```
-- MySQL dump 10.13  Distrib 5.6.22, for osx10.8 (x86_64)
--
-- Host: localhost    Database: FinalProject
-- ------------------------------------------------------
-- Server version        5.6.22

/*!40101 SET @OLD_CHARACTER_SET_CLIENT=@@CHARACTER_SET_CLIENT */;
/*!40101 SET @OLD_CHARACTER_SET_RESULTS=@@CHARACTER_SET_RESULTS */;
/*!40101 SET @OLD_COLLATION_CONNECTION=@@COLLATION_CONNECTION */;
/*!40101 SET NAMES utf8 */;
/*!40103 SET @OLD_TIME_ZONE=@@TIME_ZONE */;
/*!40103 SET TIME_ZONE='+00:00' */;
/*!40014 SET @OLD_UNIQUE_CHECKS=@@UNIQUE_CHECKS, UNIQUE_CHECKS=0 */;
/*!40014 SET @OLD_FOREIGN_KEY_CHECKS=@@FOREIGN_KEY_CHECKS,
FOREIGN_KEY_CHECKS=0 */;
/*!40101 SET @OLD_SQL_MODE=@@SQL_MODE,
SQL_MODE='NO_AUTO_VALUE_ON_ZERO' */;
/*!40111 SET @OLD_SQL_NOTES=@@SQL_NOTES, SQL_NOTES=0 */;

--
-- Table structure for table `artist`
--

DROP TABLE IF EXISTS `artist`;
/*!40101 SET @saved_cs_client     = @@character_set_client */;
/*!40101 SET character_set_client = utf8 */;
CREATE TABLE `artist` (
  `artist_id` varchar(32) NOT NULL,
  `artist_name` varchar(256) DEFAULT NULL,
  `hottness` float NOT NULL,
  `familiarity` float NOT NULL,
  PRIMARY KEY (`artist_id`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `artist`
--

# Removed insert statements for brevity

LOCK TABLES `artist` WRITE;
/*!40000 ALTER TABLE `artist` DISABLE KEYS */;
/*!40000 ALTER TABLE `artist` ENABLE KEYS */;
UNLOCK TABLES;

--
-- Table structure for table `artist_genres`
--
```

```
DROP TABLE IF EXISTS `artist_genres`;
/*!40101 SET @saved_cs_client     = @@character_set_client */;
/*!40101 SET character_set_client = utf8 */;
CREATE TABLE `artist_genres` (
  `artist_id` varchar(32) NOT NULL,
  `genre` varchar(256) NOT NULL DEFAULT '',
  PRIMARY KEY (`artist_id`,`genre`),
  CONSTRAINT `artist_genres_ibfk_1` FOREIGN KEY (`artist_id`)
REFERENCES `artist` (`artist_id`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `artist_genres`
--

# Removed insert statements for brevity

LOCK TABLES `artist_genres` WRITE;
/*!40000 ALTER TABLE `artist_genres` DISABLE KEYS */;
/*!40000 ALTER TABLE `artist_genres` ENABLE KEYS */;
UNLOCK TABLES;

--
-- Table structure for table `track`
--

DROP TABLE IF EXISTS `track`;
/*!40101 SET @saved_cs_client     = @@character_set_client */;
/*!40101 SET character_set_client = utf8 */;
CREATE TABLE `track` (
  `track_id` varchar(128) NOT NULL,
  `title` varchar(256) DEFAULT NULL,
  `artist_id` varchar(32) DEFAULT NULL,
  `artist_name` varchar(256) NOT NULL,
  `album` varchar(256) DEFAULT NULL,
  `duration` float NOT NULL,
  `year` int(11) NOT NULL,
  PRIMARY KEY (`track_id`),
  KEY `artist_id` (`artist_id`),
  CONSTRAINT `track_ibfk_1` FOREIGN KEY (`artist_id`) REFERENCES
`artist` (`artist_id`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `track`
--

# Removed insert statements for brevity
```

```
LOCK TABLES `track` WRITE;
/*!40000 ALTER TABLE `track` DISABLE KEYS */;
/*!40000 ALTER TABLE `track` ENABLE KEYS */;
UNLOCK TABLES;

--
-- Table structure for table `track_analysis`
--

DROP TABLE IF EXISTS `track_analysis`;
/*!40101 SET @saved_cs_client     = @@character_set_client */;
/*!40101 SET character_set_client = utf8 */;
CREATE TABLE `track_analysis` (
  `track_id` varchar(128) NOT NULL,
  `tempo` float NOT NULL,
  `tonality` int(11) NOT NULL,
  `danceability` float NOT NULL,
  `hottness` float NOT NULL,
  PRIMARY KEY (`track_id`),
  CONSTRAINT `track_analysis_ibfk_1` FOREIGN KEY (`track_id`)
REFERENCES `track` (`track_id`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `track_analysis`
