

Exp 2

1. Create subscription table

```
CREATE TABLE SUBSCRIPTION(  
    subscription_id NUMBER NOT NULL,  
    subscription_name VARCHAR(255),  
    subscription_price NUMBER,  
    PRIMARY KEY (subscription_id)  
);
```

```
1  CREATE TABLE SUBSCRIPTION(  
2      subscription_id NUMBER NOT NULL,  
3      subscription_name VARCHAR(255),  
4      subscription_price NUMBER,  
5      PRIMARY KEY (subscription_id)  
6  );  
7  |
```

Table created.

2. Create person table

```
CREATE TABLE PERSON(  
    person_id NUMBER NOT NULL,  
    username VARCHAR(255),  
    password VARCHAR(255),  
    subscription_id NUMBER,  
    PRIMARY KEY (person_id),  
    FOREIGN KEY (subscription_id) REFERENCES  
SUBSCRIPTION(subscription_id)  
);
```

```
1 CREATE TABLE PERSON(  
2     person_id NUMBER NOT NULL,  
3     username VARCHAR(255),  
4     password VARCHAR(255),  
5     subscription_id NUMBER,  
6     PRIMARY KEY (person_id),  
7     FOREIGN KEY (subscription_id) REFERENCES SUBSCRIPTION(subscription_id)  
8 );
```

Table created.

3. Create table Song

```
CREATE TABLE SONG(  
    song_id NUMBER NOT NULL,  
    song_name VARCHAR(255),  
    song_genre VARCHAR(255),  
    song_duration NUMBER,  
    PRIMARY KEY (song_id)  
);
```

```
1  CREATE TABLE SONG(  
2      song_id NUMBER NOT NULL,  
3      song_name VARCHAR(255),  
4      song_genre VARCHAR(255),  
5      song_duration NUMBER,  
6      PRIMARY KEY (song_id)  
7  );  
8
```

Table created.

4. Create artist table

```
CREATE TABLE ARTIST(  
    artist_id NUMBER NOT NULL,  
    artist_name VARCHAR(255),  
    followers NUMBER,  
    total_plays NUMBER,  
    PRIMARY KEY (artist_id)  
);
```

```
1 CREATE TABLE ARTIST(  
2     artist_id NUMBER NOT NULL,  
3     artist_name VARCHAR(255),  
4     followers NUMBER,  
5     total_plays NUMBER,  
6     PRIMARY KEY (artist_id)  
7 );  
8
```

Table created.

5. Create album table

```
CREATE TABLE ALBUM(  
    album_id NUMBER NOT NULL,  
    album_name VARCHAR(255),  
    PRIMARY KEY (album_id)  
);
```

```
1 CREATE TABLE ALBUM(  
2     album_id NUMBER NOT NULL,  
3     album_name VARCHAR(255),  
4     PRIMARY KEY (album_id)  
5 );  
6
```

Table created.

6. Create fact table user engagement

```
CREATE TABLE USERENGAGEMENT(  
    ue_id NUMBER NOT NULL,  
    user_id NUMBER,  
    album_id NUMBER,  
    song_id NUMBER,  
    artist_id NUMBER,  
    song_listened_duration NUMBER,  
    PRIMARY KEY (ue_id),  
    FOREIGN KEY (user_id) REFERENCES PERSON(person_id),  
    FOREIGN KEY (album_id) REFERENCES ALBUM(album_id),  
    FOREIGN KEY (song_id) REFERENCES SONG(song_id),  
    FOREIGN KEY (artist_id) REFERENCES ARTIST(artist_id)  
);
```

```
1  CREATE TABLE USERENGAGEMENT(  
2      ue_id NUMBER NOT NULL,  
3      user_id NUMBER,  
4      album_id NUMBER,  
5      song_id NUMBER,  
6      artist_id NUMBER,  
7      song_listened_duration NUMBER,  
8      PRIMARY KEY (ue_id),  
9      FOREIGN KEY (user_id) REFERENCES PERSON(person_id),  
10     FOREIGN KEY (album_id) REFERENCES ALBUM(album_id),  
11     FOREIGN KEY (song_id) REFERENCES SONG(song_id),  
12     FOREIGN KEY (artist_id) REFERENCES ARTIST(artist_id)  
13 );
```

Table created.

