SQL>
SQL> REM ****** Populating Song Database
SQL>
SQL> INSERT INTO SONG VALUES( 1,1,'UNDECIDED',123,'REL');

1 row created.

SQL> INSERT INTO SONG VALUES( 2,1,'RED',321,'LOV');
```

```
1 row created.

SQL> INSERT INTO SONG VALUES( 3,2,'ARABIAN SEA',23,'PAT');

1 row created.

SQL> INSERT INTO SONG VALUES( 3,2,'ARABIAN SEA',23,'PHI');
INSERT INTO SONG VALUES( 3,2,'ARABIAN SEA',23,'PHI')
*
ERROR at line 1:
ORA-00001: unique constraint (SYS.SONG_PK) violated


SQL> REM ****** Violating song length for 'PAT'
SQL> INSERT INTO SONG VALUES( 3,3,'BIGILEYYYY',5,'PAT');
INSERT INTO SONG VALUES( 3,3,'BIGILEYYYY',5,'PAT')
*
ERROR at line 1:
ORA-02290: check constraint (SYS.CHECK_LENGTH) violated


SQL>
SQL>
SQL> REM ****** Populating Artist Database
SQL>
SQL> INSERT INTO ARTIST VALUES( 1,'SHARVAN');

1 row created.

SQL> INSERT INTO ARTIST VALUES( 2,'SHASHU');

1 row created.

SQL> INSERT INTO ARTIST VALUES( 3,'SIDDHARTH');

1 row created.

SQL>
SQL> REM ****** Populating Sungby Database
SQL>
SQL> INSERT INTO SUNGBY VALUES( 1,2,1,'25-JUL-2019');

1 row created.

SQL> INSERT INTO SUNGBY VALUES( 1,2,2,'15-FEB-2018');

1 row created.

SQL> INSERT INTO SUNGBY VALUES( 2,1,3,'05-AUG-2017');

1 row created.

SQL> INSERT INTO SUNGBY VALUES( 2,3,3,'03-MAY-1996');

1 row created.

SQL>
SQL>
SQL> @C:/Users/siddh/Downloads/MusicAlter.sql
SQL> REM ******* 10)It is necessary to represent the gender of an
artist in the table.
SQL> DESC ARTIST;
 Name                          Null?    Type
 ----------------------------- -------- ---------------------------
 ARTIST_ID                     NOT NULL NUMBER(5)
 ARTIST_NAME                            VARCHAR2(20)

SQL>
SQL> ALTER TABLE ARTIST
  2  ADD GENDER VARCHAR2(6);

Table altered.

SQL>
SQL> DESC ARTIST;
 Name                          Null?    Type
 ----------------------------- -------- -----------------------------
 ARTIST_ID                     NOT NULL NUMBER(5)
 ARTIST_NAME                            VARCHAR2(20)
 GENDER                                 VARCHAR2(6)

SQL>
SQL> REM ****** 11)The first few words of the lyrics constitute the
song name.
SQL> REM ****** The song name do not accommodate some of the words (in
lyrics).
SQL> DESC SONG;
 Name                          Null?    Type
 ----------------------------- -------- -------------------------------
 TRACK_NO                      NOT NULL NUMBER(3)
 ALBUM_ID                      NOT NULL NUMBER(5)
 SONG_NAME                              VARCHAR2(20)
 SONG_LENGTH                            NUMBER(3)
 SONG_GENRE                             VARCHAR2(3)

SQL>
SQL> ALTER TABLE SONG
  2  MODIFY SONG_NAME VARCHAR2(50);

Table altered.

SQL>
SQL> DESC SONG;
 Name                          Null?    Type
 ----------------------------- -------- -------------------------------
 TRACK_NO                      NOT NULL NUMBER(3)
 ALBUM_ID                      NOT NULL NUMBER(5)
 SONG_NAME                              VARCHAR2(50)
 SONG_LENGTH                            NUMBER(3)
 SONG_GENRE                             VARCHAR2(3)

SQL>

SQL> REM ****** 12)The phone number of each studio should be different.
SQL> DESC STUDIO;
```

```
 Name                              Null?    Type
 --------------------------------- -------- ----------------------------
 STUDIO_NAME                       NOT NULL VARCHAR2(20)
 STUDIO_ADDRESS                             VARCHAR2(20)
 STUDIO_PHONE                               NUMBER(10)

SQL>
SQL> ALTER TABLE STUDIO
  2  ADD CONSTRAINT studio_uniq UNIQUE(STUDIO_PHONE);

Table altered.

SQL>
SQL> DESC STUDIO;
 Name                               Null?    Type
 ---------------------------------- -------- ---------------------------
 STUDIO_NAME                        NOT NULL VARCHAR2(20)
 STUDIO_ADDRESS                              VARCHAR2(20)
 STUDIO_PHONE                                NUMBER(10)

SQL>
SQL> REM ****** 13)An artist who sings a song for a particular track of
an album can not be recorded without the record_date.
SQL> DESC SUNGBY;
 Name                               Null?    Type
 ---------------------------------- -------- ---------------------------
 ALBUM_ID                           NOT NULL NUMBER(5)
 ARTIST_ID                          NOT NULL NUMBER(5)
 TRACK_NO                           NOT NULL NUMBER(3)
 RECORDING_DATE                              DATE

SQL>
SQL> ALTER TABLE SUNGBY
  2  MODIFY RECORDING_DATE DATE CONSTRAINT sungby_null NOT NULL;

Table altered.

