

# CPSC 304 Project Cover Page

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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

Our project is a database that will model social media users, accounts, the posts accounts can make and interactions made between these accounts. Our database models each individual user as an entity and link them with multiple accounts, we wish to store their profile information such as usernames, follower counts, following counts, as user-specific attributes.

The diagram is a hand-drawn Entity-Relationship (ER) model for a social media application. It features several entities, their attributes, and the relationships between them.

**Entities and Attributes:**

- User:** Attributes include *userID*, *fullName*, *age*, *generation*, *gender*, and *birthdate*.
- Account:** Attributes include *username*, *display name*, *numFollowing*, *numFollowers*, and *numPosts*.
- Stories:** Attributes include *storyID*, *duration*, and *URL*.
- Comments:** Attributes include *commentID*, *text*, and *date*.
- Likes:** Attributes include *numLikes* and *likeID*.
- Posts:** Attributes include *postID*, *location*, and *postDate*.
- Hashtags:** Attributes include *numUses*, *hashID*, and *hashName*.
- Reel:** Attributes include *text* and *location*.
- FeedPost:** Attributes include *text* and *image*.
- Notification:** Attributes include *PostLink*, *text*, and *time*.

**Relationships:**

- Owns:** Connects **User** and **Account**.
- Follow:** Connects **Account** to **Account** (self-referencing).
- Share:** Connects **Account** and **Stories**.
- Send:** Connects **Notification** and **Stories**.
- DoubleTap:** Connects **Account** and **Comments**.
- Publish:** Connects **Account** and **Posts**.
- Create:** Connects **Comments** and **Likes**.
- Has:** Connects **Likes** and **Posts**.
- Has:** Connects **Posts** and **Hashtags**.
- ISA:** Connects **Posts** to **Reel** and **FeedPost**, indicating inheritance.
- Contain:** Connects **Comments** and **Posts**.

A handwritten note "Total disjoint" is present near the bottom right of the diagram.

3. Note for changes made to the ER diagram:

1. We broke down the Make relationship into several binary relationships in an attempt to make the domain clearer.
  - a. We added a post relationship between Account and Posts that is 1:M, with total participation, meaning an account can post multiple posts, and every post must be associated with an account.
  - b. We added a binary 1: M, Make relationship between Account and Comments, meaning an account can make many Comments, each comment must be associated with an account.
  - c. We added a 1:1 Doubletap relationship between Account and Likes, with a total participation constraint on Likes, to indicate that every like must be performed by an Account.
  - d. We added a Posts Has Likes relationship that is 1:M and total participation on Likes, meaning that every Like must be associated to a Post, and a Post can have multiple Likes.
  - e. Instagram also has a feature where comments can have likes, So we added a Comments Has Likes Relationship which is 1:M, so Comments can have 0 or more likes.
    - i. On a higher level we can see that every Like must be associated to one Account and associated to one Post. A Post can have many likes.
  - f. Instagram allows you to comment on posts, so we added a Posts Contain Comments, that is 1:1 with total participation from Comments, so every Comment must be uniquely associated to some post.
    - i. On a higher level we can see that every Comment must be associated to an Account and must be associated to a post
2. Changes the ISA relationship
  - a. In instagram there are two types of posts you can make, therefore our designed captures:
    - i. A Reel, which is a video-type of post and shows up in a separate section from feed posts on an account
    - ii. A Feedpost which can contain one or more photo/videos and a caption.
    - iii. Both of these post types share common attributes and share the ability to interact with other entities similarly
    - iv. We chose Total and Disjoint constraints since a Post must fall under one of these two subclasses, and these two subclasses are separate categorizations
3. Added attributes
  - a. To User, we added birthdate and generation (Boomers, Millennials, Generation , etc.). We felt that these would be important attributes to add to a user's table

#### 4. schemas

NotificationsSend(PostLink: VARCHAR[ ], text: VARCHAR[ ], time: time, **storyID**: NOT NULL)

User(userID: INTEGER, gender: VARCHAR[ ], fullName: VARCHAR[ ], age: INTEGER, birthdate: Date, generation: VARCHAR[ ]);

