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Assumptions:

- A Page and a Profile are accounts and therefore have an account id which is an integer that increments by 1 each time a new account is created starting from 0.

- An account can create a post, and each post will have a unique int id which starts from 0 and is incremented by 1 every time a new post is created.

- A profile will also have a unique int id which starts from 0 and is incremented by 1 every time a new profile is created in addition to having a unique account id.

- A post receives views and within each view the account id of the viewer and the time it is viewed is recorded.

- A post which can be either a text, audio, video, or image contains comments and each comment has a unique int id which starts from 0 and increments every time a comment in a post it is contained by is added.

- A comment can receive a like. When that happens the comment id, the account id of the person who liked it and the time are recorded.

- An account can send and receive messages. Each message has a unique int id which starts from 0 and is incremented by 1 every time a new message is sent.

- A Page can be categorized and each category has a unique int id and has a string that corresponds to that id to decrease redundancy. A page must have a category

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Relations

Account

account_id	creation_date	account_type

Page

page_id	page_name	description	category_id	account_id	log_url	header_image_url

Category

category_id	category

Member

page_id	profile_id	join_date

PageView

profile_id	page_id	time

Admin

profile_id	page_id	admin_since_date

Profile

profile_id	fname	lname	phone	email	username	password	created_date	account_id

Message

message_id	recipient_id	sender_id	sent	delivered	read	body

Post

post_id	time	author_id	attachment_url	body

PostLike

post_id	liked_by_id	time

PostView

post_id	viewed_by_id	time

Comment

comment_id	author_id	time	body

CommentLike

comment_id	liked_by_id	time

*I was unable to use arrows to match foreign keys with their origin table, so I used corresponding colors

Tables

```
CREATE TABLE Account (
        account_id INT NOT NULL PRIMARY KEY,
        creation_date DATE,
        account_type NOT NULL VARCHAR(7)
);

CREATE TABLE Page (
        page_id INT NOT NULL PRIMARY KEY,
        page_name VARCHAR(100) NOT NULL,
        logo_url VARCHAR(300),
        header_image_url VARCHAR(300),
        description CLOB(2000),
        category INT FOREIGN KEY,
        account_id INT NOT NULL FOREIGN KEY
);

CREATE TABLE Category (
        category INT NOT NULL PRIMARY KEY,
        category VARCHAR(100) NOT NULL UNIQUE
);

CREATE TABLE Member (
        page_id INT NOT NULL FOREIGN KEY,
        profile_id INT NOT NULL FOREIGN KEY,
        join_date DATE
);

CREATE TABLE PageView (
        page_id INT NOT NULL FOREIGN KEY,
        profile_id INT NOT NULL FOREIGN KEY,
        time TIMESTAMP
);

CREATE TABLE Admin (
        page_id INT NOT NULL FOREIGN KEY,
        profile_id INT NOT NULL FOREIGN KEY,
        admin_since_date DATE
);
```

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```
CREATE TABLE Profile (
        profile_id INT NOT NULL PRIMARY KEY,
        fname VARCHAR(100) NOT NULL,
        lname VARCHAR(100) NOT NULL,
        phone VARCHAR(12) NOT NULL,
        email VARCHAR(100) NOT NULL UNIQUE,
        username VARCHAR(12) NOT NULL UNIQUE
        password VARCHAR(12) NOT NULL,
        created_date DATE,
        account_id INT NOT NULL FOREIGN_KEY
);

CREATE TABLE Message (
        message_id INT NOT NULL PRIMARY KEY,
        recipient_id INT NOT NULL FOREIGN KEY,
        sender_id INT NOT NULL FOREIGN KEY,
        sent BOOLEAN,
        delivered BOOLEAN,
        read BOOLEAN,
        body CLOB(2000) NOT NULL
);

CREATE TABLE Post (
        post_id INT NOT NULL PRIMARY KEY,
        time TIMESTAMP,
        author_id INT NOT NULL FOREIGN KEY,
        attachment_url VARCHAR(200),
        body CLOB(2000) NOT NULL
);

CREATE TABLE PostLike (
        post_id INT NOT NULL FOREIGN KEY,
        liked_by_id INT NOT NULL FOREIGN KEY,
        time TIMESTAMP
);

CREATE TABLE PostView (
        post_id INT NOT NULL FOREIGN KEY,
        viewed_by_id INT NOT NULL FOREIGN KEY,
        time TIMESTAMP
);
```

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```
CREATE TABLE Comment (
        comment_id INT NOT NULL PRIMARY KEY,
        author _id INT NOT NULL FOREIGN KEY,
        time TIMESTAMP,
        body CLOB(2000) NOT NULL
);

CREATE TABLE CommentLike (
        comment_id INT NOT NULL FOREIGN KEY,
        like_by_id INT NOT NULL FOREIGN KEY,
        time TIMESTAMP
);
```

Entities and Attributes

Audio

Video

Text

Image

d (disjoint specialization)

PostLike
- time
- liked_by_id
- post_id

CommentLike
- time
- liked_by_id
- comment_id

Post
- attachment_url
- author_id
- body
- time
- post_id

Comment
- body
- time
- comment_id
- author_id

Relationships

Receives (PostLike N — N Post)

Receives (CommentLike N — N Comment)

Contains (Post — Comment)

Creates a (N)

Gets (N)

Account
account_id
creation_date

PostView
time
viewed_by_id
post_id

Sends/Receives a
N
N

delivered
read
sent
sender_id
recipient_id
Message
message_id
body

d

category
description
log_url
Page
page_id
header_image_url
page_name

N
Categorized by
1

Category
category_id
category

N
Is made of
N

Member
join_date
profile_id
page_id

password
created_date
username
email
phone
Profile
profile_id
fname
lname

N
Receives
N

N
Controlled By
N

PageView
profile_id
time
page_id

Admin
admin_since_date
page_id
profile_id