

---

*Sabanci University*  
*2023-2024 Spring*  
*CS306 Group Project*  
*Phase1*

---

TeamUp Music Streaming Platform

Osman Şah Yılmaz, 31316

Derin Özkalkan, 30658

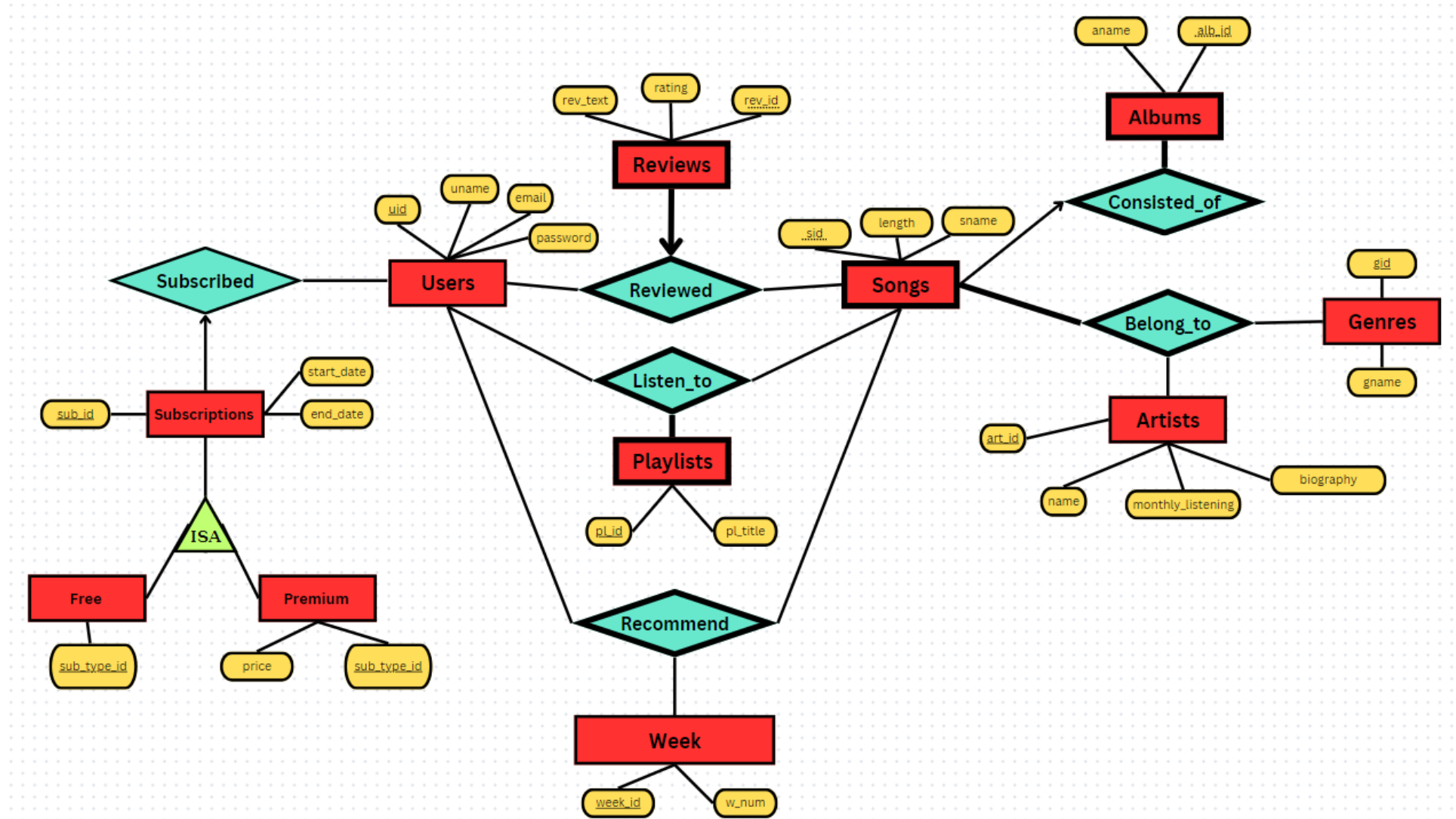
İrem Şahin, 31251

Eren Badur, 31289

# Description

We design a database application for a music streaming platform where there are **Users**, **Artists**, **Subscriptions** and **Genres**. **Users** have **uid**, **uname**, **email**, and **password**. **uid** uniquely identifies **Users**. **Subscriptions** have **sub\_id**, **start\_date** and **end\_date**. **sub\_id** uniquely identifies subscriptions. **Subscription** IS A either **Free** type or **Premium** type. **Premium** type has **price** and **pid**. **pid** uniquely identifies **premium** types. **Artists** have **art\_id**, **name**, **monthly\_listening**, and **biography**. **art\_id** uniquely identifies **Artists**. **Genres** have **gid**, and **gname**. **gid** uniquely identifies **Genres**. **Songs**, which have **sid**, **length** and **sname**, belong to multiple **Artists** and **Genres** also **Artists** and **Genres** can have multiple **Songs**. **sid** uniquely identify **Songs**. **Albums**, which have **aname**, and **alb\_id**, consist of multiple **Songs**. **alb\_id** uniquely identifies **Albums**. **Users** listen to **Songs**, and **Playlists**. **Playlists** have **pl\_id**, and **pl\_title**. **pl\_id** , **sid** , and **uid** uniquely identify **Playlists**. Multiple **Songs** recommended to multiple **Users** every **Week**. **Week** has **week\_id** and **w\_num** where **week\_id** uniquely identifies **Week**. **Reviews**, which have **rev\_text**, **rating**, and **rev\_id**, reviewed for **Song** by **User**. **Rev\_id** uniquely identifies **Reviews**.