StoriesShare(storyID: VARCHAR[ ], duration: date NOT NULL, URL: VARCHAR[ ] UNIQUE, **userName**: VARCHAR[ ], **userID**: INTEGER NOT NULL)

Reel(text: CHAR[ ], length: CHAR[ ], **postID**: INTEGER, **postID**: INTEGER, location: VARCHAR[ ], postDate: date)

FeedPost(text: CHAR[ ], image, **postID**: INTEGER, location: VARCHAR[ ], postDate: date)

Hashtags(**hashID**: INTEGER, hashName: VARCHAR[ ])

HashtagHasPost(**hashID**: CHAR[ ], **postID**: INTEGER)

LikesDoubleTapHas(**likeID**: CHAR[ ], numLikes: INTEGER, date: date, **postID**: INTEGER NOT NULL, **userName**: VARCHAR[ ], **userID**: INTEGER, **commentID**: CHAR[ ])

PublishPosts(**PostID**, location, post\_date, **userName**, **userID**)

MakeComments(text: CHAR[ ], **commentID**: CHAR[ ], date: date, **userName**: VARCHAR[ ] NOT NULL, **userID**: INTEGER NOT NULL) // we need to include userName, userID since both of them are our primary key

Contain(**commentID**: CHAR[ ], **postID**: INTEGER)

AccountOwns(**userName**: VARCHAR[ ], displayName: VARCHAR[ ], numFollowing: INTEGER, numFollowers: INTEGER, numPosts: INTEGER, **userID**: INTEGER)

## 5. Function Dependencies

- (1) NotificationsSend(**PostLink**: VARCHAR[ ], text: VARCHAR[ ], time: time, **storyID**: NOT NULL)

FD:

PostLink -> text, time, storyID

(time, storyID) -> PostLink

- (2) User(**userID**: INTEGER, gender: VARCHAR[ ], fullName: VARCHAR[ ], age: INTEGER, birthdate: Date, generation: CHAR[ ]);

FD:

userID-> gender, fullName, age, birthdate

birthdate-> generation

- (3) StoriesShare(**storyID**: CHAR[ ], duration: date, URL: VARCHAR[ ] UNIQUE, **userName**: VARCHAR[ ], **userID**: INTEGER)

FD:

storyID -> duration, URL, userName, userID

URL -> duration, storyID, userName, userID

(userID, duration) -> (storyID, URL, name) //// not in BNF

- (4) Reel(text: CHAR[ ], length: CHAR[ ], **postID**: INTEGER, location: VARCHAR[ ], postDate: date)

FD:

postID -> length, text, location, postDate

(length, text, location, postDate) => hashID

- (5) FeedPost(text: CHAR[ ], numImage: INTEGER, postID: INTEGER, location: VARCHAR[ ], postDate: date)

FD:

postID->text, numImage, location, postDate

(text, numImage, location, postDate) => hashID

- (6) Hashtags(hashID: INTEGER, hashName: VARCHAR[ ], numUses: INTEGER)

FD:

hashID -> hashName, numUses

hashName -> numUses

- (7) HashtagHasPost(hashID: INTEGER, postID: INTEGER)

FD:

hashID -> postID

postID -> length, text, location, postDate

- (8) LikesDoubletapHas(likeID: CHAR[ ], numLikes: INTEGER, date: date, **postID**: INTEGER NOT NULL, **userName**: VARCHAR[ ], **userID**: INTEGER, **commentID**: CHAR[ ])

FD:

likeID -> numLikes, date, postID, userName, userID, commentID

(postID, userID) -> likeID

userID->userName

postID-> userID, userName, numLikes, commentID

date, postID -> numLikes

- (9) MakeComments(text: CHAR[ ], commentID: CHAR[ ], date: date, **userName**: VARCHAR[ ] NOT NULL, **userID**: INTEGER NOT NULL)

FD:

commentID -> text, date, userName, userID

userID->userName

userID, text, date-> commentID

- (10) Contain(commentID: CHAR[ ], postID: INTEGER)