7. Insert into subscription

INSERT INTO SUBSCRIPTION VALUES(1, 'premium', 500);

INSERT INTO SUBSCRIPTION VALUES(2, 'ultra', 1000);

```
1  INSERT INTO SUBSCRIPTION VALUES(1, 'premium', 500);
2  INSERT INTO SUBSCRIPTION VALUES(2, 'ultra', 1000);
3  |
```

1 row(s) inserted.

1 row(s) inserted.

SUBSCRIPTION_ID	SUBSCRIPTION_NAME	SUBSCRIPTION_PRICE
1	premium	500
2	ultra	1000

8. Insert into Person

```
INSERT INTO PERSON VALUES(1, 'varun', '1234', 1);
INSERT INTO PERSON VALUES(2, 'chiraayu', '1234', 2);
INSERT INTO PERSON VALUES(3, 'vedant', '1234', 1);
INSERT INTO PERSON VALUES(4, 'test1', '1234', 2);
INSERT INTO PERSON VALUES(5, 'test2', '1234', 1);
INSERT INTO PERSON VALUES(6, 'test3', '1234', 2);
INSERT INTO PERSON VALUES(7, 'test4', '1234', 1);
INSERT INTO PERSON VALUES(8, 'test5', '1234', 2);
INSERT INTO PERSON VALUES(9, 'test6', '1234', 1);
INSERT INTO PERSON VALUES(10, 'test7', '1234', 2);
```

```
1  INSERT INTO PERSON VALUES(1, 'varun', '1234', 1);
2  INSERT INTO PERSON VALUES(2, 'chiraayu', '1234', 2);
3  INSERT INTO PERSON VALUES(3, 'vedant', '1234', 1);
4  INSERT INTO PERSON VALUES(4, 'test1', '1234', 2);
5  INSERT INTO PERSON VALUES(5, 'test2', '1234', 1);
6  INSERT INTO PERSON VALUES(6, 'test3', '1234', 2);
7  INSERT INTO PERSON VALUES(7, 'test4', '1234', 1);
8  INSERT INTO PERSON VALUES(8, 'test5', '1234', 2);
9  INSERT INTO PERSON VALUES(9, 'test6', '1234', 1);
10 INSERT INTO PERSON VALUES(10, 'test7', '1234', 2);
11 |
```

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

PERSON_ID	USERNAME	PASSWORD	SUBSCRIPTION_ID
1	varun	1234	1
2	chiraayu	1234	2
3	vedant	1234	1
4	test1	1234	2
5	test2	1234	1
6	test3	1234	2
7	test4	1234	1
8	test5	1234	2
9	test6	1234	1
10	test7	1234	2

9. Insert into SONG

INSERT INTO SONG VALUES(1, 'idle town', 'classic', 5);

INSERT INTO SONG VALUES(2, 'starboy', 'rock', 2);

INSERT INTO SONG VALUES(3, 'stay', 'rock', 3);

INSERT INTO SONG VALUES(4, 'wait', 'classic', 6);

INSERT INTO SONG VALUES(5, 'closer', 'instrumental', 2);

INSERT INTO SONG VALUES(6, 'memories', 'instrumental', 4);

```
1 INSERT INTO SONG VALUES(1, 'idle town', 'classic', 5);
2 INSERT INTO SONG VALUES(2, 'starboy', 'rock', 2);
3 INSERT INTO SONG VALUES(3, 'stay', 'rock', 3);
4 INSERT INTO SONG VALUES(4, 'wait', 'classic', 6);
5 INSERT INTO SONG VALUES(5, 'closer', 'instrumental', 2);
6 INSERT INTO SONG VALUES(6, 'memories', 'instrumental', 4);
7
```

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

SONG_ID	SONG_NAME	SONG_GENRE	SONG_DURATION
1	idle town	classic	5
2	starboy	rock	2
3	stay	rock	3
4	wait	classic	6
5	closer	instrumental	2
6	memories	instrumental	4

