

CPSC 304 Project Cover Page

Milestone #: 2

Date: July 23, 2022

Group Number: 42

Name	Student Number	CS Alias (Userid)	Preferred E-mail Address
Nicole Liang	10679835	f2f3b	f2f3b@ugrad.cs.ubc.ca
Erin Ren	99013948	h4a3b	renyue0106@gmail.com
Helen Chen	80051246	e5y2b	chenweihan0213@gmail.com

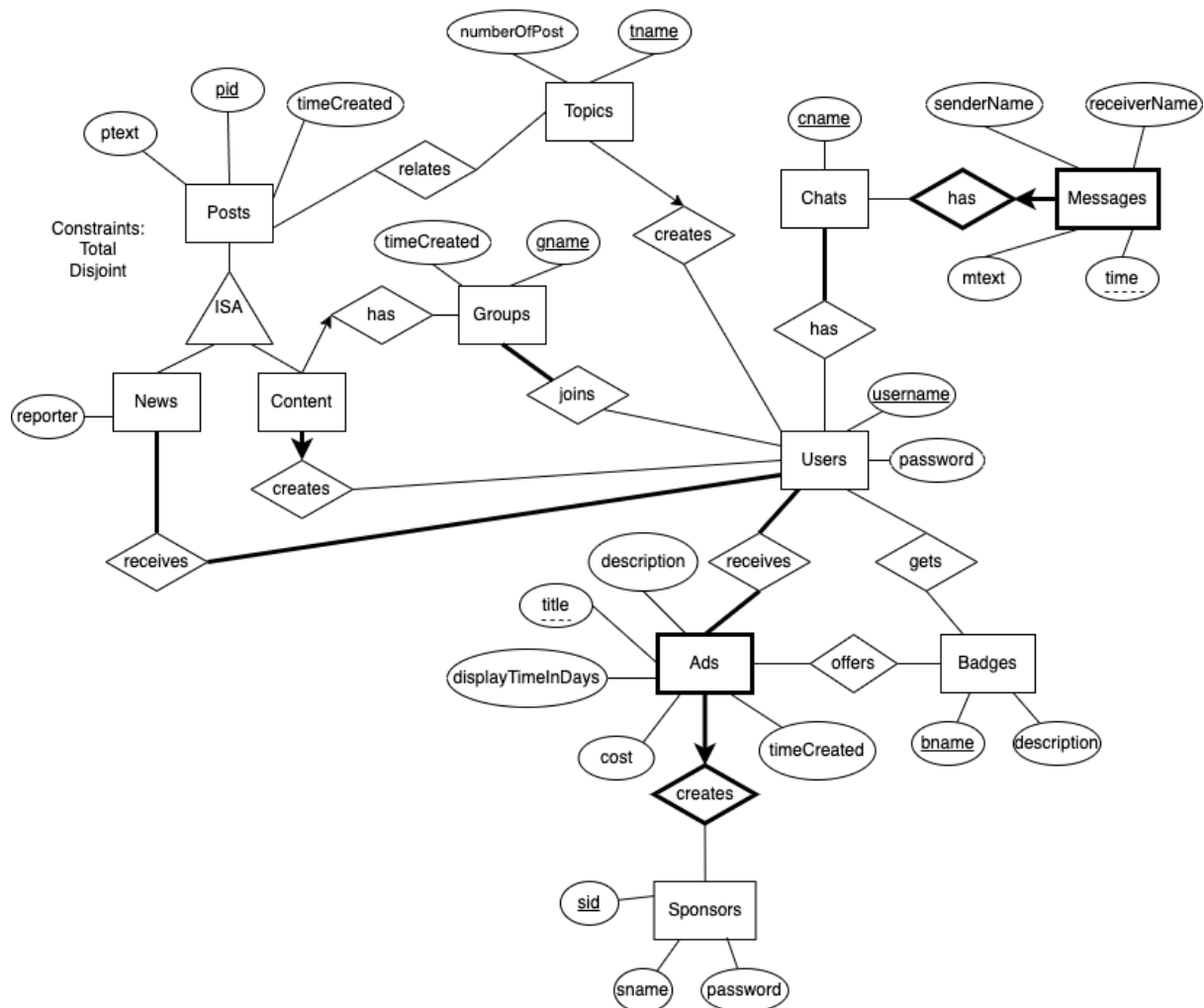
By typing our names and student numbers in the above table, we certify that the work in the attached assignment was performed solely by those whose names and student IDs are included above. (In the case of Project Milestone 0, the main purpose of this page is for you to let us know your e-mail address, and then let us assign you to a TA for your project supervisor.)