FD:

commentID-> postID

postID -> commentID

- (11) AccountOwns(userName: VARCHAR[ ], displayName: VARCHAR[ ], numFollowing: INTEGER, numFollowers: INTEGER, numPosts: INTEGER, userID: CHAR[ ])

FD:

userName, userID -> displayName, numFollowing, numFollowers, numPosts

displayName, numFollowing, numFollowers, numPosts -> username, userID

- (12) PublishPosts(PostID, location, postDate, **userName**, **userID**)

FD:

PostID -> location, postDate, userName, userID  
userID->userName

## 6. Normalization

- (1) Both PostLink and (time, storyID) are superkeys, so no decomposition is required  
NotificationsSend(PostLink: VARCHAR[ ], text: VARCHAR[ ], time: time, **storyID**: NOT NULL)
- (2) Birthdate is not superkey, decompose the table into two tables. One contains birthdate and generation, and the other one contains all attributes except generation.  
BirthdateGen(birthdate: DATE, generation: CHAR[ ])  
User(userID: INTEGER, gender: VARCHAR[ ], fullName: VARCHAR[ ], age: INTEGER, birthdate: Date)
- (3) Already in BCNF.  
StoriesShare(storyID: VARCHAR[ ], duration: date, URL: VARCHAR[ ] UNIQUE, **userName**: VARCHAR[ ], **userID**: INTEGER)
- (4) Reel  
Already in BCNF  
Reel(text: CHAR[ ], length: CHAR[ ], postID: INTEGER, location: VARCHAR[ ], postDate: date)
- (5) FeedPost  
Already in BCNF  
FeedPost(text: CHAR[ ], numImage: INTEGER, postID: INTEGER, location: VARCHAR[ ], postDate: date)
- (6) Hashtags  
hashname is not superkey, so it is not in BCNF, decomposes into two tables. One contains hashName and numUses, and the other one contains hashID and hashName.  
Hashtags(hashID: INTEGER, hashName: VARCHAR[ ])  
HashName(hashName: VARCHAR[ ], numUses: INTEGER)
- (7) HashtagHasPost  
Already in BCNF.  
HashtagHasPost(**hashID**: INTEGER, **postID**: INTEGER)
- (8) LikesDoubletapHas  
UserID is not superkey, so it is not in BCNF. PostID is not superkey either but it is part of a minimal key, so it is in 3NF. We only need to decompose the FD userID->userName.  
UserIdentity(**userID**: INTEGER, userName: VARCHAR[ ])  
LikesDoubletapHas(likeID: CHAR[ ], numLikes: INTEGER, date: date, **postID**: INTEGER NOT NULL, **userID**: INTEGER, **commentID**: CHAR[ ])
- (9) MakeComments

UserID is not superkey, but it is being decomposed in the above relationship, still decompose with this FD but get rid of the duplicated (UserID,UserName) table.

MakeComments(text: CHAR[ ], commentID: CHAR[ ], date: date, **userID**: INTEGER NOT NULL)

(10) Contain

Already in BCNF.

Contain(commentID: CHAR[ ], postID: INTEGER)

(11) AccountOwns

Already in BCNF.

AccountOwns(userName: VARCHAR[ ], displayName: VARCHAR[ ], numFollowing: INTEGER, numFollowers: INTEGER, numPosts: INTEGER, **userID**: INTEGER)

(12) PublishPosts

UserID is not superkey, but it is being decomposed in the above relationship, still decompose with this FD but get rid of the duplicated (UserID,UserName) table.

