A. Write sql queries for Create following tables

● Users (user\_id,user\_name, email)

● Playlists (playlist\_id,playlist\_name, description, user\_id, created\_on)

● Artist (artist\_id,artist\_name)

● Tracks (track\_id,track\_name, duration, artist\_id)

● Playlist\_Track (playlist\_id, track\_id)

CREATE TABLE Users(

user\_id int PRIMARY KEY auto\_increment,

name varchar(20),

email varchar(20)

);

CREATE TABLE Artist(

artist\_id int auto\_increment primary key,

artist\_name varchar(20)

);

CREATE TABLE Playlists(

playlist\_id int auto\_increment primary key,

playlist\_name varchar(20),

description varchar(20), user\_id int, created\_on Date,

FOREIGN KEY (user\_id) REFERENCES Users(user\_id)

);

CREATE TABLE Tracks(

track\_id int auto\_increment primary key,

track\_name varchar(20),

artist\_id int,

duration varchar(20),

FOREIGN KEY (artist\_id) REFERENCES Artist(artist\_id)

);

Create table Playlist\_Track(

playlist\_id int,

track\_id int,

foreign key (playlist\_id) references Playlists(playlist\_id ),

foreign key (track\_id) references Tracks(track\_id)

);

B. Write sql queries for Inserting data into above tables

INSERT INTO Users(name, email)

VALUES

('parvati' , 'abc@abc.com'),

('bhama' , 'bhama@abc.com'),

('radha', 'radha@aaa.com');

| **user\_id** | **name** | **email** |
| --- | --- | --- |
| 1 | parvati | abc@abc.com |
| 2 | bhama | bhama@abc.com |
| 3 | radha | radha@aaa.com |

Record Count: 3; Execution Time: 11ms [View Execution Plan](http://sqlfiddle.com/#executionPlan)  [link](http://sqlfiddle.com/#!9/0a8fbc8/43/0)

INSERT INTO Playlists( playlist\_id,playlist\_name,description,user\_id,created\_on

) VALUES(1,'Hosabelaku','DR.Rajkumar',1,'2008-01-02'),

(2,'Hosabelaku2','Hosabelaku',2,'2021-05-31'),

(3,'JackNJill','Rhyme',3,'2009-12-06')

;

| **playlist\_id** | **playlist\_name** | **description** | **user\_id** | **created\_on** |
| --- | --- | --- | --- | --- |
| 1 | Hosabelaku | DR.Rajkumar | 1 | 2008-01-02 |
| 2 | Hosabelaku2 | Hosabelaku | 2 | 2021-05-31 |
| 3 | JackNJill | Rhyme | 3 | 2009-12-06 |

INSERT INTO Artist (artist\_id, artist\_name)VALUES (1 , 'sonu nigam'),(2,'PBsrinivas'),

(3,'SJanaki');

INSERT INTO Artist (artist\_id, artist\_name)VALUES (1 , 'sonu nigam'),(2,'PBsrinivas'),

(3,'SJanaki'),(4,'BKsumitra');

INSERT INTO Tracks (track\_id,track\_name, duration, artist\_id) VALUES

(1, 'track1','30sec',1),(2, 'track2','10sec',2),(3, 'track3','60sec',3);

| **ck\_id** | **track\_name** | **artist\_id** | **duration** |
| --- | --- | --- | --- |
| 1 | track1 | 1 | 30sec |
| 2 | track2 | 2 | 10sec |
| 3 | track3 | 3 | 60sec |

INSERT INTO Playlist\_Track (playlist\_id, track\_id) VALUES (1,1),(2,2),(3,3);

C. Write sql queries for below

● How many users have registered with our app

**SELECT Users.user\_id, Users.name, (SELECT COUNT(\*) FROM Playlists WHERE Users.user\_id = Playlists.user\_id) AS total FROM Users;**

| **user\_id** | **name** | **total** |
| --- | --- | --- |
| 1 | parvati | 1 |
| 2 | bhama | 1 |
| 3 | radha | 1 |

Record Count: 3; Execution Time: 2ms [View Execution Plan](http://sqlfiddle.com/#executionPlan)  [link](http://sqlfiddle.com/#!9/0a8fbc8/43/1)

● What playlist is the latest one

**SELECT \* FROM Playlists WHERE created\_on=(SELECT max(created\_on) FROM Playlists);**

| **playlist\_id** | **playlist\_name** | **description** | **user\_id** | **created\_on** |
| --- | --- | --- | --- | --- |
| **2** | **Hosabelaku2** | **Hosabelaku** | **2** | **2021-05-31** |

**Record Count: 1; Execution Time: 7ms** [**View Execution Plan**](http://sqlfiddle.com/#executionPlan) [**link**](http://sqlfiddle.com/#!9/0a8fbc8/44/2)