In addition, we indicate that we are fully aware of the rules and consequences of plagiarism, as set forth by the Department of Computer Science and the University of British Columbia

Part 2 Diagram

- We changed the naming for ID/Name-type attributes(eg. Id, name to pid, gname) for different entities, in order to avoid confusion.
- We added an additional attribute for News named “reporter” to keep track of the source of news in the database.
- We changed the relationship between Content and Groups to a many-to-one relationship in order to prevent the same content entity from being in multiple groups.
- We changed the relationship between Topics and Users to a many-to-one relationship in order to prevent duplicate topics from being created by users.
- We added two attributes called “displayTimeInDays” and “timeCreated” for Ads to create a functional dependency that violates BCNF

ER Diagram



Part 3 Schema

Users(username:char(50), password:char(50))

- candidate key: {username}
- constraint: password NOT NULL

Chats(cname:char(50))

- candidate key: {cname}

Messages(cname:char(50), time:datetime, mtext:char(80), senderName:char(50), receiverName:char(50))

- candidate key: {cname, time}
- constraint: mtext, senderName, and receiverName NOT NULL

Has_Chats(username:char(50), cname:char(50))

- candidate key: {username, cname}

Topics(tname:char(50), numberOfPost:int)

- candidate key: {tname}
- constraint: numberOfPost NOT NULL

Creates_Topics(tname:char(50), username:char(50))

- candidate key: {tname}

Creates_Ads(sid:char(50), title:char(50), cost:int, description:char(80), displayTimeInDays:int, timeCreated: datetime)

- candidate key: {sid, title}
- constraint: cost, description, displayTimeInDays and timeCreated are NOT NULL

Sponsors(sid:char(50), sname:char(50), password:char(50))

- candidate key: {sid}, {sname}
- constraint: sname UNIQUE and NOT NULL + password NOT NULL

Badges(bname:char(50), description:char(80))

- candidate key: {bname}
- constraint: description NOT NULL

Receives_Ads(sid:char(50), title:char(50), username:char(50))

- candidate key: {sid, title, username}

Gets_Badges(username:char(50), bname:char(50))

- candidate key: {username, bname}

Offers_Badges(sid:char(50), title:char(50), bname:char(50))

- candidate key: {sid, title, bname}

Posts(pid:char(10), ptext:char(200), timeCreated:datetime)

- candidate key: {pid}
- constraint: ptext and timeCreated are NOT NULL

Note: We will use 'N' at the beginning of the pid to represent News and 'C' in the pid to represent 'Content'

Content(pid:char(10), username:char(50), gname:char(30))

- candidate key: {pid}
- constraint: username NOT NULL

News(pid:char(10), reporter:char(40))

- candidate key: {pid}

Receives_News(pid:char(10), username:char(50))

- candidate key: {pid, username}

Relates(pid:char(10), tname:char(50))

- candidate key: {pid, tname}

Groups(gname:char(30), timeCreated:date)

- candidate key: {gname}
- constraint: timeCreated NOT NULL

Joins_Groups(username: char(50), gname: char(30))

- candidate key: {username, gname}

Part 4: Functional Dependencies (Bold and underlined ones violate BCNF)

Users(username) → Users(password)

Messages(cname, senderName) → Messages(receiverName)

Messages(cname,time) → Messages(mtext)

Messages(cname,time) → Messages(senderName)

Messages(cname,time) → Messages(receiverName)

Topics(tname) → Topics(numberOfPost)

Creates_Topics(tname) → Creates_Topics(username)

Sponsors(sid) → Sponsors(sname)

Sponsors(sid) → Sponsors(password)

Sponsors(sname) → Sponsors(password)

Posts(pid) → Posts(timeCreated)

Posts(pid) → Posts(ptext)

Content(pid) → Content(username)

Content(pid) → Content(gname)

News(pid) → News(reporter)

Groups(gname) → Groups(timeCreated)

Creates_Ads(sid, title) → Creates_Ads(cost)

Creates_Ads(sid, title) → Creates_Ads(description)

Creates_Ads(sid, title) → Creates_Ads(displayTimeInDays)

Creates_Ads(sid, title) → Creates_Ads(timeCreated)

Creates_Ads(cost) → Creates_Ads(displayTimeInDays)

Creates_Ads(displayTimeInDays) → Creates_Ads(cost)

Badges(bname) → Badges(description)

Part 5: Normalization

Messages(cname, senderName) → Messages(receiverName)

Messages(cname,time) → Messages(mtext)

Messages(cname,time) → Messages(senderName)

Messages(cname,time) → Messages(receiverName)

{cname, senderName}⁺ = {cname, senderName, receiverName}

{cname, time}⁺ = {cname, time, mtext, senderName, receiverName}

The combination of cname and senderName isn't a valid superkey, therefore we need a decomposition. Decompose Messages into two relations: Messages0(**cname**, **senderName**, receiverName) & Messages1(**cname**, **time**, mtext, **senderName**). Messages0 and Messages1 are in BCNF so we stop decomposing.