10. Insert into artists

```
INSERT INTO ARTIST VALUES(1, 'conan', 1000, 300);
INSERT INTO ARTIST VALUES(2, 'maroon', 1500, 250);
INSERT INTO ARTIST VALUES(3, 'zedd', 2300, 500);
INSERT INTO ARTIST VALUES(4, 'weeknd', 2500, 1000);
INSERT INTO ARTIST VALUES(5, 'harry', 5421, 560);
INSERT INTO ARTIST VALUES(6, 'drake', 1000, 2412);
INSERT INTO ARTIST VALUES(7, 'zayn', 4563, 5124);
INSERT INTO ARTIST VALUES(8, 'james', 1578, 7524);
INSERT INTO ARTIST VALUES(9, 'ariana', 7845, 6987);
INSERT INTO ARTIST VALUES(10, 'daya', 3544, 4511);
```

```
1  INSERT INTO ARTIST VALUES(1, 'conan', 1000, 300);
2  INSERT INTO ARTIST VALUES(2, 'maroon', 1500, 250);
3  INSERT INTO ARTIST VALUES(3, 'zedd', 2300, 500);
4  INSERT INTO ARTIST VALUES(4, 'weeknd', 2500, 1000);
5  INSERT INTO ARTIST VALUES(5, 'harry', 5421, 560);
6  INSERT INTO ARTIST VALUES(6, 'drake', 1000, 2412);
7  INSERT INTO ARTIST VALUES(7, 'zayn', 4563, 5124);
8  INSERT INTO ARTIST VALUES(8, 'james', 1578, 7524);
9  INSERT INTO ARTIST VALUES(9, 'ariana', 7845, 6987);
10 INSERT INTO ARTIST VALUES(10, 'daya', 3544, 4511);
```

```
1 row(s) inserted.
```

```
1 row(s) inserted.
```

```
1 row(s) inserted.
```

```
1 row(s) inserted.
```

```
1 row(s) inserted.
```

```
1 row(s) inserted.
```

ARTIST_ID	ARTIST_NAME	FOLLOWERS	TOTAL_PLAYS
1	conan	1000	300
2	maroon	1500	250
3	zedd	2300	500
4	weeknd	2500	1000
5	harry	5421	560
6	drake	1000	2412
7	zayn	4563	5124
8	james	1578	7524
9	ariana	7845	6987
10	daya	3544	4511

11. Insert into album

```
INSERT INTO ALBUM VALUES(1, 'star boy');  
INSERT INTO ALBUM VALUES(2, 'sunset season');  
INSERT INTO ALBUM VALUES(3, 'jordi');  
INSERT INTO ALBUM VALUES(4, 'views');  
INSERT INTO ALBUM VALUES(5, 'clarity');
```

```
1 INSERT INTO ALBUM VALUES(1, 'star boy');  
2 INSERT INTO ALBUM VALUES(2, 'sunset season');  
3 INSERT INTO ALBUM VALUES(3, 'jordi');  
4 INSERT INTO ALBUM VALUES(4, 'views');  
5 INSERT INTO ALBUM VALUES(5, 'clarity');
```

```
1 row(s) inserted.
```

```
1 row(s) inserted.
```

```
1 row(s) inserted.
```

```
1 row(s) inserted.
```

```
1 row(s) inserted.
```

ALBUM_ID	ALBUM_NAME
1	star boy
2	sunset season
3	jordi
4	views
5	clarity

12. Insert into user engagement

INSERT INTO USERENGAGEMENT VALUES(1, 1, 2, 3, 3, 100);

INSERT INTO USERENGAGEMENT VALUES(2, 2, 2, 1, 1, 150);

INSERT INTO USERENGAGEMENT VALUES(3, 3, 1, 2, 4, 200);

INSERT INTO USERENGAGEMENT VALUES(4, 4, 5, 3, 2, 230);

INSERT INTO USERENGAGEMENT VALUES(5, 5, 4, 3, 5, 220);

INSERT INTO USERENGAGEMENT VALUES(6, 4, 2, 5, 3, 340);

INSERT INTO USERENGAGEMENT VALUES(7, 4, 2, 6, 3, 140);

```
1 INSERT INTO USERENGAGEMENT VALUES(1, 1, 2, 3, 3, 100);
2 INSERT INTO USERENGAGEMENT VALUES(2, 2, 2, 1, 1, 150);
3 INSERT INTO USERENGAGEMENT VALUES(3, 3, 1, 2, 4, 200);
4 INSERT INTO USERENGAGEMENT VALUES(4, 4, 5, 3, 2, 230);
5 INSERT INTO USERENGAGEMENT VALUES(5, 5, 4, 3, 5, 220);
6
```