PublishPosts(PostID: INTEGER, location: VARCHAR[ ], postDate: DATE, **userID**: INTEGER)

## 7. SQL DDL statements

(1) CREATE TABLE NotificationsSend (

PostLink VARCHAR[255],

text VARCHAR[500],

time TIME,

storyID VARCHAR[255] NOT NULL,

PRIMARY KEY (PostLink),

FOREIGN KEY (storyID) REFERENCES StoriesShare,

ON UPDATE CASCADE

ON DELETE CASCADE

)

(2) CREATE TABLE User(

userID INTEGER,

gender VARCHAR[3],

fullName VARCHAR[30],

age INTEGER,

birthdate DATE,

PRIMARY KEY (userID)

)

CREATE TABLE BirthdateGen(

birthdate DATE,

generation CHAR[4],

PRIMARY KEY (birthdate)

)

```
(3) CREATE TABLE StoriesShare(  
    storyID VARCHAR[255],  
    duration DATE,  
    URL VARCHAR[255] UNIQUE,  
    userName VARCHAR[30],  
    userID INTEGER,  
    PRIMARY KEY (storyID),  
    FOREIGN KEY (userName) REFERENCES AccountOwns,  
    ON UPDATE CASCADE  
    ON DELETE CASCADE  
    FOREIGN KEY (userID) REFERENCES UserIdentity,  
    ON UPDATE CASCADE  
    ON DELETE CASCADE  
)
```

```
(4) CREATE TABLE Reel(  
    text CHAR[255],  
    length CHAR[255],  
    postID INTEGER,  
    location VARCHAR[255],  
    postDate DATE,  
    PRIMARY KEY (postID)  
)
```

```
(5) CREATE TABLE FeedPost(  
    text CHAR[255],  
    numImage INTEGER,  
    postID INTEGER,  
    location VARCHAR[255],  
    postDate DATE,  
    PRIMARY KEY (postID)  
)
```

```
(6) CREATE TABLE Hashtags(  
    hashID INTEGER,  
    hashName VARCHAR[100],  
    PRIMARY KEY (hashID)  
)
```

```
CREATE TABLE HashName(  
    hashName: VARCHAR[100],  
    numUses: INTEGER,  
    PRIMARY KEY (hashName)  
)
```

```
(7) CREATE TABLE HashtagHasPost(  
    hashID INTEGER,  
    postID INTEGER,
```



```
PRIMARY KEY (hashID,postID),  
FOREIGN KEY (hashID) REFERENCES Hashtags,  
ON UPDATE CASCADE  
ON DELETE CASCADE  
FOREIGN KEY (postID) REFERENCES FeedPost,  
ON UPDATE CASCADE  
ON DELETE CASCADE  
)
```

```
(8) CREATE TABLE UserIdentity(  
    userID INTEGER,  
    userName VARCHAR[100]  
    PRIMARY KEY (userID),  
    FOREIGN KEY (userID) REFERENCES User,  
    ON UPDATE CASCADE  
    ON DELETE CASCADE
```

```
  
CREATE TABLE LikesDoubletapHas(  
    likeID CHAR[11],  
    numLikes INTEGER,  
    date DATE,  
    postID INTEGER NOT NULL,  
    userID INTEGER,  
    commentID CHAR[11]  
    PRIMARY KEY (likeID),  
    FOREIGN KEY (postID) REFERENCES FeedPost,  
    ON UPDATE CASCADE  
    ON DELETE CASCADE  
    FOREIGN KEY (userID) REFERENCES UserIdentity,  
    ON UPDATE CASCADE  
    ON DELETE CASCADE  
    FOREIGN KEY (commentID) REFERENCES MakeComments,  
    ON UPDATE CASCADE  
    ON DELETE CASCADE  
)
```

```
(9) CREATE TABLE MakeComments(  
    text CHAR[100],  
    commentID CHAR[11],  
    date DATE,  
    userID INTEGER NOT NULL,  
    PRIMARY KEY (commentID),  
    FOREIGN KEY (userID) REFERENCES UserIdentity,  
    ON UPDATE CASCADE  
    ON DELETE CASCADE  
)
```

```
(10) CREATE TABLE Contain(  
    commentID CHAR[11],  
    postID INTEGER,  
    PRIMARY KEY (commentID,postID),  
    FOREIGN KEY (commentID) REFERENCES MakeComments,  
    ON UPDATE CASCADE  
    ON DELETE CASCADE  
    FOREIGN KEY (postID) REFERENCES FeedPost,  
    ON UPDATE CASCADE  
    ON DELETE CASCADE  
)
```

```
(11) CREATE TABLE AccountOwns(  
    userName VARCHAR[100],  
    displayName VARCHAR[100],  
    numFollowing INTEGER,  
    numFollowers INTEGER,  
    numPosts INTEGER,  
    userID INTEGER,  
    PRIMARY KEY (userName,userID),  
    FOREIGN KEY (userID) REFERENCES UserIdentity,  
    ON UPDATE CASCADE  
    ON DELETE CASCADE  
)
```

```
(12) CREATE TABLE PublishPosts(  
    PostID INTEGER,  
    location VARCHAR[100],  
    postDate DATE,  
    userID INTEGER,  
    PRIMARY KEY (PostID),  
    FOREIGN KEY (userID) REFERENCES UserIdentity,  
    ON UPDATE CASCADE  
    ON DELETE CASCADE  
)
```