Creates_Ads(sid, title) → Creates_Ads(cost)

Creates_Ads(sid, title) → Creates_Ads(description)

Creates_Ads(sid, title) → Creates_Ads(displayTimeInDays)

Creates_Ads(sid, title) → Creates_Ads(timeCreated)

Creates_Ads(cost) → Creates_Ads(displayTimeInDays)

Creates_Ads(displayTimeInDays) → Creates_Ads(cost)

{sid, title}⁺ = {sid, title, cost, description, displayTimeInDays, timeCreated}

{cost}⁺ = {cost, displayTimeInDays}

{displayTimeInDays}⁺ = {displayTimeInDays, cost}

Since cost is not a valid superkey, we decompose Creates_Ads into two relations: Creates_Ads0(**cost**, displayTimeInDays) & Creates_Ads1(**sid**, **title**, **cost**, description, timeCreated). These two relations are in BCNF so we stop.

Relations other than the ones specified above are all in BCNF, so we skip the normalization part.

Users(**username**:char(50), password:char(50))

- candidate key: {username}
- constraint: password NOT NULL

Chats(**cname**:char(50))

- candidate key: {cname}

Messages0(**cname**:char(50), **senderName**:char(50), receiverName:char(50))

- candidate key: {cname, senderName}
- constraint: receiverName NOT NULL

Messages1(**cname**, **time**, mtext, **senderName**)

- candidate key: {cname, time}
- constraint: mtext and senderName NOT NULL

Has_Chats(**username**:char(50), **cname**:char(50))

- candidate key: {username, cname}

Topics(**tname**:char(50), numberOfPost:int)

- candidate key: {tname}

- constraint: numberOfPost NOT NULL

Creates_Topics(**tname**:char(50), **username**:char(50))

- candidate key: {tname}
- constraint: username NOT NULL

Creates_Ads0(**cost**:int, displayTimeInDays:int)

- candidate key: {cost}, {displayTimeInDays}
- constraint: displayTimeInDays NOT NULL and UNIQUE

Creates_Ads1(**sid**:char(50),**title**:char(50),**cost**:int,description:char(80),timeCreated:datetime)

- candidate key: {sid, title}
- constraint: cost, description and timeCreated are NOT NULL

Sponsors(**sid**:char(50),sname:char(50),password:char(50))

- candidate key:{sid},{sname}
- constraint: sname UNIQUE and NOT NULL + password NOT NULL

Badges(**bname**:char(50),description:char(80))

- candidate key:{bname}
- constraint: description NOT NULL

Receives_Ads(**sid**:char(50),**title**:char(50),**username**:char(50))

- candidate key:{sid,title,username}

Gets_Badges(**username**:char(50),**bname**:char(50))

- candidate key:{username, bname}

Offers_Badges(**sid**:char(50),**title**:char(50),**bname**:char(50))

- candidate key:{sid,title,bname}

Posts(**pid**:char(10), ptext:char(200), timeCreated:datetime)

- candidate key:{pid}
- constraint:ptext and timeCreated are NOT NULL

Content(**pid**:char(10), **username**:char(50), **gname**:char(30))

- candidate key:{pid}
- constraint: username NOT NULL

News(**pid**:char(10), reporter:char(50))

- candidate key:{pid}

Receives_News(**pid**:char(10), **username**:char(50))

- candidate key:{pid,username}

Relates(**pid**:char(10), **tname**:char(50))

- candidate key:{pid,tname}

Groups(**gname**:char(30), timeCreated:date)

- candidate key:{gname}
- constraint: timeCreated NOT NULL

Joins_Groups(**username**: char(50), **gname**: char(30))

