

Creating Schema and Tables

```
CREATE SCHEMA `albumdb` ;
```

```
CREATE TABLE `albumdb`.`artist` (  
  `ArName` VARCHAR(45) NOT NULL,  
  `DateOfBirth` DATE NOT NULL,  
  `Role` VARCHAR(45) NOT NULL,  
  PRIMARY KEY (`ArName`));
```

```
CREATE TABLE `albumdb`.`featuredartist` (  
  `FAName` VARCHAR(45) NOT NULL,  
  `DateOfBirth` DATE NOT NULL,  
  `Role` VARCHAR(45) NOT NULL,  
  PRIMARY KEY (`FAName`));
```

```
CREATE TABLE `albumdb`.`song` (  
  `SName` VARCHAR(45) NOT NULL,  
  `ParentalAdvisory` TINYINT NOT NULL,  
  `ReleaseDate` DATE NOT NULL,  
  `NumberOfListens` INT NOT NULL,  
  PRIMARY KEY (`SName`));
```

```
CREATE TABLE `albumdb`.`album` (  
  `AName` VARCHAR(45) NOT NULL,  
  `DateOfRelease` DATE NOT NULL,  
  PRIMARY KEY (`AName`));
```

```
CREATE TABLE `albumdb`.`publisher` (  
  `PName` VARCHAR(45) NOT NULL,  
  `Address` VARCHAR(45) NOT NULL,  
  PRIMARY KEY (`PName`));
```

```
CREATE TABLE `albumdb`.`shasfa` (  
  `SName` VARCHAR(45) NOT NULL,  
  `FAName` VARCHAR(45) NOT NULL,  
  PRIMARY KEY (`SName`, `FAName`),  
  INDEX `FAName_idx` (`FAName` ASC) VISIBLE,  
  CONSTRAINT `SName`  
    FOREIGN KEY (`SName`)  
    REFERENCES `albumdb`.`song` (`SName`)  
    ON DELETE CASCADE  
    ON UPDATE CASCADE,  
  CONSTRAINT `FAName`
```

```
FOREIGN KEY (`FAName`)
REFERENCES `albumdb`.`featuredartist` (`FAName`)
ON DELETE CASCADE
ON UPDATE CASCADE);
```

```
CREATE TABLE `albumdb`.`allass` (
  `AName` VARCHAR(45) NOT NULL,
  `SName` VARCHAR(45) NOT NULL,
  PRIMARY KEY (`AName`, `SName`),
  INDEX `Sname1_idx` (`SName` ASC) VISIBLE,
  CONSTRAINT `AName`
    FOREIGN KEY (`AName`)
      REFERENCES `albumdb`.`album` (`AName`)
      ON DELETE CASCADE
      ON UPDATE CASCADE,
  CONSTRAINT `Sname1`
    FOREIGN KEY (`SName`)
      REFERENCES `albumdb`.`song` (`SName`)
      ON DELETE CASCADE
      ON UPDATE CASCADE);
```

```
CREATE TABLE `albumdb`.`arthasal` (
  `AName` VARCHAR(45) NOT NULL,
  `ArName` VARCHAR(45) NOT NULL,
  PRIMARY KEY (`AName`, `ArName`),
  INDEX `ArName_idx` (`ArName` ASC) VISIBLE,
  CONSTRAINT `AName1`
    FOREIGN KEY (`AName`)
      REFERENCES `albumdb`.`album` (`AName`)
      ON DELETE CASCADE
      ON UPDATE CASCADE,
  CONSTRAINT `ArName`
    FOREIGN KEY (`ArName`)
      REFERENCES `albumdb`.`artist` (`ArName`)
      ON DELETE CASCADE
      ON UPDATE CASCADE);
```

```
CREATE TABLE `albumdb`.`publishes` (
  `PName` VARCHAR(45) NOT NULL,
  `AName` VARCHAR(45) NOT NULL,
  PRIMARY KEY (`PName`, `AName`),
  INDEX `AName2_idx` (`AName` ASC) VISIBLE,
  CONSTRAINT `PName`
    FOREIGN KEY (`PName`)
```

```
REFERENCES `albumdb`.`publisher` (`PName`)
ON DELETE CASCADE
ON UPDATE CASCADE,
CONSTRAINT `AName2`
FOREIGN KEY (`AName`)
REFERENCES `albumdb`.`album` (`AName`)
ON DELETE CASCADE
ON UPDATE CASCADE);
```

```
CREATE TABLE `albumdb`.`genre` (
  `AName` VARCHAR(45) NOT NULL,
  `Genre` VARCHAR(45) NOT NULL,
  PRIMARY KEY (`AName`, `Genre`),
  CONSTRAINT `AName3`
  FOREIGN KEY (`AName`)
  REFERENCES `albumdb`.`album` (`AName`)
  ON DELETE CASCADE
  ON UPDATE CASCADE);
```

```
CREATE TABLE `albumdb`.`language` (
  `AName` VARCHAR(45) NOT NULL,
  `Language` VARCHAR(45) NOT NULL,
  PRIMARY KEY (`AName`, `Language`),
  CONSTRAINT `AName4`
  FOREIGN KEY (`AName`)
  REFERENCES `albumdb`.`album` (`AName`)
  ON DELETE CASCADE
  ON UPDATE CASCADE);
```

```
CREATE TABLE `albumdb`.`musicvideo` (
  `SName` VARCHAR(45) NOT NULL,
  `MusicVideo` VARCHAR(45) NOT NULL,
  PRIMARY KEY (`SName`, `MusicVideo`),
  CONSTRAINT `SName2`
  FOREIGN KEY (`SName`)
  REFERENCES `albumdb`.`song` (`SName`)
  ON DELETE CASCADE
  ON UPDATE CASCADE);
```