## 8. Populated instances

TABLE **NotificationsSend**

INSERT

INTO NotificationsSend (PostLink, text, time, storyID)

VALUES ('https://test.com/post1', 'this is post 1', '12:00:00', 'story1')

```
INSERT
INTO NotificationsSend (PostLink, text, time, storyID)
VALUES ('https://test.com/post2', 'this is post 2', '13:00:00', 'story2')
```

```
INSERT
INTO NotificationsSend (PostLink, text, time, storyID)
VALUES ('https://test.com/post3', 'this is post 3', '14:00:00', 'story3')
```

```
INSERT
INTO NotificationsSend (PostLink, text, time, storyID)
VALUES ('https://test.com/post4', 'this is post 4', '15:00:00', 'story4')
```

```
INSERT
INTO NotificationsSend (PostLink, text, time, storyID)
VALUES ('https://test.com/post5', 'this is post 5', '15:00:00', 'story5')
```

TABLE **User**

```
INSERT
INTO User (userID, gender, fullName, age, birthdate)
VALUES (1, 'F', 'Jane Doe', 28, '1995-04-12')
```

```
INSERT
INTO User (userID, gender, fullName, age, birthdate)
VALUES (2, 'M', 'John Smith', 32, '1991-08-24')
```

```
INSERT
INTO User (userID, gender, fullName, age, birthdate)
VALUES (3, 'O', 'Alex Johnson', 29, '1994-11-05')
```

```
INSERT
INTO User (userID, gender, fullName, age, birthdate)
VALUES (4, 'F', 'Emily Davis', 35, '1988-02-19')
```

```
INSERT
INTO User (userID, gender, fullName, age, birthdate)
VALUES (5, 'M', 'Chris Green', 40, '1983-07-30')
```

TABLE **BirthdateGen**

```
INSERT
INTO BirthdateGen (birthdate, generation)
VALUES ('1946-01-01', 'BB')
```

```
INSERT
INTO BirthdateGen (birthdate, generation)
VALUES ('1964-01-01', 'X')
```

```
INSERT
INTO BirthdateGen (birthdate, generation)
```

VALUES ('1980-01-01', 'M')

INSERT

INTO BirthdateGen (birthdate, generation)

VALUES ('1996-01-01', 'Z')

INSERT

INTO BirthdateGen (birthdate, generation)

VALUES ('2010-01-01', 'A')

TABLE **StoriesShare**

INSERT

INTO StoriesShare (storyID, duration, URL, userName, userID)

VALUES ('story1', '2024-03-01', 'http://test.com/story1', 'userOne', 12345678901)

INSERT

INTO StoriesShare (storyID, duration, URL, userName, userID)

VALUES ('story2', '2024-03-02', 'http://test.com/story2', 'userTwo', 12345678902)

INSERT

INTO StoriesShare (storyID, duration, URL, userName, userID)

VALUES ('story3', '2024-03-03', 'http://test.com/story3', 'userThree', 12345678903)

INSERT

INTO StoriesShare (storyID, duration, URL, userName, userID)

VALUES ('story4', '2024-03-04', 'http://test.com/story4', 'userFour', 12345678904)

INSERT

INTO StoriesShare (storyID, duration, URL, userName, userID)