- candidate key: {username, gname}

Part 6: SQL DDL

```
CREATE TABLE Users(  
    username char(50) PRIMARY KEY,  
    password char(50) NOT NULL  
);
```

```
CREATE TABLE Chats(  
    cname char(50) PRIMARY KEY  
);
```

```
CREATE TABLE Messages0(  
    cname char(50),  
    senderName char(50),  
    receiverName char(50) NOT NULL,  
    PRIMARY KEY(cname, senderName),  
    FOREIGN KEY(cname) REFERENCES Chats  
        ON DELETE CASCADE  
        ON UPDATE CASCADE  
);
```

```
CREATE TABLE Messages1(  
    cname char(50),  
    time datetime,  
    mtext char(80) NOT NULL,  
    senderName char(50) NOT NULL,  
    PRIMARY KEY(cname, time),  
    FOREIGN KEY(cname, senderName) REFERENCES Messages0  
        ON DELETE CASCADE  
        ON UPDATE CASCADE  
);
```

```
CREATE TABLE Has_Chats(  
    username char(50),  
    cname char(50),  
    PRIMARY KEY(username, cname),  
    FOREIGN KEY(username) REFERENCES Users  
        ON DELETE CASCADE  
        ON UPDATE CASCADE,  
    FOREIGN KEY(cname) REFERENCES Chats  
        ON DELETE CASCADE  
        ON UPDATE CASCADE  
);
```

```
CREATE TABLE Topics(  
    
```



```

        tname char(50) PRIMARY KEY,
        numberOfPost int NOT NULL
    );

CREATE TABLE Creates_Topics(
    tname char(50) PRIMARY KEY,
    username char(50),
    FOREIGN KEY(tname) REFERENCES Topics
        ON DELETE CASCADE
        ON UPDATE CASCADE
    FOREIGN KEY(username) REFERENCES Users
        ON DELETE CASCADE
        ON UPDATE CASCADE
);

CREATE TABLE Sponsors(
    sid char(50) PRIMARY KEY,
    sname char(50) NOT NULL UNIQUE,
    password char(50) NOT NULL
);

CREATE TABLE Creates_Ads0(
    cost int PRIMARY KEY,
    displayTimeInDays int NOT NULL UNIQUE
);

CREATE TABLE Creates_Ads1(
    sid char(50),
    title char(50),
    cost int NOT NULL,
    description char(80) NOT NULL,
    timeCreated datetime NOT NULL,
    PRIMARY KEY(sid,title),
    FOREIGN KEY(sid) REFERENCES Sponsors
        ON DELETE CASCADE
        ON UPDATE CASCADE
    FOREIGN KEY(cost) REFERENCES Creates_Ads0
        ON DELETE NO ACTION
        ON UPDATE CASCADE
);

CREATE TABLE Badges(
    bname char(50) PRIMARY KEY,
    description char(80) NOT NULL
);

```

```

CREATE TABLE Receives_Ads(
    sid char(50),
    title char(50),
    username char(50),
    PRIMARY KEY(sid,title,username),
    FOREIGN KEY(sid, title) REFERENCES Creates_Ads1
        ON DELETE CASCADE
        ON UPDATE CASCADE,
    FOREIGN KEY(username) REFERENCES Users
        ON DELETE CASCADE
        ON UPDATE CASCADE
);

```

```

CREATE TABLE Gets_Badges(
    username char(50),
    bname char(50),
    PRIMARY KEY(username,bname),
    FOREIGN KEY(username) REFERENCES Users
        ON DELETE CASCADE
        ON UPDATE CASCADE,
    FOREIGN KEY(bname) REFERENCES Badges
        ON DELETE CASCADE
        ON UPDATE CASCADE
);

```

```

CREATE TABLE Offers_Badges(
    sid char(50),
    title char(50),
    bname char(50),
    PRIMARY KEY(sid,title,bname),
    FOREIGN KEY(sid, title) REFERENCES Creates_Ads1
        ON DELETE CASCADE
        ON UPDATE CASCADE,
    FOREIGN KEY(bname) REFERENCES Badges
        ON DELETE CASCADE
        ON UPDATE CASCADE
);

```

```

CREATE TABLE Posts(
    pid char(10) PRIMARY KEY,
    ptext char(200) NOT NULL,
    timeCreated datetime NOT NULL
);