Populating Tables

```
INSERT INTO `albumdb`.`album` (`AName`, `DateOfRelease`) VALUES ('Album1',  
'2021-04-10');  
INSERT INTO `albumdb`.`album` (`AName`, `DateOfRelease`) VALUES ('Album2',  
'1999-04-10');  
INSERT INTO `albumdb`.`album` (`AName`, `DateOfRelease`) VALUES ('Hotalbum',  
'2000-05-18');  
INSERT INTO `albumdb`.`album` (`AName`, `DateOfRelease`) VALUES ('Anotha',  
'2005-12-01');  
INSERT INTO `albumdb`.`album` (`AName`, `DateOfRelease`) VALUES ('Won', '2007-08-13');
```

```
INSERT INTO `albumdb`.`genre` (`AName`, `Genre`) VALUES ('Album1', 'Rock');  
INSERT INTO `albumdb`.`genre` (`AName`, `Genre`) VALUES ('Album2', 'RnB');  
INSERT INTO `albumdb`.`genre` (`AName`, `Genre`) VALUES ('Hotalbum', 'Blues');  
INSERT INTO `albumdb`.`genre` (`AName`, `Genre`) VALUES ('Anotha', 'Disco');  
INSERT INTO `albumdb`.`genre` (`AName`, `Genre`) VALUES ('Won', 'Country');
```

```
INSERT INTO `albumdb`.`language` (`AName`, `Language`) VALUES ('Album1', 'English');  
INSERT INTO `albumdb`.`language` (`AName`, `Language`) VALUES ('Album2', 'Spanish');  
INSERT INTO `albumdb`.`language` (`AName`, `Language`) VALUES ('Hotalbum', 'Japanese');  
INSERT INTO `albumdb`.`language` (`AName`, `Language`) VALUES ('Anotha', 'German');  
INSERT INTO `albumdb`.`language` (`AName`, `Language`) VALUES ('Won', 'French');
```

```
INSERT INTO `albumdb`.`song` (`SName`, `ParentalAdvisory`, `ReleaseDate`,  
`NumberOfListens`) VALUES ('SongA', '0', '1999-09-14', '4');  
INSERT INTO `albumdb`.`song` (`SName`, `ParentalAdvisory`, `ReleaseDate`,  
`NumberOfListens`) VALUES ('SongB', '0', '2000-10-14', '0');  
INSERT INTO `albumdb`.`song` (`SName`, `ParentalAdvisory`, `ReleaseDate`,  
`NumberOfListens`) VALUES ('Song3', '1', '2005-12-25', '100');  
INSERT INTO `albumdb`.`song` (`SName`, `ParentalAdvisory`, `ReleaseDate`,  
`NumberOfListens`) VALUES ('Montana', '0', '2003-08-22', '25');  
INSERT INTO `albumdb`.`song` (`SName`, `ParentalAdvisory`, `ReleaseDate`,  
`NumberOfListens`) VALUES ('Indiana', '0', '2002-09-15', '10');  
INSERT INTO `albumdb`.`song` (`SName`, `ParentalAdvisory`, `ReleaseDate`,  
`NumberOfListens`) VALUES ('Alabama', '1', '2002-10-16', '5');  
INSERT INTO `albumdb`.`song` (`SName`, `ParentalAdvisory`, `ReleaseDate`,  
`NumberOfListens`) VALUES ('Sweet', '0', '1999-02-26', '100');  
INSERT INTO `albumdb`.`song` (`SName`, `ParentalAdvisory`, `ReleaseDate`,  
`NumberOfListens`) VALUES ('Savory', '0', '2000-03-30', '1000');  
INSERT INTO `albumdb`.`song` (`SName`, `ParentalAdvisory`, `ReleaseDate`,  
`NumberOfListens`) VALUES ('Spicy', '0', '2000-03-30', '10');  
INSERT INTO `albumdb`.`song` (`SName`, `ParentalAdvisory`, `ReleaseDate`,  
`NumberOfListens`) VALUES ('Nike', '0', '2018-03-30', '50');
```

```

INSERT INTO `albumdb`.`song` (`SName`, `ParentalAdvisory`, `ReleaseDate`,
`NumberOfListens`) VALUES ('Mea', '0', '2017-08-20', '55');
INSERT INTO `albumdb`.`song` (`SName`, `ParentalAdvisory`, `ReleaseDate`,
`NumberOfListens`) VALUES ('Culpa', '1', '2019-02-20', '53');
INSERT INTO `albumdb`.`song` (`SName`, `ParentalAdvisory`, `ReleaseDate`,
`NumberOfListens`) VALUES ('Bohemian Rhapsody', '0', '1996-04-24', '10000');
INSERT INTO `albumdb`.`song` (`SName`, `ParentalAdvisory`, `ReleaseDate`,
`NumberOfListens`) VALUES ('Bicycle', '0', '1995-05-26', '5000');
INSERT INTO `albumdb`.`song` (`SName`, `ParentalAdvisory`, `ReleaseDate`,
`NumberOfListens`) VALUES ('Big 1', '1', '1995-04-15', '2000');