# ER Model



# Relational Model

```
CREATE TABLE Users (  
    uid CHAR(5) NOT NULL,  
    uname CHAR(50),  
    email CHAR(255),  
    password CHAR(60),  
    PRIMARY KEY (uid)  
);  
  
CREATE TABLE Subscriptions (  
    sub_id CHAR(5) NOT NULL,  
    start_date DATE,  
    end_date DATE,  
    PRIMARY KEY (sub_id)  
);  
  
CREATE TABLE FreeSubscriptions (  
    sub_free_id CHAR(5) NOT NULL REFERENCES Subscriptions(sub_id) ON DELETE CASCADE,  
    PRIMARY KEY (sub_free_id )  
);  
  
CREATE TABLE PremiumSubscriptions (  
    sub_premium_id CHAR(5) NOT NULL REFERENCES Subscriptions(sub_id) ON DELETE CASCADE,  
    pid CHAR(5) NOT NULL,  
    Price REAL,  
    PRIMARY KEY (sub_premium_id)  
);  
  
CREATE TABLE Subscribed (  
    uid CHAR(5) NOT NULL,  
    sub_id CHAR(5) NOT NULL,  
    FOREIGN KEY (uid)  
        REFERENCES Users(uid)  
        ON DELETE CASCADE,  
    FOREIGN KEY (sub_id)  
        REFERENCES Subscriptions(sub_id)  
        ON DELETE CASCADE  
);
```

```
CREATE TABLE Artists (  
    art_id CHAR(5) NOT NULL,  
    name CHAR(50),  
    biography TEXT,  
    monthly_listening INTEGER,  
    PRIMARY KEY (art_id)  
);  
  
CREATE TABLE Genres (  
    gid CHAR(5) NOT NULL,  
    gname CHAR(50),  
    PRIMARY KEY (gid)  
);  
  
CREATE TABLE Songs_Belong_to (  
    sid CHAR(5) NOT NULL,  
    length INTEGER,  
    sname CHAR(50),  
    art_id CHAR(5) NOT NULL,  
    gid CHAR(5) NOT NULL,  
    PRIMARY KEY (sid),  
    FOREIGN KEY (art_id)  
        REFERENCES Artists(art_id)  
        ON DELETE CASCADE,  
    FOREIGN KEY (gid)  
        REFERENCES Genres(gid)  
        ON DELETE CASCADE  
);  
  
CREATE TABLE Albums_consisted_of (  
    alb_id CHAR(5) NOT NULL,  
    aname CHAR(50),  
    sid CHAR(5) NOT NULL,  
    PRIMARY KEY (sid),  
    FOREIGN KEY (sid)  
        REFERENCES Songs_Belong_to(sid)  
        ON DELETE CASCADE  
);
```

```
CREATE TABLE Week_recommend (  
    week_id CHAR(5) NOT NULL,  
    w_num INTEGER,  
    sid CHAR(5) NOT NULL,  
    uid CHAR(5) NOT NULL,  
    PRIMARY KEY (week_id),  
    FOREIGN KEY (sid)  
        REFERENCES Songs_Belong_to(sid)  
        ON DELETE CASCADE,  
    FOREIGN KEY (uid)  
        REFERENCES Users(uid)  
        ON DELETE CASCADE  
);
```

```
CREATE TABLE Playlists_Listen_to (  
    pl_id CHAR(5) NOT NULL,  
    pl_title CHAR(50),  
    sid CHAR(5) NOT NULL,  
    uid CHAR(5) NOT NULL,  
    PRIMARY KEY (pl_id , sid , uid),  
    FOREIGN KEY (sid)  
        REFERENCES Songs_Belong_to(sid)  
        ON DELETE CASCADE,  
    FOREIGN KEY (uid)  
        REFERENCES Users(uid)  
        ON DELETE CASCADE  
);
```

```
CREATE TABLE Reviews_Reviewed (  
    rev_id CHAR(5) NOT NULL,  
    rev_text CHAR(50),  
    rating REAL,  
    sid CHAR(5) NOT NULL,  
    uid CHAR(5) NOT NULL,  
    PRIMARY KEY (rev_id),  
    FOREIGN KEY (sid)  
        REFERENCES Songs_Belong_to(sid)  
        ON DELETE CASCADE,  
    FOREIGN KEY (uid)  
        REFERENCES Users(uid)  
        ON DELETE CASCADE  
);
```

```
INSERT INTO Users (uid, uname, email, password) VALUES ("10000", "Osman", "osman@cs", "12345");