● Tracks count per playlist

**SELECT COUNT(\*) FROM Tracks;**

**SELECT COUNT(track\_id)**

**FROM Playlist\_Track ;**

**o/p**

| **COUNT(track\_id)** |
| --- |
| **3** |

SELECT track\_id, COUNT(\*)

FROM Tracks

GROUP BY track\_id;

o/p

| **track\_id** | **COUNT(\*)** |
| --- | --- |
| 1 | 1 |
| 2 | 1 |
| 3 | 1 |

● Details of the playlist for a given user name

**Select playlist\_name from Playlists where playlist\_name like**

**'%Hosabelaku%';**

| **playlist\_id** | **playlist\_name** | **description** | **user\_id** | **created\_on** |
| --- | --- | --- | --- | --- |
| **1** | **Hosabelaku** | **DR.Rajkumar** | **1** | **2008-01-02** |
| **2** | **Hosabelaku2** | **Hosabelaku** | **2** | **2021-05-31** |
| **3** | **JackNJill** | **Rhyme** | **3** | **2009-12-06** |
| **4** | **gururaghavendra** | **DR.Rajkumar** | **1** | **2008-11-02** |
| **5** |  |  | **4** | **2008-11-02** |

**Record Count: 5; Execution Time: 2ms** [**View Execution Plan**](http://sqlfiddle.com/#executionPlan) [**link**](http://sqlfiddle.com/#!9/48f1ba/11/0)

| **playlist\_name** |
| --- |
| Hosabelaku |
| Hosabelaku2 |

Record Count: 2; Execution Time: 1ms [View Execution Plan](http://sqlfiddle.com/#executionPlan)  [link](http://sqlfiddle.com/#!9/0a8fbc8/41/1)

● Most popular artist’s name (Most tracks by that artist)

select track\_id,track\_name, count(\*) as tracksCount

from Tracks

where ptrack\_name = 'track2'

group by track\_id,track\_name;

| **ck\_id** | **track\_name** | **tracksCount** |
| --- | --- | --- |
| 2 | track2 | 1 |
| 4 | track2 | 1 |
| 5 | track2 | 1 |

Record Count: 3; Execution Time: 9ms [View Execution Plan](http://sqlfiddle.com/#executionPlan)  [link](http://sqlfiddle.com/#!9/37e428/3/0)

● Longest track (in terms of time)

**SELECT \* FROM Tracks WHERE duration=(SELECT max(duration) FROM Tracks);**

**o/p**

| **track\_id** | **track\_name** | **artist\_id** | **duration** |
| --- | --- | --- | --- |
| **1** | **track1** | **1** | **30sec** |
| **2** | **track2** | **2** | **10sec** |
| **3** | **track3** | **3** | **60sec** |
|  |  |  |  |

| **rack\_id** | **track\_name** | **artist\_id** | **duration** |
| --- | --- | --- | --- |
| 3 | track3 | 3 | 60sec |

Re

● Which users have no playlists?

select \* from Artist;

SELECT artist\_id,

artist\_name FROM Artist WHERE

artist\_id NOT IN(SELECT DISTINCT artist\_id FROM Tracks);

| **artist\_id** | **artist\_name** |
| --- | --- |
| 1 | sonu nigam |
| 2 | PBsrinivas |
| 3 | SJanaki |
| 4 | BKsumitra |

Record Count: 4; Execution Time: 17ms [View Execution Plan](http://sqlfiddle.com/#executionPlan)  [link](http://sqlfiddle.com/#!9/8fb2f9/3/0)

User have no playlist

o/p

| **artist\_id** | **artist\_name** |
| --- | --- |
| 4 | BKsumitra |

● Details of playlists which are empty

SELECT playlist\_id,playlist\_name, description, user\_id

FROM Playlists

WHERE description ='';

| **playlist\_id** | **playlist\_name** | **description** | **user\_id** | **created\_on** |
| --- | --- | --- | --- | --- |
| 1 | Hosabelaku | DR.Rajkumar | 1 | 2008-01-02 |
| 2 | Hosabelaku2 | Hosabelaku | 2 | 2021-05-31 |
| 3 | JackNJill | Rhyme | 3 | 2009-12-06 |
| 4 | gururaghavendra | DR.Rajkumar | 1 | 2008-11-02 |
| 5 |  |  | 4 | 2008-11-02 |

Record Count: 5; Execution Time: 1ms [View Execution Plan](http://sqlfiddle.com/#executionPlan)  [link](http://sqlfiddle.com/#!9/48f1ba/8/0)

| **playlist\_id** | **playlist\_name** | **description** | **user\_id** |
| --- | --- | --- | --- |
| 5 |  |  | 4 |

Record Count: 1; Execution Time: 0ms [View Execution Plan](http://sqlfiddle.com/#executionPlan)  [link](http://sqlfiddle.com/#!9/48f1ba/8/1)