```

```

INSERT INTO `albumdb`.`musicvideo` (`SName`, `MusicVideo`) VALUES ('Bohemian
Rhapsody', 'Bohemian Rhapsody');
INSERT INTO `albumdb`.`musicvideo` (`SName`, `MusicVideo`) VALUES ('Montana', 'Montana
EXTENDED');
INSERT INTO `albumdb`.`musicvideo` (`SName`, `MusicVideo`) VALUES ('Song3', 'Song3');
INSERT INTO `albumdb`.`musicvideo` (`SName`, `MusicVideo`) VALUES ('Savory', 'YUMMY');
INSERT INTO `albumdb`.`musicvideo` (`SName`, `MusicVideo`) VALUES ('Nike', 'Sweet
Victory');

```

```

INSERT INTO `albumdb`.`publisher` (`PName`, `Address`) VALUES ('Publisher Won', '4886
Hog Camp Road');
INSERT INTO `albumdb`.`publisher` (`PName`, `Address`) VALUES ('Publisher Lost', '1799
Cityview Drive');
INSERT INTO `albumdb`.`publisher` (`PName`, `Address`) VALUES ('Middle Man LLC.', '581
1st Street');

```

```

INSERT INTO `albumdb`.`artist` (`ArName`, `DateOfBirth`, `Role`) VALUES ('Frederick Pluto',
'1804-05-23', 'Lead Singer');
INSERT INTO `albumdb`.`artist` (`ArName`, `DateOfBirth`, `Role`) VALUES ('Susan Boyle',
'1995-05-05', 'Drummer');
INSERT INTO `albumdb`.`artist` (`ArName`, `DateOfBirth`, `Role`) VALUES ('Billie Eyelash',
'2000-06-03', 'Lead Singer');
INSERT INTO `albumdb`.`artist` (`ArName`, `DateOfBirth`, `Role`) VALUES ('Anna Indiana',
'2004-05-13', 'Drummer');
INSERT INTO `albumdb`.`artist` (`ArName`, `DateOfBirth`, `Role`) VALUES ('Drake Elton',
'1999-08-14', 'Pianist');

```

```

INSERT INTO `albumdb`.`featuredartist` (`FAName`, `DateOfBirth`, `Role`) VALUES ('Ted
Earman', '1999-07-30', 'Saxaphonist');
INSERT INTO `albumdb`.`featuredartist` (`FAName`, `DateOfBirth`, `Role`) VALUES ('Shelton
Jan', '1966-08-20', 'Rocketman');
INSERT INTO `albumdb`.`featuredartist` (`FAName`, `DateOfBirth`, `Role`) VALUES
('BillHeWas', '1988-05-20', 'Rapper');

```

```

INSERT INTO `albumdb`.`publishes` (`PName`, `AName`) VALUES ('Middle Man LLC.',
'Hotalbum');
INSERT INTO `albumdb`.`publishes` (`PName`, `AName`) VALUES ('Middle Man LLC.',