INSERT INTO Users (uid, uname, email, password) VALUES ("10001", "İrem", "irem@cs", "12346");
INSERT INTO Users (uid, uname, email, password) VALUES ("10002", "Berke", "berke@cs", "12347");
INSERT INTO Users (uid, uname, email, password) VALUES ("10003", "Arda", "arda@cs", "12348");
INSERT INTO Users (uid, uname, email, password) VALUES ("10004", "Derin", "derin@cs", "12349");
INSERT INTO Users (uid, uname, email, password) VALUES ("10005", "Selen", "selen@cs", "12350");
INSERT INTO Users (uid, uname, email, password) VALUES ("10006", "Asli", "asli@cs", "12351");
INSERT INTO Users (uid, uname, email, password) VALUES ("10007", "Eren", "eren@cs", "12352");
INSERT INTO Users (uid, uname, email, password) VALUES ("10008", "Bartu", "bartu@cs", "12353");
INSERT INTO Users (uid, uname, email, password) VALUES ("10009", "Melike", "melike@cs", "12354");
INSERT INTO Users (uid, uname, email, password) VALUES ("10010", "Damla", "damla@cs", "12355");
INSERT INTO Users (uid, uname, email, password) VALUES ("10011", "Ayca", "ayca@cs", "12356");
INSERT INTO Users (uid, uname, email, password) VALUES ("10012", "Ekin", "ekin@cs", "12357");
INSERT INTO Users (uid, uname, email, password) VALUES ("10013", "Mert", "mert@cs", "12358");
INSERT INTO Users (uid, uname, email, password) VALUES ("10014", "Simay", "simay@cs", "12359");
INSERT INTO Users (uid, uname, email, password) VALUES ("10015", "Yunus", "yunus@cs", "12360");
INSERT INTO Users (uid, uname, email, password) VALUES ("10016", "Ahmet", "ahmet@cs", "12361");
INSERT INTO Users (uid, uname, email, password) VALUES ("10017", "Kerem", "kerem@cs", "12362");
INSERT INTO Users (uid, uname, email, password) VALUES ("10018", "Burak", "burak@cs", "12363");
INSERT INTO Users (uid, uname, email, password) VALUES ("10019", "Nil", "nil@cs", "12364");
```



```

INSERT INTO Artists (art_id, name, biography, monthly_listening)
VALUES ("20000", "Motive", "motive@mob", 12321);
INSERT INTO Artists (art_id, name, biography, monthly_listening)
VALUES ("20001", "Canozan", "canozan@cnzn", 11111);
INSERT INTO Artists (art_id, name, biography, monthly_listening)
VALUES ("20002", "Teoman", "teoman@tmn", 22222);
INSERT INTO Artists (art_id, name, biography, monthly_listening)
VALUES ("20003", "Pinhani", "pinhani@pnh", 33333);
INSERT INTO Artists (art_id, name, biography, monthly_listening)
VALUES ("20004", "Melike Sahin", "melikesahin@mlkshn", 30040);
INSERT INTO Artists (art_id, name, biography, monthly_listening)
VALUES ("20005", "Sezen Aksu", "sezenaksu@szns", 59000);
INSERT INTO Artists (art_id, name, biography, monthly_listening)
VALUES ("20006", "Can Bonomo", "canbonomo@cnbnm", 40909);
INSERT INTO Artists (art_id, name, biography, monthly_listening)
VALUES ("20007", "Ajda Pekkan", "ajdapekkan@ajdpkkn", 60000);
INSERT INTO Artists (art_id, name, biography, monthly_listening)
VALUES ("20008", "Sena sener", "senasener@snsnr", 39000);
INSERT INTO Artists (art_id, name, biography, monthly_listening)
VALUES ("20009", "Duman", "duman@dmn", 50909);