```

```

CREATE TABLE News(
    pid char(10) PRIMARY KEY,
    reporter char(50) NOT NULL,
    FOREIGN KEY(pid) REFERENCES Posts(pid)
        ON DELETE CASCADE
        ON UPDATE CASCADE
);

CREATE TABLE Receives_News(
    pid char(10),
    username char(50),
    PRIMARY KEY (pid, username),
    FOREIGN KEY (pid) REFERENCES News(pid)
        ON DELETE CASCADE
        ON UPDATE CASCADE,
    FOREIGN KEY (username) REFERENCES Users(username)
        ON DELETE CASCADE
        ON UPDATE CASCADE
);

CREATE TABLE Relates(
    pid char(10),
    tname char(50),
    PRIMARY KEY (pid, tname),
    FOREIGN KEY (pid) REFERENCES Posts(pid)
        ON DELETE CASCADE
        ON UPDATE CASCADE,
    FOREIGN KEY (tname) REFERENCES Topics(tname)
        ON DELETE CASCADE
        ON UPDATE CASCADE
);

CREATE TABLE Groups(
    gname char(30) PRIMARY KEY,
    timeCreated date NOT NULL
);

CREATE TABLE Content(
    pid char(10) PRIMARY KEY,
    username char(50) NOT NULL,
    gname char(30),
    FOREIGN KEY(pid) REFERENCES Posts(pid)
        ON DELETE CASCADE
        ON UPDATE CASCADE,
    FOREIGN KEY(username) REFERENCES Users(username)
        ON DELETE CASCADE

```

```
        ON UPDATE CASCADE,  
FOREIGN KEY(gname) REFERENCES Groups(gname)  
        ON DELETE CASCADE  
        ON UPDATE CASCADE  
);  
  
CREATE TABLE Joins_Groups(  
    username char(50),  
    gname char(30),  
    PRIMARY KEY (gname, username),  
    FOREIGN KEY (gname) REFERENCES Groups(gname)  
        ON DELETE CASCADE  
        ON UPDATE CASCADE,  
    FOREIGN KEY (username) REFERENCES Users(username)  
        ON DELETE CASCADE  
        ON UPDATE CASCADE  
);
```

