# FAVTAP

"A SOCIAL MEDIA FOR ALL YOUR FAVORITE MEDIA"

Database Design Proposal By: Kwame T . Darko

## TABLE OF CONTENTS

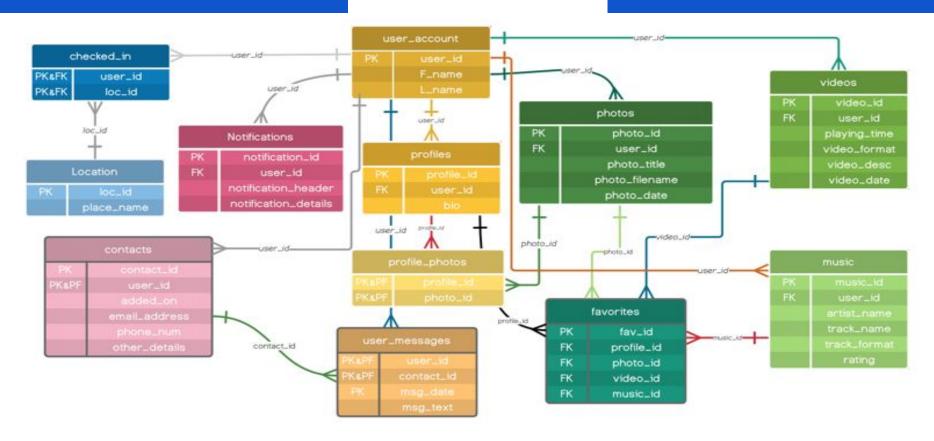
- EXECUTIVE SUMMARY ... 3
- D/R DIAGRAM .... 4
- TABLES
  - O USER\_ACCOUNT .... 5
  - o PROFILES .... 6
  - o CONTACTS.....7
  - O USER\_MESSAGES .... 8
  - o LOCATION .... 9
  - o CHECKED\_IN ..... 10
  - o VIDEOS ..... 11
  - o MUSI( ..... 12
  - o PHOTOS ..... 13
  - o PROFILE\_PHOTOS .... 14
  - o FAVORITES .... 15
  - o NOTIFICATIONS ..... 16

- VIEWS
  - PROFILEMUSICFAVORITES ..... 17
  - O USERCHECKINS ..... 18
  - o PROFILEPHOTOFAVORITES ..... 19
  - PROFILEVIDEOFAVORITES ..... 20
- STORED PROCEDURES .... 21
  - O VIDEONOTIFICATION .... 22
  - O VIDEONOTIFICATION CONTINUED .. 23
  - MUSICNOTIFICATION .... 24
  - O MUSICNOTIFICATION CONTINUED .... 25
  - o PHOTONOTIFICATION .... 26
  - o PHOTONOTIFICATION CONTINUED .... 27
- TRIGGER FUNCTION ..... 28 & 29
- SECURITY .... 30 & 31
- IMPLEMENTATION NOTES ... 32
- KNOWN PROBLEMS .... 33
- FUTURE ENHANCEMENTS ..... 34

## EXECUTIVE SUMMARY

TAPFAV WILL BE A WEB BASED SOCIAL MEDIA WITH THE SIMPLE CONCEPT OF SIMPLY LISTING YOUR FAVORITE MEDIA SUCH AS VIDEOS, MUSIC, AND PICTURES. THIS DOCUMENT PRESENTS A GENERAL DESIGN AND IMPLEMENTATION OF TAPFAV DATABASE AND OUTLINES THE STRUCTURE AND TABLES INVOLVED IN THE DESIGN OF THE DATABASE SYSTEM. THE PURPOSE OF THIS DATABASE IS TO STORE ALL DIFFERENT USER DATA AND TURN IT INTO INFORMATION WHICH WILL THEN BE USED BY THE WEBSITE TO DISPLAY CERTAIN THINGS. THE DESIGN HAS BEEN TESTED AND IMPLEMENTED ON POSTGRES TO PROVIDE A FULLY FUNCTIONAL DATABASE THAT IS IN BOYCE CODD THIRD NORMAL FORM.