```

```

INSERT INTO Genres (gid, gname) VALUES ("30000", "Turkish Rap");
INSERT INTO Genres (gid, gname) VALUES ("30001", "Alternative");
INSERT INTO Genres (gid, gname) VALUES ("30002", "Acoustic Rock");
INSERT INTO Genres (gid, gname) VALUES ("30003", "Turkish Rock");
INSERT INTO Genres (gid, gname) VALUES ("30004", "Blues");
INSERT INTO Genres (gid, gname) VALUES ("30005", "Classical");
INSERT INTO Genres (gid, gname) VALUES ("30006", "Pop");
INSERT INTO Genres (gid, gname) VALUES ("30007", "Country");
INSERT INTO Genres (gid, gname) VALUES ("30008", "Reggae");
INSERT INTO Genres (gid, gname) VALUES ("30009", "Indie");

```

```
INSERT INTO Songs_Belong_to (sid, length, sname, art_id, gid)
VALUES ("40000", 190, "LOADED", "20000", "30000");
INSERT INTO Songs_Belong_to (sid, length, sname, art_id, gid)
VALUES ("40001", 180, "Bazen", "20001", "30001");
INSERT INTO Songs_Belong_to (sid, length, sname, art_id, gid)
VALUES ("40002", 170, "Gonullcelen", "20002", "30002");
INSERT INTO Songs_Belong_to (sid, length, sname, art_id, gid)
VALUES ("40003", 160, "Nehirler Durmaz", "20003", "30003");
INSERT INTO Songs_Belong_to (sid, length, sname, art_id, gid)
VALUES ("40004", 240, "Pusulam Ruzgar", "20004", "30006");
INSERT INTO Songs_Belong_to (sid, length, sname, art_id, gid)
VALUES ("40005", 240, "Vay", "20005", "30006");
INSERT INTO Songs_Belong_to (sid, length, sname, art_id, gid)
VALUES ("40006", 235, "Tukeniyor Omrum", "20004", "30003");
INSERT INTO Songs_Belong_to (sid, length, sname, art_id, gid)
VALUES ("40007", 195, "Haykiracak Nefesim Kalmasa Bile", "20007", "30006");
INSERT INTO Songs_Belong_to (sid, length, sname, art_id, gid)
VALUES ("40008", 195, "Teni Tenime", "20008", "30001");
INSERT INTO Songs_Belong_to (sid, length, sname, art_id, gid)
VALUES ("40009", 250, "Yurek", "20009", "30001");
```

```

INSERT INTO Albums_consisted_of (alb_id, aname, sid)
VALUES ("50000", "ROMANTIK", "40000");
INSERT INTO Albums_consisted_of (alb_id, aname, sid)
VALUES ("50001", "Derleme", "40001");
INSERT INTO Albums_consisted_of (alb_id, aname, sid)
VALUES ("50002", "Gonulcelen", "40002");
INSERT INTO Albums_consisted_of (alb_id, aname, sid)
VALUES ("50003", "Kedikoy", "40003");
INSERT INTO Albums_consisted_of (alb_id, aname, sid)
VALUES ("50004", "Pusulam Ruzgar", "40004");
INSERT INTO Albums_consisted_of (alb_id, aname, sid)
VALUES ("50005", "Optum", "40005");
INSERT INTO Albums_consisted_of (alb_id, aname, sid)
VALUES ("50006", "Kara Konular", "40006");
INSERT INTO Albums_consisted_of (alb_id, aname, sid)
VALUES ("50007", "Super Star, Vol.2", "40007");
INSERT INTO Albums_consisted_of (alb_id, aname, sid)
VALUES ("50008", "Teni Tenime", "40008");
INSERT INTO Albums_consisted_of (alb_id, aname, sid)
VALUES ("50009", "Darmaduman", "40009");