--

# Removed insert statements for brevity

LOCK TABLES `track_analysis` WRITE;
/*!40000 ALTER TABLE `track_analysis` DISABLE KEYS */;
/*!40000 ALTER TABLE `track_analysis` ENABLE KEYS */;
UNLOCK TABLES;



# DDL Specification
CREATE TABLE artist (
    artist_id   VARCHAR(32) PRIMARY KEY,
        artist_name VARCHAR(64) NOT NULL,
            hottness    FLOAT(5)        NOT NULL,
                familiarity FLOAT(5)        NOT NULL
                );

CREATE TABLE artist_genres (
    artist_id   VARCHAR(32) NOT NULL,
        genre       VARCHAR(32) NOT NULL,
            FOREIGN KEY('artist_id') REFERENCES artist ('artist_id')
```

```
            );

CREATE TABLE track (
    track_id    VARCHAR(128)    PRIMARY KEY,
        title       VARCHAR(128)    NOT NULL,
            album       VARCHAR(128)    NOT NULL,
                artist_id   VARCHAR(32) NOT NULL,
                    duration    FLOAT(5)        NOT NULL,
                        year        INT         NOT NULL,
                            FOREIGN KEY(‘artist_id’) REFERENCES
artist(‘artist_id’)
                            );

CREATE TABLE track_analysis (
    track_id    VARCHAR(128)    PRIMARY KEY,
        tempo       FLOAT(2)        NOT NULL,
            tonality        INT         NOT NULL,
                danceability    FLOAT(2)        NOT NULL,
                    hottness    FLOAT(2)        NOT NULL,
                        FOREIGN KEY(‘track_id’) REFERENCES
tracks(‘track_id’)
                        );

CREATE TABLE cover_art (
    track_id    VARCHAR(128)    PRIMARY KEYa,
        pic_location    VARCHAR(256)    NULL,
            FOREIGN KEY(‘track_id’) REFERENCES tracks(‘track_id’)
            );

# Stored Procedures

#0 List songs by artist
DELIMITER //
CREATE PROCEDURE ArtistSong(IN artistin VARCHAR(256))
BEGIN
    SELECT *
        FROM track as t, artist as a
            WHERE t.artist_id = a.artist_id AND
a.artist_name=artistin;
            END //
            DELIMITER ;

            List of SQL statements:
#1 List all songs from a specific year.
            DELIMITER //
            CREATE PROCEDURE SongFromYear(IN yearin INT)
            BEGIN
                SELECT *
                    FROM track as t
                        WHERE t.year = yearin;
```

```
                        END //
                        DELIMITER ;

#2 songs from a specific decade
DELIMITER //
CREATE PROCEDURE SongFromDecade(IN decade INT)
BEGIN
    SELECT *
        FROM track as t
            WHERE t.year >= (decade-(decade%10)) AND t.year < (decade-
(decade%10)) + 10;
            END //
            DELIMITER ;

#3 List All Songs in a specific genre
DELIMITER //
CREATE PROCEDURE SongOfGenre(IN genrein VARCHAR(256))
BEGIN
    SELECT *
        FROM track as t, artist_genres as a
            WHERE t.artist_id=a.artist_id AND a.genre=genrein;
            END //
            DELIMITER ;

#4 50 most popular songs.
DELIMITER //
CREATE PROCEDURE SongTop50()
BEGIN
    SELECT *
        FROM track as t, track_analysis as a
            WHERE t.track_id = a.track_id
                ORDER BY a.hottness DESC LIMIT 50;
                END //
                DELIMITER ;

#5 List songs with a specific tempo
DELIMITER //
CREATE PROCEDURE SpecificTempo(IN tempoin FLOAT(2))
BEGIN
    SELECT *
        FROM track as t, track_analysis as a
            WHERE t.track_id=a.track_id AND a.tempo=tempoin;
            END //
            DELIMITER ;

#6 songs within a tempo range.