## E/R DIAGRAM



## TABLE: USER\_ACCOUNT

### SQL

```
CREATE TABLE IF NOT EXISTS user_account(
          User_id SERIAL NOT NULL UNIQUE,
        F_name VARCHAR(50) NOT NULL,
          L_name VARCHAR(50) NOT NULL,
          PRIMARY KEY (user_id)
);
```

### FUNCTIONAL DEPENDENCIES

User\_id -> F\_name, L\_name

### SAMPLE DATA

|    | user_id<br>integer | f_name<br>character varying(50) | I_name<br>character varying(50) |
|----|--------------------|---------------------------------|---------------------------------|
| 1  | 1                  | Kwame                           | Darko                           |
| 2  | 2                  | Alan                            | Labouseur                       |
| 3  | 3                  | Dan                             | Njoku                           |
| 4  | 4                  | Ed                              | Achziger                        |
| 5  | 5                  | John                            | Brennan                         |
| 6  | 6                  | Devin                           | Cividni                         |
| 7  | 7                  | Juston                          | Christian                       |
| 8  | 8                  | Nicholas                        | Foster                          |
| 9  | 9                  | Melvin                          | Forkpa                          |
| 10 | 10                 | John                            | Khanda                          |

## PROFILES TABLE



#### **Functional Dependencies**

Profile\_id -> User\_id, Bio

| profile_id<br>integer |    | bio<br>character varying(200) |
|-----------------------|----|-------------------------------|
| 1                     | 1  | test test test tesr           |
| 2                     | 2  | best site ever                |
| 3                     | 3  | new to the site               |
| 4                     | 4  | hello world                   |
| 5                     | 5  | well hello there              |
| 6                     | 6  | welcome to my profile         |
| 7                     | 7  | hellllooooooooo               |
| 8                     | 8  | ok ok ok                      |
| 9                     | 9  | hmmmmm                        |
| 10                    | 10 | kskskskskskskks               |

### CONTACTS TABLE

#### SOL

#### Functional dependencies

```
Contact_id > user_id, Added_on,
Email_address, Phone_num , other_details
```

| contact_id<br>integer | user_id<br>integer | added_on<br>date | email_address<br>character varying(30) | phone_num<br>character varying(10) | other_details<br>character varying(100) |
|-----------------------|--------------------|------------------|--|------------------------------------|---|
| 1                     | 1                  | 2016-04-11       | tenktenk@gmail.com                     | 3478225555                         | he is very nice                         |
| 2                     | 2                  | 2016-04-11       | alanlab@gmail.com                      | 2025550141                         | cannot give up, ever                    |
| 3                     | 3                  | 2016-04-11       | dannjoku@gmail.com                     | 2025550143                         | likes skirts that twirl well            |
| 4                     | 4                  | 2016-04-11       | edachzi@gmail.com                      | 2025550145                         | feels like no shoes they ever wear are  |
| 5                     | 5                  | 2016-04-11       | johnbrennan@gmail.com                  | 2023550141                         | is convinced astrology is the scientif  |
| 6                     | 6                  | 2016-04-11       | devinviid@gmail.com                    | 2025550949                         | paints their fingernails a different co |
| 7                     | 7                  | 2016-04-11       | justonchris@gmail.com                  | 2025552222                         | cannot end a conversation without insu  |
| 8                     | 8                  | 2016-04-11       | nicholasfos@gmail.com                  | 2025550666                         | treats all of their friends like they   |
| 9                     | 9                  | 2016-04-11       | melvinfork@gmail.com                   | 9999999999                         | wears either mismatched socks or shoeld |
| 10                    | 10                 | 2016-04-11       | johnkhanda@gmail.com                   | 9849299949                         | eats colors.                            |

## USER\_MESSAGES TABLE

#### SQL

#### **Functional Dependencies**

(user\_id, contact\_id, date\_time\_of\_msg) > msg\_text

|    | contact_id<br>integer | msg_date<br>date | msg_text<br>character varying(500) |
|----|-----------------------|------------------|------------------------------------|
| 1  | 1                     | 2016-04-11       | hello kwame world                  |
| 2  | 4                     | 2016-04-11       | soo                                |
| 3  | 5                     | 2016-04-11       | im going to go to class now        |
| 7  | 5                     | 2016-04-11       | ok                                 |
| 2  | 3                     | 2016-04-11       | What my grade looking like         |
| 5  | 1                     | 2016-04-11       | HMU when you are free              |
| 4  | 1                     | 2016-04-11       | you never wrote me back bro        |
| 8  | 3                     | 2016-04-11       | Whats up BRO!!                     |
| 9  | 3                     | 2016-04-11       | How is everything                  |
| 10 | 2                     | 2016-04-11       | Are you ok?                        |

### LOCATION TABLE

#### SQL

#### Functional dependencies

(loc\_id) > place\_name

|   | place_name<br>character varying(50) |
|---|-------------------------------------|
| 1 | Marist                              |
| 2 | marist                              |
| 3 | vassar                              |
| 4 | Yale                                |
| 5 | Rutger                              |

### CHECKED\_IN

#### SQL

```
CREATE TABLE checked_in(
    user_id INTEGER NOT NULL,
    loc_id INTEGER NOT NULL,
    PRIMARY KEY(user_id, loc_id),
    FOREIGN KEY (user_id)

REFERENCES user_account(user_id),
    FOREIGN KEY (loc_id) REFERENCES
location(loc_id)
);
```