```

```

INSERT INTO Week_Recommend (week_id, w_num, sid, uid) VALUES ("60000", "1", "40000", "10000");
INSERT INTO Week_Recommend (week_id, w_num, sid, uid) VALUES ("60001", "2", "40000", "10000");
INSERT INTO Week_Recommend (week_id, w_num, sid, uid) VALUES ("60002", "3", "40000", "10000");
INSERT INTO Week_Recommend (week_id, w_num, sid, uid) VALUES ("60003", "4", "40000", "10000");
INSERT INTO Week_Recommend (week_id, w_num, sid, uid) VALUES ("60004", "5", "40000", "10000");
INSERT INTO Week_Recommend (week_id, w_num, sid, uid) VALUES ("60005", "6", "40000", "10000");
INSERT INTO Week_Recommend (week_id, w_num, sid, uid) VALUES ("60006", "7", "40000", "10000");
INSERT INTO Week_Recommend (week_id, w_num, sid, uid) VALUES ("60007", "8", "40000", "10000");
INSERT INTO Week_Recommend (week_id, w_num, sid, uid) VALUES ("60008", "9", "40000", "10000");
INSERT INTO Week_Recommend (week_id, w_num, sid, uid) VALUES ("60009", "10", "40000", "10000");

```

```

INSERT INTO Playlists_Listen_to (pl_id,pl_title,sid, uid) VALUES ("70000", "Arabada Calmalik", "40000", "10000");
INSERT INTO Playlists_Listen_to (pl_id,pl_title,sid, uid) VALUES ("70001", "Takilmasyon", "40001", "10001");
INSERT INTO Playlists_Listen_to (pl_id,pl_title,sid, uid) VALUES ("70002", "Derbeder", "40002", "10002");
INSERT INTO Playlists_Listen_to (pl_id,pl_title,sid, uid) VALUES ("70003", "Agladim", "40003", "10003");
INSERT INTO Playlists_Listen_to (pl_id,pl_title,sid, uid) VALUES ("70004", "Hot hits", "40004", "10004");
INSERT INTO Playlists_Listen_to (pl_id,pl_title,sid, uid) VALUES ("70005", "Karisik", "40005", "10005");
INSERT INTO Playlists_Listen_to (pl_id,pl_title,sid, uid) VALUES ("70006", "Eller Havaya", "40006", "10006");
INSERT INTO Playlists_Listen_to (pl_id,pl_title,sid, uid) VALUES ("70007", "Eskimeyen Klasikler", "40007", "10007");
INSERT INTO Playlists_Listen_to (pl_id,pl_title,sid, uid) VALUES ("70008", "Oylesine", "40008", "10008");
INSERT INTO Playlists_Listen_to (pl_id,pl_title,sid, uid) VALUES ("70009", "2010'lar", "40009", "10009");