Part 7: Insert

```
INSERT INTO Users(username, password)
VALUES ('user1', 'password1'), ('user2', 'password2'), ('user3',
'password3'), ('user4', 'password4'), ('user5', 'password5');

INSERT INTO Chats(cname)
VALUES ('chatFor1&2'), ('chatFor1&3'), ('chatFor3&4'), ('chatFor2&5'),
('chatFor1&5');

INSERT INTO Messages0(cname, senderName, receiverName)
VALUES ('chatFor1&2', 'user1', 'user2'), ('chatFor1&2', 'user2',
'user1'), ('chatFor1&3', 'user1', 'user3'), ('chatFor1&3', 'user3',
'user1'), ('chatFor1&5', 'user1', 'user5'), ('chatFor1&5', 'user5',
'user1');

INSERT INTO Messages1(cname, time, mtext, senderName)
VALUES ('chatFor1&2', '20220718 10:34:09 AM', 'hi', 'user1'),
('chatFor1&2', '20220718 10:35:09 AM', 'hello', 'user2'),
('chatFor1&3', '20220718 10:36:09 AM', 'hi', 'user1'), ('chatFor1&5',
'20220718 10:37:09 AM', 'hi', 'user1'), ('chatFor1&5', '20220718
10:38:09 AM', 'hi user1', 'user5');

INSERT INTO Has_Chats(username, cname)
VALUES ('user1', 'chatFor1&2'), ('user1', 'chatFor1&3'), ('user1',
'chatFor1&5'), ('user2', 'chatFor1&2'), ('user2', 'chatFor2&5'),
('user3', 'chatFor1&3'), ('user3', 'chatFor3&4'), ('user4',
'chatFor3&4'), ('user5', 'chatFor1&5'), ('user5', 'chatFor2&5');

INSERT INTO Topics(tname, numberOfPost)
VALUES ('sunrise', 0), ('Sports', 0), ('Pets', 1), ('Sea', 0),
('Spring', 0), ('My Favorite Song', 0), ('My Day', 3), ('Coffee', 1),
('Diet', 0);

INSERT INTO Creates_Topics(tname, username)
VALUES ('Spring', 'user1'), ('My Favorite Song', 'user1'), ('My Day',
'user2'), ('Coffee', 'user2'), ('Diet', 'user2');

INSERT INTO Sponsors(sid, sname, password)
VALUES('s1', 'COFFEE', 'password1'), ('s2', 'TEA', 'password2'), ('s3',
'BOBA', 'password3'), ('s4', 'GEESE', 'password4'), ('s5', 'MATCHA',
'password5');
```

```
INSERT INTO Creates_Ads0(cost, displayTimeInDays)
VALUES(100, 5), (500, 30), (1000, 65), (2000,140), (4000, 300);
```

```
INSERT INTO Creates_Ads1(sid, title, cost, description, timeCreated)
VALUES('s1', 'COFFEE1', '100', 'Freshly Brewed Coffee', '20220704
10:34:09 AM'), ('s3', 'BOBA1', '500', 'Amazing Black Sugar Boba',
'20220704 10:35:09 AM'), ('s3', 'BOBA2', '500', 'Blue Lemonade',
'20220704 10:36:09 AM'), ('s4', 'GEESE1', '500', 'The Best Animal, and
the fiercest fighter', '20220704 10:37:09 AM'), ('s5', 'MATCHA1',
'1000', 'The Supremacy', '20220704 10:39:09 AM'), ('s5', 'MATCHA2',
'4000', 'The Oriental', '20220704 10:44:09 AM');
```

```
INSERT INTO Badges(bname, description)
VALUES('b1', 'For Coffee Lover'), ('b2', 'For Black Sugar Lover'), ('b3',
'For Lemonade Lover'), ('b4', 'For Matcha Lover'), ('b5', 'Great
User'), ('b6', 'Honourable Geese');
```

```
INSERT INTO Receives_Ads(sid, title, username)
VALUES('s1', 'COFFEE1', 'user1'), ('s1', 'COFFEE1', 'user2'), ('s1',
'COFFEE1', 'user3'), ('s1', 'COFFEE1', 'user4'), ('s1', 'COFFEE1',
'user5'), ('s3', 'BOBA1', 'user1'), ('s3', 'BOBA1', 'user2'), ('s3',
'BOBA1', 'user3'), ('s3', 'BOBA1', 'user4'), ('s3', 'BOBA1', 'user5'),
('s3', 'BOBA2', 'user1'), ('s3', 'BOBA2', 'user2'), ('s3', 'BOBA2',
'user3'), ('s3', 'BOBA2', 'user4'), ('s3', 'BOBA2', 'user5'), ('s4',
'GEESE1', 'user1'), ('s4', 'GEESE1', 'user2'), ('s4', 'GEESE1',
'user3'), ('s4', 'GEESE1', 'user4'), ('s4', 'GEESE1', 'user5'), ('s5',
'MATCHA1', 'user1'), ('s5', 'MATCHA1', 'user2'), ('s5', 'MATCHA1',
'user3'), ('s5', 'MATCHA1', 'user4'), ('s5', 'MATCHA1', 'user5'), ('s5',
'MATCHA2', 'user1'), ('s5', 'MATCHA2', 'user2'), ('s5', 'MATCHA2',
'user3'), ('s5', 'MATCHA2', 'user4'), ('s5', 'MATCHA2', 'user5');
```

```
INSERT INTO Gets_Badges(username, bname)
VALUES('user1', 'b1'), ('user1', 'b2'), ('user1', 'b3'), ('user1',
'b4'), ('user1', 'b5'), ('user1', 'b6'), ('user2', 'b1'), ('user2',
'b2'), ('user2', 'b3'), ('user2', 'b4'), ('user2', 'b6'), ('user3',
'b1'), ('user3', 'b2'), ('user3', 'b3'), ('user3', 'b4'), ('user3',
'b6'), ('user4', 'b1'), ('user4', 'b2'), ('user4', 'b3'), ('user4',
'b4'), ('user4', 'b6'), ('user5', 'b1'), ('user5', 'b2'), ('user5',
'b3'), ('user5', 'b4'), ('user5', 'b6');
```

```
INSERT INTO Offers_Badges(sid, title, bname)
VALUES('s1', 'COFFEE1', 'b1'), ('s3', 'BOBA1', 'b2'), ('s3', 'BOBA2',
'b3'), ('s5', 'MATCHA1', 'b4'), ('s4', 'GEESE1', 'b6');
```

```
INSERT INTO Posts(pid, ptext, timeCreated)
```

```
VALUES('C123456789', 'Breka Café has the best hot chocolate!',
'20220704 10:34:09 AM'), ('N888456781', 'Breaking News: Billionaire Sued
for Backing Out of Purchase', '20220612 10:34:09 AM'), ('C123455553',
'Canadian Geese can sense fear', '20220529 10:34:09 AM'),
('N833746781', 'Boulder Found on Sea-to-Sky Highway', '20220430
10:34:09 AM'), ('C196478236', 'Why can cows stop burglars? They
calcium!', '20220601 10:34:09 AM'), ('C163489553', 'Ice cream sandwich
melted in my hands. Why do bad things happen to good people?',
'20220529 10:34:09 AM'), ('C314504864', 'The sun and I have a love-hate
relationship', '2022-07-01 10:34:09 AM'), ('N257416580', 'New Species
of Raccoon Discovered!', '20220626 10:34:09 AM'), ('N833698021',
'Expert Weighs in: Five Ways to Declutter Your Haunted Doll Room',
'20220408 10:34:09 AM'), ('N394256710', 'Housing Market - The One
Industry that Millennials Have Not Killed. Yet.', '20220511 10:34:09
AM');
```

```
INSERT INTO Groups(gname, timeCreated)
VALUES('group1', '2022-04-01'), ('group2', '2022-05-11'), ('group3',
'2022-06-30'), ('group4', '2022-05-24'), ('group5', '2022-07-11');
```

```
INSERT INTO Content(pid, username, gname)
VALUES('C123455553', 'user1', 'group5'), ('C196478236', 'user3',
'group3'), ('C123456789', 'user2', NULL), ('C163489553', 'user4',
NULL), ('C314504864', 'user5', NULL);
```

```
INSERT INTO News(pid, reporter)
VALUES('N888456781', 'reporter1'), ('N833746781', 'reporter2'),
('N833698021', 'reporter3'), ('N394256710', 'reporter4'),
('N257416580', 'reporter5');
```

```
INSERT INTO Relates(pid, tname)
VALUES('C123455553', 'Coffee'), ('C123456789', 'My Day'),
('C196478236', 'Pets'), ('N888456781', 'My Day'), ('N833698021', 'My
Day');
```

```
INSERT INTO Joins_Groups(username, gname)
VALUES('user1', 'group1'), ('user2', 'group2'), ('user3', 'group3'),
('user2', 'group4'), ('user1', 'group5');
```

```
INSERT INTO Receives_News(pid, username)
VALUES('N888456781', 'user1'), ('N888456781', 'user2'), ('N888456781',
'user3'), ('N888456781', 'user4'), ('N888456781', 'user5'),
('N833746781', 'user1'), ('N833746781', 'user2'), ('N833746781',
'user3'), ('N833746781', 'user4'), ('N833746781', 'user5'),
('N833698021', 'user1'), ('N833698021', 'user2'), ('N833698021',
'user3'), ('N833698021', 'user4'), ('N833698021', 'user5');
```

```
('N394256710', 'user1'), ('N394256710', 'user2'), ('N394256710', 'user3'), ('N394256710', 'user4'), ('N394256710', 'user5'), ('N257416580', 'user1'), ('N257416580', 'user2'), ('N257416580', 'user3'), ('N257416580', 'user4'), ('N257416580', 'user5');
```