VALUES ('story5', '2024-03-05', 'http://test.com/story5', 'userFive', 12345678905)

TABLE **Reel**

INSERT

INTO Reel (text, length, postID, location, postDate)

VALUES ('First reel', '10', 10000001, 'New York', '2024-01-01')

INSERT

INTO Reel (text, length, postID, location, postDate)

VALUES ('second reel', '10', 10000002, 'New York', '2024-01-02');

INSERT

INTO Reel (text, length, postID, location, postDate)

VALUES ('second reel', '10', 10000003, 'New York', '2024-01-02')

INSERT

INTO Reel (text, length, postID, location, postDate)

VALUES ('second reel', '10', 10000004, 'New York', '2024-01-02')

INSERT

```
INTO Reel (text, length, postID, location, postDate)
VALUES ('second reel', '10', 10000005, 'New York', '2024-01-02')
```

TABLE **FeedPost**

```
INSERT
INTO FeedPost (text, numImage, postID, location, postDate)
VALUES ('Post 1', 2, 10000001, 'New York', '2024-03-01')
```

```
INSERT
INTO FeedPost (text, numImage, postID, location, postDate)
VALUES ('Post 2', 1, 10000002, 'Los Angeles', '2024-03-02')
```

```
INSERT
INTO FeedPost (text, numImage, postID, location, postDate)
VALUES ('Post 3', 3, 10000003, 'New York', '2024-03-03')
```

```
INSERT
INTO FeedPost (text, numImage, postID, location, postDate)
VALUES ('Post 4', 4, 10000004, 'Miami', '2024-03-04')
```

```
INSERT
INTO FeedPost (text, numImage, postID, location, postDate)
VALUES ('Post 5', 5, 10000005, 'New York', '2024-03-05')
```

TABLE **Hashtags**

```
INSERT
INTO Hashtags (hashID, hashName)
VALUES (1, '#travel')
```

```
INSERT
INTO Hashtags (hashID, hashName)
VALUES (2, '#food')
```

```
INSERT
INTO Hashtags (hashID, hashName)
VALUES (3, '#fitness')
```

```
INSERT
INTO Hashtags (hashID, hashName)
VALUES (4, '#technology')
```

```
INSERT
INTO Hashtags (hashID, hashName)
VALUES (5, '#fashion')
```

TABLE **HashName**

```
INSERT
INTO HashName (hashName, numUses)
```

```
VALUES ('#travel', 1200)
```

```
INSERT  
INTO HashName (hashName, numUses)  
VALUES ('#food', 950)
```

```
INSERT  
INTO HashName (hashName, numUses)  
VALUES ('#fitness', 800)
```

```
INSERT  
INTO HashName (hashName, numUses)  
VALUES ('#technology', 620)
```

```
INSERT  
INTO HashName (hashName, numUses)  
VALUES ('#fashion', 890)
```

```
TABLE HashtagHasPost  
INSERT  
INTO HashtagHasPost (hashID, postID)  
VALUES (1, 1)
```

```
INSERT  
INTO HashtagHasPost (hashID, postID)  
VALUES (2, 1)
```

```
INSERT  
INTO HashtagHasPost (hashID, postID)  
VALUES (3, 3)
```

```
INSERT  
INTO HashtagHasPost (hashID, postID)  
VALUES (4, 3)
```

```
INSERT  
INTO HashtagHasPost (hashID, postID)  
VALUES (5, 4)
```

```
TABLE UserIdentity  
INSERT  
INTO UserIdentity (userID, userName)  
VALUES (1, 'UserOne')
```

```
INSERT  
INTO UserIdentity (userID, userName)  
VALUES (2, 'UserTwo')
```

```
INSERT
INTO UserIdentity (userID, userName)
VALUES (3, 'UserThree')
```

```
INSERT
INTO UserIdentity (userID, userName)
VALUES (4, 'UserFour')
```

```
INSERT
INTO UserIdentity (userID, userName)
VALUES (5, 'UserFive')
```