```

```

INSERT INTO Reviews_Reviewed (rev_id, rev_text ,sid, uid)
VALUES ("80000", "Cok basarili bir parca", "40000", "10000");
INSERT INTO Reviews_Reviewed (rev_id, rev_text ,sid, uid)
VALUES ("80001", "Inanilmaz", "40001", "10001");
INSERT INTO Reviews_Reviewed (rev_id, rev_text ,sid, uid)
VALUES ("80002", "Abim cok iyisin, zirvede birakmani oneririm", "40002", "10002");
INSERT INTO Reviews_Reviewed (rev_id, rev_text ,sid, uid)
VALUES ("80003", "Basarilarinin devamini diliyorum", "40003", "10003");
INSERT INTO Reviews_Reviewed (rev_id, rev_text ,sid, uid)
VALUES ("80004", "Cok dokunakli", "40004", "10004");
INSERT INTO Reviews_Reviewed (rev_id, rev_text ,sid, uid)
VALUES ("80005", "Daha iyisi gelmez", "40005", "10005");
INSERT INTO Reviews_Reviewed (rev_id, rev_text ,sid, uid)
VALUES ("80006", "Albumdeki en iyi parca olmus", "40006", "10006");
INSERT INTO Reviews_Reviewed (rev_id, rev_text ,sid, uid)
VALUES ("80007", "Cok cok iyi", "40004", "10004");
INSERT INTO Reviews_Reviewed (rev_id, rev_text ,sid, uid)
VALUES ("80008", "Yeni bir sarki olsa da sevdiklerim arasina girdi", "40005", "10005");
INSERT INTO Reviews_Reviewed (rev_id, rev_text ,sid, uid)
VALUES ("80009", "En iyi sarkilari", "40006", "10006");

```



```
INSERT INTO PremiumSubscriptions (sub_premium_id, pid, price) VALUES ("90010", "p0001", 49.99);
INSERT INTO PremiumSubscriptions (sub_premium_id, pid, price) VALUES ("90011", "p0002", 49.99);
INSERT INTO PremiumSubscriptions (sub_premium_id, pid, price) VALUES ("90012", "p0003", 49.99);
INSERT INTO PremiumSubscriptions (sub_premium_id, pid, price) VALUES ("90013", "p0004", 49.99);
INSERT INTO PremiumSubscriptions (sub_premium_id, pid, price) VALUES ("90014", "p0005", 49.99);
INSERT INTO PremiumSubscriptions (sub_premium_id, pid, price) VALUES ("90015", "p0006", 49.99);
INSERT INTO PremiumSubscriptions (sub_premium_id, pid, price) VALUES ("90016", "p0007", 49.99);
INSERT INTO PremiumSubscriptions (sub_premium_id, pid, price) VALUES ("90017", "p0008", 49.99);
INSERT INTO PremiumSubscriptions (sub_premium_id, pid, price) VALUES ("90018", "p0009", 49.99);
INSERT INTO PremiumSubscriptions (sub_premium_id, pid, price) VALUES ("90019", "p0010", 49.99);
```

```
INSERT INTO Subscribed (uid, sub_id) VALUES ("10000", "90000");
INSERT INTO Subscribed (uid, sub_id) VALUES ("10002", "90001");
INSERT INTO Subscribed (uid, sub_id) VALUES ("10004", "90002");
INSERT INTO Subscribed (uid, sub_id) VALUES ("10006", "90003");
INSERT INTO Subscribed (uid, sub_id) VALUES ("10008", "90004");
INSERT INTO Subscribed (uid, sub_id) VALUES ("10010", "90005");
INSERT INTO Subscribed (uid, sub_id) VALUES ("10012", "90006");
INSERT INTO Subscribed (uid, sub_id) VALUES ("10014", "90007");
INSERT INTO Subscribed (uid, sub_id) VALUES ("10016", "90008");
INSERT INTO Subscribed (uid, sub_id) VALUES ("10018", "90009");
INSERT INTO Subscribed (uid, sub_id) VALUES ("10001", "90010");
INSERT INTO Subscribed (uid, sub_id) VALUES ("10003", "90011");
INSERT INTO Subscribed (uid, sub_id) VALUES ("10005", "90012");
INSERT INTO Subscribed (uid, sub_id) VALUES ("10007", "90013");
INSERT INTO Subscribed (uid, sub_id) VALUES ("10009", "90014");
INSERT INTO Subscribed (uid, sub_id) VALUES ("10011", "90015");
INSERT INTO Subscribed (uid, sub_id) VALUES ("10013", "90016");
INSERT INTO Subscribed (uid, sub_id) VALUES ("10015", "90017");
INSERT INTO Subscribed (uid, sub_id) VALUES ("10017", "90018");
INSERT INTO Subscribed (uid, sub_id) VALUES ("10019", "90019");
```