#### Functional dependencies

(user\_id, loc\_id) > user\_id, loc\_id

| user_id<br>integer |   |
|--------------------|---|
| 1                  | 1 |
| 5                  | 1 |
| 4                  | 2 |
| 6                  | 2 |
| 3                  | 1 |
| 6                  | 4 |
| 8                  | 3 |
| 9                  | 4 |
| 2                  | 5 |
| 3                  | 4 |

## VIDEOS TABLE

#### SQL

```
CREATE TABLE IF NOT EXISTS Videos(
    Video_id SERIAL NOT NULL UNIQUE,
    User_id INTEGER NOT NULL,
    Playing_time INTEGER NOT NULL,
    Video_format VARCHAR(4) NOT NULL,
    Video_desc VARCHAR(100),
    Video_date DATE,
    PRIMARY KEY(video_id),
    FOREIGN KEY (user_id) REFERENCES
user_account(user_id)
);
```

#### Functional dependencies

Video\_id > user\_id, playing\_time,
video\_format, Video\_desc, Video\_date

| And the second second | A STATE OF THE PARTY OF THE PAR |     | video_format<br>character varying(4) | video_desc<br>character varying(100) | video_date<br>date |
|-----------------------|--|-----|--------------------------------------|--------------------------------------|--------------------|
| 1                     | 1  | 120 | mp4                                  | my beautiful video                   | 2016-04-11         |
| 2                     | 2  | 10  | mp4                                  | hitting a ball                       | 2016-04-11         |
| 3                     | 4  | 100 | mp4                                  | hitting a ball                       | 2016-04-05         |
| 4                     | 6  | 104 | mp4                                  | riding my bike                       | 2016-04-06         |
| 5                     | 2  | 510 | mp4                                  | me coding                            | 2016-04-11         |
| 6                     | 6  | 210 | mp4                                  | counting money                       | 2016-02-11         |
| 7                     | 7  | 40  | mp4                                  | walking to the gym                   | 2016-03-11         |
| 8                     | 8  | 60  | mp4                                  | going to class                       | 2016-04-04         |
| 9                     | 3  | 180 | mp4                                  | my first go pro                      | 2016-04-05         |
| 10                    | 9  | 104 | mp4                                  | talking to my friend                 | 2016-04-03         |

## MUSIC TABLE

#### SQL

```
CREATE TABLE IF NOT EXISTS Music(
    Music_id SERIAL NOT NULL UNIQUE,
    User_id INTEGER NOT NULL,
    Artist_name VARCHAR(50) NOT NULL,
    Track_name VARCHAR(100) NOT NULL,
    Track_format VARCHAR(4) NOT NULL,
    rating INTEGER,
    PRIMARY KEY (music_id),
    FOREIGN KEY (user_id)
    REFERENCES user_account(user_id)
);
```

#### Functional dependencies

Music\_id > user\_id, artist\_name, track\_name,
track\_format, rating

| music_id<br>integer |    | artist_name<br>character varying(50) | track_name<br>character varying(100) | track_format<br>character varying(4) | rating<br>integer |
|---------------------|----|--------------------------------------|--------------------------------------|--------------------------------------|-------------------|
| 1                   | 1  | kwamedarko                           | kwamemixtape                         | mp3                                  | 4                 |
| 2                   | 2  | alanlab                              | alanmixtape                          | mp3                                  | 3                 |
| 3                   | 3  | 50cent                               | getrich                              | mp3                                  | 5                 |
| 4                   | 4  | tyga                                 | tygaworld                            | mp3                                  | 4                 |
| 5                   | 5  | fattrel                              | gleesh                               | mp3                                  | 5                 |
| 6                   | 6  | brysontiller                         | trapsoul                             | mp3                                  | 5                 |
| 7                   | 7  | whoknows                             | getit                                | mp3                                  | 1                 |
| 8                   | 8  | jondoe                               | luvsic                               | mp3                                  | 2                 |
| 9                   | 9  | jiggaa                               | hmmmm                                | mp3                                  | 4                 |
| 10                  | 10 | michaeljackson                       | savetheworld                         | mp3                                  | 5                 |