TABLE LikesDoubletapHas

```
INSERT
INTO LikesDoubletapHas (likeID, numLikes, date, postID, userID, commentID)
VALUES ('L000000001', 100, '2024-02-28', 1, 1, 'C000000001')
```

```
INSERT
INTO LikesDoubletapHas (likeID, numLikes, date, postID, userID, commentID)
VALUES ('L000000002', 150, '2024-02-29', 2, 2, 'C000000002')
```

```
INSERT
INTO LikesDoubletapHas (likeID, numLikes, date, postID, userID, commentID)
VALUES ('L000000003', 200, '2024-03-01', 3, 3, 'C000000003')
```

```
INSERT
INTO LikesDoubletapHas (likeID, numLikes, date, postID, userID, commentID)
VALUES ('L000000004', 250, '2024-03-02', 4, 4, 'C000000004')
```

```
INSERT
INTO LikesDoubletapHas (likeID, numLikes, date, postID, userID, commentID)
VALUES ('L000000005', 300, '2024-03-03', 5, 5, 'C000000005')
```

TABLE MakeComments

```
INSERT
INTO MakeComments (text, commentID, date, userID)
VALUES ('Great!', 'C000000001', '2024-03-01', 1);
```

```
INSERT
INTO MakeComments (text, commentID, date, userID)
VALUES ('Love this', 'C000000002', '2024-03-02', 2);
```

```
INSERT
INTO MakeComments (text, commentID, date, userID)
VALUES ('Amazing content', 'C000000003', '2024-03-03', 3);
```

```
INSERT
```

```
INTO MakeComments (text, commentID, date, userID)
VALUES ('So bad'', 'C000000004', '2024-03-04', 4);
```

```
INSERT
INTO MakeComments (text, commentID, date, userID)
VALUES ('work harder', 'C000000005', '2024-03-05', 5);
```

TABLE **Contain**

```
INSERT
INTO Contain (commentID, postID)
VALUES ('C000000001', 1);
```

```
INSERT
INTO Contain (commentID, postID)
VALUES ('C000000002', 2);
```

```
INSERT
INTO Contain (commentID, postID)
VALUES ('C000000003', 3);
```

```
INSERT
INTO Contain (commentID, postID)
VALUES ('C000000004', 4);
```

```
INSERT
INTO Contain (commentID, postID)
VALUES ('C000000005', 5);
```

TABLE **AccountOwns**

```
INSERT
INTO AccountOwns (userName, displayName, numFollowing, numFollowers, numPosts, userID)
VALUES ('userOne', 'User One', 100, 150, 50, 1);
```

```
INSERT
INTO AccountOwns (userName, displayName, numFollowing, numFollowers, numPosts, userID)
VALUES ('userTwo', 'User Two', 200, 250, 150, 2);
```

```
INSERT
INTO AccountOwns (userName, displayName, numFollowing, numFollowers, numPosts, userID)
VALUES ('userThree', 'User Three', 300, 350, 250, 3);
```

```
INSERT
INTO AccountOwns (userName, displayName, numFollowing, numFollowers, numPosts, userID)
VALUES ('userFour', 'User Four', 400, 450, 350, 4);
```



```
INSERT
INTO AccountOwns (userName, displayName, numFollowing, numFollowers, numPosts, userID)
VALUES ('userFive', 'User Five', 500, 550, 450, 5);
```

TABLE **PublishPosts**

```
INSERT
INTO PublishPosts (PostID, location, postDate, userID)
VALUES (1, 'New York', '2024-03-01', 1);
```

```
INSERT
INTO PublishPosts (PostID, location, postDate, userID)
VALUES (2, 'Los Angeles', '2024-03-02', 2);
```

```
INSERT
INTO PublishPosts (PostID, location, postDate, userID)
VALUES (3, 'New York', '2024-03-03', 3);
```

```
INSERT
INTO PublishPosts (PostID, location, postDate, userID)
VALUES (4, 'Miami', '2024-03-04', 4);
```

```
INSERT
INTO PublishPosts (PostID, location, postDate, userID)
VALUES (5, 'New York', '2024-03-05', 5);
```