Badges

bname	description
b1	For Coffee Lover
b2	For Black Sugar Lover
b3	For Lemonade Lover
b4	For Matcha Lover
b5	Great User
b6	Honourable Geese

Chats

cname
chatFor1&2
chatFor1&3
chatFor3&4
chatFor2&5
chatFor1&5

Content

pid	username	gname
C123455553	user1	group5
C196478236	user3	group3
C123456789	user2	
C163489553	user4	
C314504864	user5	

Creates_Ads0

cost	displayTimeInDays
100	5
500	30
1000	65
2000	140
4000	300

Creates_Ads1

sid	title	cost	description	timeCreated
s1	COFFEE1	100	Freshly Brewed Coffee	20220704 10:34:09 AM
s3	BOBA1	500	Amazing Black Sugar Boba	20220704 10:35:09 AM
s3	BOBA2	500	Blue Lemonade	20220704 10:36:09 AM
s4	GEESE1	500	The Best Animal, and the fiercest fighter	20220704 10:37:09 AM
s5	MATCHA1	1000	The Supremacy	20220704 10:39:09 AM
s5	MATCHA2	4000	The Oriental	20220704 10:44:09 AM

Messages1

cname	time	mtext	senderName
chatFor1&2	20220718 10:34:09 AM	hi	user1
chatFor1&2	20220718 10:35:09 AM	hello	user2
chatFor1&3	20220718 10:36:09 AM	hi	user1
chatFor1&5	20220718 10:37:09 AM	hi	user1
chatFor1&5	20220718 10:38:09 AM	hi user1	user5

News

pid	reporter
N888456781	reporter1
N833746781	reporter2
N833698021	reporter3
N394256710	reporter4
N257416580	reporter5