'Album1');
INSERT INTO `albumdb`.`publishes` (`PName`, `AName`) VALUES ('Publisher Lost', 'Anotha');
INSERT INTO `albumdb`.`publishes` (`PName`, `AName`) VALUES ('Publisher Won', 'Won');
INSERT INTO `albumdb`.`publishes` (`PName`, `AName`) VALUES ('Publisher Won', 'Album2');

```

```

INSERT INTO `albumdb`.`allass` (`AName`, `SName`) VALUES ('Album1', 'SongA');
INSERT INTO `albumdb`.`allass` (`AName`, `SName`) VALUES ('Album1', 'SongB');
INSERT INTO `albumdb`.`allass` (`AName`, `SName`) VALUES ('Album1', 'Song3');
INSERT INTO `albumdb`.`allass` (`AName`, `SName`) VALUES ('Album2', 'Alabama');
INSERT INTO `albumdb`.`allass` (`AName`, `SName`) VALUES ('Album2', 'Indiana');
INSERT INTO `albumdb`.`allass` (`AName`, `SName`) VALUES ('Album2', 'Montana');
INSERT INTO `albumdb`.`allass` (`AName`, `SName`) VALUES ('Anotha', 'Nike');
INSERT INTO `albumdb`.`allass` (`AName`, `SName`) VALUES ('Anotha', 'Mea');
INSERT INTO `albumdb`.`allass` (`AName`, `SName`) VALUES ('Anotha', 'Culpa');
INSERT INTO `albumdb`.`allass` (`AName`, `SName`) VALUES ('Hotalbum', 'Sweet');
INSERT INTO `albumdb`.`allass` (`AName`, `SName`) VALUES ('Hotalbum', 'Savory');
INSERT INTO `albumdb`.`allass` (`AName`, `SName`) VALUES ('Hotalbum', 'Spicy');
INSERT INTO `albumdb`.`allass` (`AName`, `SName`) VALUES ('Won', 'Bohemian
Rhapsody');
INSERT INTO `albumdb`.`allass` (`AName`, `SName`) VALUES ('Won', 'Bicycle');
INSERT INTO `albumdb`.`allass` (`AName`, `SName`) VALUES ('Won', 'Big 1');

```

```

INSERT INTO `albumdb`.`arthasal` (`AName`, `ArName`) VALUES ('Album1', 'Anna Indiana');
INSERT INTO `albumdb`.`arthasal` (`AName`, `ArName`) VALUES ('Album2', 'Billie Eyelash');
INSERT INTO `albumdb`.`arthasal` (`AName`, `ArName`) VALUES ('Anotha', 'Drake Elton');
INSERT INTO `albumdb`.`arthasal` (`AName`, `ArName`) VALUES ('Hotalbum', 'Frederick
Pluto');
INSERT INTO `albumdb`.`arthasal` (`AName`, `ArName`) VALUES ('Won', 'Susan Boyle');

