

SQL queries:

1) How many albums recorded between date y1 and date y2:

```
select count(*) from album where (start_date > year-month-day AND end_date < year-month-day);
```

2) How many different songs were recorded by musician X between date y1 and date y2:

```
select count(*)  
from track_musician left join musical_track ON musical_track.id=track_musician.track_id  
where musician_id=8 AND recording_date between year-month-day AND year-month-day;
```

3) In How many different albums musician X participate between date y1 and date y2:

```
select count( distinct album.id)  
from track_musician left join musical_track on track_musician.track_id=musical_track.id left  
join tracks_album on musical_track.id= tracks_album.track_id left join album on  
album.id=tracks_album.album_id  
where musician_id=4 AND (start_date > year-month-day AND end_date < year-month-day);
```

4) What is the most common musical instrument throw the years:

```
select instrument_id , count(instrument_id) as ct  
from track_instruments  
group by instrument_id order by ct desc  
limit 1;
```

5) Musical instrument in album A:

```
select tracks_album.album_id,  
tracks_album.track_id,track_instruments.instrument_id,instrument_type.description,manf.  
manufacturer_name  
from track_instruments left join tracks_album on  
track_instruments.track_id=tracks_album.track_id left join instruments_stock as ins_stock  
on ins_stock.id=track_instruments.instrument_id left join instrument_type on  
ins_stock.instrumen_type_id = instrument_type.id left join manufacturers as manf on  
ins_stock.manufacturer_id=manf.id  
where tracks_album.album_id=2;
```

6) The most productive producer between date y1 and date y2:

```
SELECT album_producer.producer_id ,count(album_producer.producer_id) as ct  
FROM album_producer left join album on album_producer.album_id=album.id  
WHERE (start_date >'1960-1-1' AND end_date < '2018-12-31')  
group by album_producer.producer_id order by ct desc  
limit 1;
```

7) The most common manufacturer:

```
select*  
from( SELECT instruments_stock.manufacturer_id,  
count(instruments_stock.manufacturer_id) as ct  
FROM track_instruments left join instruments_stock on track_instruments.instrument_id =  
instruments_stock.id  
group by instruments_stock.manufacturer_id order by ct desc  
limit 1) as manf  
left join manufacturers on manf.manufacturer_id = manufacturers.id;
```

8) How many musicians have recorded over the years:

```
SELECT count( distinct (track_musician.musician_id))  
FROM track_musician;
```

9) The musician who collaborated with the greatest number of other musicians:

10) The most popular song genre:

```
SELECT genre , count(genre) as ct FROM musical_track  
group by `musical_track`.genre order by ct desc;
```

11) Who is the recording technician who recorded the largest number of songs between date y1 and date y2:

```
SELECT technician_id, person.name, count(musical_track.technician_id) as ct FROM  
musical_track LEFT JOIN `person` ON musical_track.technician_id = person.Id  
where (recording_date > '1960-1-1' AND recording_date < '2018-12-31')  
group by musical_track.technician_id order by ct desc  
limit 1;
```

12) What is the first album recorded in the studio:

```
SELECT * FROM `album`  
WHERE end_date = ( SELECT MIN(end_date) FROM album );
```

13) List all songs in 2 or more albums:

```
SELECT track_id, track_name , count(track_id) as ct FROM tracks_album right join  
`musical_track` on tracks_album.track_id = musical_track.id  
group by tracks_album.track_id  
HAVING count(track_id) >1;
```

14) List of technicians who have shared the recording of an entire album:

```
select tb1.album_id, tb1.technician_id, person.name  
from (select tb.album_id, tb.technician_id, count(tb.technician_id) as ct  
from (select track.id , track.track_name , tracks_album.album_id , track.technician_id  
, count(technician_id) from musical_track as track left join tracks_album on track.id =  
tracks_album.track_id group by track.technician_id , tracks_album.album_id order by  
tracks_album.album_id ASC) as tb  
group by tb.album_id) as tb1  
left join person on person.id = tb1.technician_id  
where tb1.ct = 1;
```

15) Who is the most versatile musician:

```
SELECT technician_id, genre, count(technician_id) as ct FROM my_db.musical_track  
group by technician_id order by ct desc  
limit 1;
```