Offers_Badges

sid	title	bname
s1	COFFEE1	b1
s3	BOBA1	b2
s3	BOBA2	b3
s5	MATCHA1	b4
s4	GEESE1	b6

Posts		
pid	ptext	timeCreated
C123456789	Breka Café has the best hot chocolate!	20220704 10:34:09 AM
N888456781	Breaking News: Billionare Sued for Backing Out of Purchase	20220612 10:34:09 AM
C123455553	Canadian Geese can sense fear	20220529 10:34:09 AM
N833746781	Boulder Found on Sea-to-Sky Highway	20220430 10:34:09 AM
C196478236	Why can cows stop burglars? They calcium!	20220601 10:34:09 AM
C163489553	Ice cream sandwich melted in my hands. Why do bad things happen to good people?	20220529 10:34:09 AM
C314504864	The sun and I have a love-hate relationship	2022-07-01 10:34:09 AM
N257416580	New Species of Raccoon Discovered!	20220626 10:34:09 AM
N833698021	Expert Weighs in: Five Ways to Declutter Your Haunted Doll Room	20220408 10:34:09 AM
N394256710	Housing Market - The One Industry that Millennials Have Not Killed. Yet.	20220511 10:34:09 AM

Receives_Ads		
sid	title	username
s1	COFFEE1	user1
s1	COFFEE1	user2
s1	COFFEE1	user3
s1	COFFEE1	user4
s1	COFFEE1	user5
s3	BOBA1	user1
s3	BOBA1	user2
s3	BOBA1	user3
s3	BOBA1	user4
s3	BOBA1	user5
s3	BOBA2	user1
s3	BOBA2	user2
s3	BOBA2	user3
s3	BOBA2	user4
s3	BOBA2	user5
s4	GEESE1	user1
s4	GEESE1	user2
s4	GEESE1	user3
s4	GEESE1	user4
s4	GEESE1	user5
s5	MATCHA1	user1
s5	MATCHA1	user2
s5	MATCHA1	user3
s5	MATCHA1	user4
s5	MATCHA1	user5
s5	MATCHA2	user1
s5	MATCHA2	user2
s5	MATCHA2	user3
s5	MATCHA2	user4
s5	MATCHA2	user5

Receives_News

pid	username
N888456781	user1
N888456781	user2
N888456781	user3
N888456781	user4
N888456781	user5
N833746781	user1
N833746781	user2
N833746781	user3
N833746781	user4
N833746781	user5
N833698021	user1
N833698021	user2
N833698021	user3
N833698021	user4
N833698021	user5
N394256710	user1
N394256710	user2
N394256710	user3
N394256710	user4
N394256710	user5
N257416580	user1
N257416580	user2
N257416580	user3
N257416580	user4
N257416580	user5

Relates	
pid	tname
C123455553	Coffee
C123456789	My Day
C196478236	Pets
N888456781	My Day
N833698021	My Day

Users	
username	password
user1	password1
user2	password2
user3	password3
user4	password4
user5	password5

Sponsors

sid	sname	password
s1	COFFEE	password1
s2	TEA	password2
s3	BOBA	password3
s4	GEESE	password4
s5	MATCHA	password5

Topics

tname	numberOfPost
sunrise	0
Sports	0
Pets	1
Sea	0
Spring	0
My Favorite Song	0
My Day	3
Coffee	1
Diet	0

Creates_Topics

tname	username
Spring	user1
My Favorite Song	user1
My Day	user2
Coffee	user2
Diet	user2

Gets_Badges

username	bname
user1	b1
user1	b2
user1	b3
user1	b4
user1	b5
user1	b6
user2	b1
user2	b2
user2	b3
user2	b4
user2	b6
user3	b1
user3	b2
user3	b3
user3	b4
user3	b6
user4	b1
user4	b2
user4	b3
user4	b4
user4	b6
user5	b1
user5	b2
user5	b3
user5	b4
user5	b6

Groups

gname	timeCreated
group1	2022-04-01
group2	2022-05-11
group3	2022-06-30
group4	2022-05-24
group5	2022-07-11

Has_Chats

username	cname
user1	chatFor1&2
user1	chatFor1&3
user1	chatFor1&5
user2	chatFor1&2
user2	chatFor2&5
user3	chatFor1&3
user3	chatFor3&4
user4	chatFor3&4
user5	chatFor1&5
user5	chatFor2&5

Joins_Groups

username	gname
user1	group1
user2	group2
user3	group3
user2	group4
user1	group5

Messages0

cname	senderName	receiverName
chatFor1&2	user1	user2
chatFor1&2	user2	user1
chatFor1&3	user1	user3
chatFor1&3	user3	user1
chatFor1&5	user1	user5
chatFor1&5	user5	user1