SQL>
SQL> DESC SUNGBY;
 Name                                Null?    Type
 ----------------------------------- -------- --------------------------
 ALBUM_ID                            NOT NULL NUMBER(5)
 ARTIST_ID                           NOT NULL NUMBER(5)
 TRACK_NO                            NOT NULL NUMBER(3)
 RECORDING_DATE                      NOT NULL DATE

SQL>
SQL> REM ******14)It was decided to include the genre NAT for nature
songs.



SQL> DESC SONG;
 Name                                Null?    Type
 ----------------------------------- -------- --------------------------
 TRACK_NO                            NOT NULL NUMBER(3)
 ALBUM_ID                            NOT NULL NUMBER(5)
 SONG_NAME                                    VARCHAR2(50)
 SONG_LENGTH                                  NUMBER(3)
 SONG_GENRE                                   VARCHAR2(3)

SQL>
SQL> INSERT INTO SONG VALUES( 2,2,'BLUE',321,'NAT');
INSERT INTO SONG VALUES( 2,2,'BLUE',321,'NAT')
*
ERROR at line 1:
ORA-02290: check constraint (SYS.CHECK_SONG) violated


SQL>
SQL> ALTER TABLE SONG
  2  ADD CONSTRAINT genre_check CHECK(SONG_GENRE
IN('REL','PHI','LOV','DEV','PAT','NAT'));

Table altered.

SQL>
SQL> ALTER TABLE SONG
  2  DROP CONSTRAINT check_song;

Table altered.

SQL> INSERT INTO SONG VALUES( 2,2,'BLUE',321,'NAT');

1 row created.

SQL>
SQL> REM ****** 15)Due to typoerror,there may be a possibility of false
information. Hence while deleting the song information,
SQL> REM ****** make sure that all the corresponding information are
also deleted.
SQL> DESC SONG;
 Name                          Null?    Type
 ----------------------------- -------- -------------------------------
 TRACK_NO                      NOT NULL NUMBER(3)
 ALBUM_ID                      NOT NULL NUMBER(5)
 SONG_NAME                              VARCHAR2(50)
 SONG_LENGTH                            NUMBER(3)
 SONG_GENRE                             VARCHAR2(3)

SQL>
SQL> REM ****** Song Database
SQL> SELECT * FROM SONG;

  TRACK_NO   ALBUM_ID SONG_NAME           SONG_LENGTH SON
---------- ---------- ------------------- ----------- ---
         1          1 UNDECIDED                   123 REL
         2          1 RED                         321 LOV
         3          2 ARABIAN SEA                  23 PAT
         2          2 BLUE                        321 NAT

SQL>



SQL> REM ****** Sungby Database
SQL> SELECT * FROM SUNGBY;

  ALBUM_ID  ARTIST_ID   TRACK_NO RECORDING
---------- ---------- ---------- ---------
         1          2          1 25-JUL-19
         1          2          2 15-FEB-18
         2          1          3 05-AUG-17
         2          3          3 03-MAY-96

SQL>
SQL> DELETE FROM SONG
  2  WHERE SONG_NAME='UNDECIDED';
DELETE FROM SONG
*
ERROR at line 1:
ORA-02292: integrity constraint (SYS.SUNGBY_FK) violated - child record
found


SQL>
SQL> ALTER TABLE SUNGBY
  2  DROP CONSTRAINT sungby_fk;

Table altered.

SQL>
SQL> ALTER TABLE SUNGBY
  2  DROP CONSTRAINT sungby_fk1;

Table altered.

SQL>
SQL> ALTER TABLE SUNGBY
  2  ADD CONSTRAINT sungby_fk FOREIGN KEY(ALBUM_ID,TRACK_NO) REFERENCES
      SONG(ALBUM_ID,TRACK_NO)
  3  ON DELETE CASCADE;

Table altered.

SQL>
SQL> ALTER TABLE SUNGBY
  2  ADD CONSTRAINT sungby_fk1 FOREIGN KEY(ARTIST_ID) REFERENCES
  ARTIST(ARTIST_ID)
  3  ON DELETE CASCADE;

Table altered.

SQL>
SQL> REM ****** Deleting song information
SQL> DELETE FROM SONG
  2  WHERE SONG_NAME='UNDECIDED';

1 row deleted.

SQL>
SQL> REM ****** Song Database
SQL> SELECT * FROM SONG;
```

```
  TRACK_NO   ALBUM_ID SONG_NAME           SONG_LENGTH SON
---------- ---------- ------------------- ----------- ---
         2          1 RED                         321 LOV
         3          2 ARABIAN SEA                  23 PAT
         2          2 BLUE                        321 NAT

SQL>
SQL> REM ****** Sungby Database
SQL> SELECT * FROM SUNGBY;

  ALBUM_ID  ARTIST_ID   TRACK_NO RECORDING
---------- ---------- ---------- ---------
         1          2          2 15-FEB-18
         2          1          3 05-AUG-17
         2          3          3 03-MAY-96

SQL>
SQL>
SQL> spool off
```