DELIMITER //
CREATE PROCEDURE SongWithinTempoRange(IN min FLOAT(2), IN max
FLOAT(2))
BEGIN
```

```
    SELECT *
        FROM track as t, track_analysis as a
            WHERE t.track_id = a.track_id AND a.tempo >= min AND
a.tempo <= max;
            END //
            DELIMITER ;

#7 List Songs close to a specific tempo (+/- 3 BPM)
DELIMITER //
CREATE PROCEDURE CloseToTempo(IN tempoin FLOAT(2))
BEGIN
    SELECT *
        FROM track as t, track_analysis as a
            WHERE t.track_id=a.track_id AND (a.tempo<=tempoin+3 AND
a.tempo>=tempoin-3);
            END //
            DELIMITER ;

#8 songs with a specific key.
DELIMITER //
CREATE PROCEDURE SongWithKey(IN keyin INT)
BEGIN
    SELECT *
        FROM track as t, track_analysis as a
            WHERE t.track_id = a.track_id AND a.tonality = keyin;
            END //
            DELIMITER ;

#9 Song in a close key (+/- 7 Mod 12)
DELIMITER //
CREATE PROCEDURE SongCloseToKey(IN keyin INT)
BEGIN
    SELECT *
        FROM track as t, track_analysis as a
            WHERE t.track_id = a.track_id AND (a.tonality=(keyin -
7)%12 OR a.tonality=(keyin + 7)%12);
            END //
            DELIMITER ;

#11 Fast Dance song
DELIMITER //
CREATE PROCEDURE FastDanceSong()
BEGIN
    SELECT *
        FROM track as t, track_analysis as a
            WHERE t.track_id=a.track_id AND a.tempo > 120 AND
a.danceability > .6;
            END //
            DELIMITER ;
```

```
#12 songs that are danceable from the 80’s and sort by year, then
popularity.
DELIMITER //
CREATE PROCEDURE SongDance80()
BEGIN
    SELECT *
        FROM track as t, track_analysis as a
            WHERE t.track_id = a.track_id AND t.year >= 1980 AND
t.year < 1990
                    AND a.danceability >= 0.5
                        ORDER BY t.year, a.hottness DESC;
                        END //
                        DELIMITER ;

#13 Electronic song between 128 and 140 BPM
DELIMITER //
CREATE PROCEDURE  ElectronicDance()
BEGIN
    SELECT *
        FROM track as t, track_analysis as a, artist_genres as g
            WHERE t.track_id=a.track_id AND a.tempo<=140 AND
a.tempo>128 AND
            g.artist_id=t.artist_id AND g.genre='electronic';
            END //
            DELIMITER ;

#14 all songs that are at least semi-danceable (>= .5 danceability)
and group by key and sort by danceability.
DELIMITER //
CREATE PROCEDURE SongSemiDance()
BEGIN
    SELECT *
        FROM track as t, track_analysis as a
            WHERE t.track_id = a.track_id AND a.danceability > 0.5
                GROUP BY a.tonality
                    ORDER BY a.danceability DESC;
                    END //
                    DELIMITER ;

#15 (close in tempo, similar key)
DELIMITER //
CREATE PROCEDURE MashupSong(IN tempoin FLOAT(2), IN keyin INT)
BEGIN
    SELECT *
        FROM track as t, track_analysis as a
            WHERE t.track_id=a.track_id AND (a.tonality=(keyin - 7)%12
OR a.tonality=(keyin + 7)%12) AND (a.tempo<=tempoin+3 AND
a.tempo>=tempoin-3);
            END //
            DELIMITER ;
```

```
/*!40103 SET TIME_ZONE=@OLD_TIME_ZONE */;

/*!40101 SET SQL_MODE=@OLD_SQL_MODE */;
/*!40014 SET FOREIGN_KEY_CHECKS=@OLD_FOREIGN_KEY_CHECKS */;
/*!40014 SET UNIQUE_CHECKS=@OLD_UNIQUE_CHECKS */;
/*!40101 SET CHARACTER_SET_CLIENT=@OLD_CHARACTER_SET_CLIENT */;
/*!40101 SET CHARACTER_SET_RESULTS=@OLD_CHARACTER_SET_RESULTS */;
/*!40101 SET COLLATION_CONNECTION=@OLD_COLLATION_CONNECTION */;
/*!40111 SET SQL_NOTES=@OLD_SQL_NOTES */;

-- Dump completed on 2014-12-18 14:14:41
```