```

```

INSERT INTO `albumdb`.`shasfa` (`SName`, `FName`) VALUES ('SongB', 'BillHeWas');
INSERT INTO `albumdb`.`shasfa` (`SName`, `FName`) VALUES ('Song3', 'Shelton Jan');
INSERT INTO `albumdb`.`shasfa` (`SName`, `FName`) VALUES ('Spicy', 'Ted Earman');

```

List of Needed Queries

The functionality to add data to the database is already defined in the insertion statements described in the **Populating Tables** section.

Search for Album by Name

'Anotha' represents a template name that will be defined by the user.

```
SELECT DISTINCT A.AName
FROM albumdb.album AS A
WHERE A.AName = 'Anotha';
```

Search for Album by Artist Name

```
SELECT DISTINCT A.AName
FROM albumdb.album AS A, albumdb.arthasal AS ARTHASAL
WHERE A.AName=ARTHASAL.AName AND ARTHASAL.ArName='Anna Indiana';
```

Search for Album by Song Name

```
SELECT DISTINCT A.AName
FROM albumdb.album AS A, albumdb.alhass AS ALHASS
WHERE A.AName=ALHASS.AName AND ALHASS.SName='Savory';
```

Search for Album by Genre

```
SELECT DISTINCT G.AName
FROM albumdb.genre AS G
WHERE G.Genre='RnB';
```

Search for Album by Publisher Name

```
SELECT DISTINCT P.AName
FROM albumdb.publishes AS P
WHERE P.PName='Middle Man LLC.';
```

Search for Album by Language

```
SELECT DISTINCT L.AName
FROM albumdb.language AS L
WHERE L.Language='Japanese';
```

Search for Song by Song Name

```
SELECT DISTINCT S.SName
FROM albumdb.song AS S
WHERE S.SName='Sweet';
```

Search for Song by Artist Name

```
SELECT DISTINCT S.SName
FROM albumdb.song AS S, albumdb.alhass AS ALHASS, albumdb.arthasal AS ARTHASAL
WHERE S.SName=ALHASS.SName AND ARTHASAL.ArName='Anna Indiana' AND
ARTHASAL.AName=ALHASS.AName;
```

Search for Song by Featured Artist Name

```
SELECT DISTINCT S.SName
FROM albumdb.shasfa AS S
WHERE S.FAName='Shelton Jan';
```

Search for Song by Music Video

```
SELECT DISTINCT S.SName
FROM albumdb.musicvideo AS S
WHERE S.MusicVideo='Montana EXTENDED';
```

Search for Song by Genre

```
SELECT DISTINCT ALHASS.SName
FROM albumdb.genre AS G, albumdb.alhass AS ALHASS
WHERE G.Genre='Rock' AND G.AName=ALHASS.AName;
```

Search for Song by Number of Listens

```
SELECT DISTINCT S.SName
FROM albumdb.song AS S
WHERE S.NumberOfListens=4;
```

Search for Song by Language

```
SELECT DISTINCT S.SName
FROM albumdb.alhass AS S, albumdb.language AS L
WHERE L.Language='Spanish' AND L.AName=S.AName;
```

Order Albums by Alphabetical Order

```
SELECT DISTINCT A.AName
FROM albumdb.album AS A
ORDER BY A.AName ASC;
```


Order Songs by Alphabetical Order

```
SELECT DISTINCT S.SName  
FROM albumdb.song AS S  
ORDER BY S.SName ASC;
```

Order Songs by Highest Number of Listens

```
SELECT DISTINCT S.SName  
FROM albumdb.song AS S  
ORDER BY S.NumberOfListens DESC;
```

Order Songs by Lowest Number of Listens

```
SELECT DISTINCT S.SName  
FROM albumdb.song AS S  
ORDER BY S.NumberOfListens ASC;
```