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

UE_ID	USER_ID	ALBUM_ID	SONG_ID	ARTIST_ID	SONG_LISTENED_DURATION
1	1	2	3	3	100
2	2	2	1	1	150
3	3	1	2	4	200
4	4	5	3	2	230
5	5	4	3	5	220
6	4	2	5	3	340
7	4	2	6	3	140

EXP 3

1. Total subscription per subscription type paid by users

```
CREATE MATERIALIZED VIEW SubscriptionAmount AS
SELECT subscription_name, sum(subscription_price)
FROM PERSON JOIN SUBSCRIPTION ON
PERSON.subscription_id=SUBSCRIPTION.subscription_id
GROUP BY subscription_name;
```

```
1 CREATE MATERIALIZED VIEW SubscriptionAmount AS
2 SELECT subscription_name, sum(subscription_price)
3 FROM PERSON JOIN SUBSCRIPTION ON PERSON.subscription_id=SUBSCRIPTION.subscription_id
4 GROUP BY subscription_name;
```

Statement processed.

```
SELECT * FROM SubscriptionAmount;
```

```
1 SELECT * FROM SubscriptionAmount;
```

SUBSCRIPTION_NAME	SUM(SUBSCRIPTION_PRICE)
premium	2500
ultra	5000

2. Total subscription per subscription type paid by users and grand total.

```
CREATE MATERIALIZED VIEW TotalSubscriptionAmount AS
SELECT subscription_name, sum(subscription_price)
FROM PERSON JOIN SUBSCRIPTION ON
PERSON.subscription_id=SUBSCRIPTION.subscription_id
GROUP BY ROLLUP (subscription_name);
```

```
1 CREATE MATERIALIZED VIEW TotalSubscriptionAmount AS
2 SELECT subscription_name, sum(subscription_price)
3 FROM PERSON JOIN SUBSCRIPTION ON PERSON.subscription_id=SUBSCRIPTION.subscription_id
4 GROUP BY ROLLUP (subscription_name);
```

Statement processed.

```
SELECT * FROM TotalSubscriptionAmount;
```

```
1 SELECT * FROM TotalSubscriptionAmount;
```

SUBSCRIPTION_NAME	SUM(SUBSCRIPTION_PRICE)
premium	2500
ultra	5000
-	7500

3. Total time listened to each genre and its grand total.

```
CREATE MATERIALIZED VIEW GenreDuration AS
SELECT song_genre, sum(song_listened_duration)
FROM USERENGAGEMENT JOIN SONG ON
USERENGAGEMENT.song_id=SONG.song_id
GROUP BY ROLLUP (song_genre);
```

```
1 CREATE MATERIALIZED VIEW GenreDuration AS
2 SELECT song_genre, sum(song_listened_duration)
3 FROM USERENGAGEMENT JOIN SONG ON USERENGAGEMENT.song_id=SONG.song_id
4 GROUP BY ROLLUP (song_genre);
```

Statement processed.


```
SELECT * FROM GenreDuration;
```

```
1 SELECT * FROM GenreDuration;|
```

SONG_GENRE	SUM(SONG_LISTENED_DURATION)
classic	150
instrumental	480
rock	750
-	1380

4. Average time listened per song genre.

```
CREATE MATERIALIZED VIEW AverageListenedByGenre AS
SELECT song_genre, AVG(song_listened_duration)
FROM USERENGAGEMENT JOIN SONG ON
USERENGAGEMENT.song_id=SONG.song_id
GROUP BY ROLLUP (song_genre);
```

```
1 CREATE MATERIALIZED VIEW AverageListenedByGenre AS
2 SELECT song_genre, AVG(song_listened_duration)
3 FROM USERENGAGEMENT JOIN SONG ON USERENGAGEMENT.song_id=SONG.song_id
4 GROUP BY ROLLUP (song_genre);|
```

Statement processed.

SELECT * FROM AverageListenedByGenre;

1 SELECT * FROM AverageListenedByGenre;|

SONG_GENRE	AVG(SONG_LISTENED_DURATION)
classic	150
instrumental	240
rock	187.5
-	197.142857142857142857142857142857