## PHOTOS TABLE

#### SQL

#### Functional dependencies

Photo\_id > user\_id, photo\_title,
photo\_filename, photo\_date

| photo_id<br>integer | C2571-7-10-10-10-10-10-10-10-10-10-10-10-10-10- | photo_title<br>character varying(50) | photo_filename<br>character varying(100) | photo_date<br>date |
|---------------------|---|--------------------------------------|--|--------------------|
| 1                   | 1   | My beautiful photo                   | jasjajajaja.jpg                          | 2016-04-11         |
| 2                   | 1   | My beautiful photo                   | jasjajajaja, jpg                         | 2016-04-11         |
| 3                   | 4   | myface                               | myface.jpg                               | 2016-04-11         |
| 4                   | 4   | pictureofmyfood                      | pictureofmygood.png                      | 2016-04-11         |
| 5                   | 7   | getmoneymoney                        | getmoneymoney.jpg                        | 2016-04-11         |
| 6                   | 5   | My photo                             | 3432423423423.gif                        | 2016-04-11         |
| 7                   | 2   | Sin city                             | 11100494888.png                          | 2016-04-11         |
| 8                   | 6   | Out having fun                       | 4424234234.jpg                           | 2016-04-11         |
| 9                   | 9   | My cousins                           | 2342432432423.png                        | 2016-04-11         |
| 10                  | 10  | The hill                             | 4442244235.jpg                           | 2016-04-11         |

## PROFILE\_PHOTOS TABLE

#### SQL

#### Functional dependencies

```
(Profile_id, photo_id) > profile_id,
photo_id
```

| profile_id<br>integer | photo_id<br>integer |
|-----------------------|---------------------|
| 1                     | 1                   |
| 2                     | 1                   |
| 3                     | 1                   |
| 4                     | 1                   |
| 5                     | 1                   |
| 6                     | 1                   |
| 7                     | 1                   |
| 8                     | 1                   |
| 9                     | 1                   |
| 10                    | 1                   |

### FAVORITES TABLE

#### SQL

```
CREATE TABLE IF NOT EXISTS favorites(
    Fav_id SERIAL NOT NULL UNIQUE,
    profile_id INTEGER NOT NULL,
    Photo_id INTEGER,
    Video_id INTEGER,
    Music_id INTEGER,
    PRIMARY KEY (fav_id),
    FOREIGN KEY (profile_id) REFERENCES profiles
(profile_id),
    FOREIGN KEY (photo_id) REFERENCES photos
(photo_id),
    FOREIGN KEY(video_id) REFERENCES videos
(video_id),
    FOREIGN KEY (music_id) REFERENCES music(music_id)
);
```

#### Functional dependencies

(fav\_id) > profile\_id, photo\_id, video\_id, music\_id

| fav_id<br>integer | profile_id<br>integer | photo_id<br>integer | video_id<br>integer | music_id<br>integer |
|-------------------|-----------------------|---------------------|---------------------|---------------------|
| 11                | 2                     | 1                   | 1                   | 1                   |
| 12                | 3                     | 1                   | 1                   | 1                   |
| 13                | 4                     | 1                   | 1                   | 1                   |
| 14                | 5                     | 1                   | 1                   | 1                   |
| 15                | 2                     | 1                   | 1                   | 1                   |
| 16                | 2                     | 1                   | 1                   | 1                   |
| 17                | 2                     | 1                   | 1                   | 1                   |
| 18                | 2                     | 1                   | 1                   | 1                   |
| 19                | 10                    | 1                   | 1                   | 1                   |

### NOTIFICATIONS TABLE

#### SQL

```
CREATE TABLE IF NOT EXISTS Notifications(
    Notification_id SERIAL NOT NULL UNIQUE,
    User_id INTEGER NOT NULL,
    Notification_header VARCHAR(20) NOT NULL,
    Notification_details VARCHAR(200) NOT NULL,
    PRIMARY KEY (Notification_id),
    FOREIGN KEY (User_id) REFERENCES
user_account(user_id)
);
```

#### **Functional Dependencies**

Notification\_id -> user\_id , notification\_header, notofication\_details

|   |    |   | notification_header<br>character varying(20) | notification_details<br>character varying(200) |
|---|----|---|--|--|
| 1 | 11 | 1 | Music favorited                              | user two has favorited Palm Tree               |
| 2 | 12 | 1 | Music favorited                              | user one has favorited Palm Tree               |

## VIEW: PROFILEMUSICFAVORITES

#### --Show all user music favorites

CREATE VIEW profileMusicFavorites AS

SELECT DISTINCT u.user\_id, u.f\_name, u.l\_name, m.track\_name

FROM user\_account u, music m, profiles pr, favorites f

WHERE pr.user\_id = u.user\_id

AND pr.profile\_id = f.profile\_id

AND f.music\_id = m.music\_id

ORDER BY u.user\_id, u.f\_name, u.l\_name;

#### Sample Data Preview

|    | f_name<br>character varying(50) | I_name<br>character varying(50) | track_name<br>character varying(100) |
|----|---------------------------------|---------------------------------|--------------------------------------|
| 2  | Alan                            | Labouseur                       | kwamemixtape                         |
| 3  | Dan                             | Njoku                           | kwamemixtape                         |
| 4  | Ed                              | Achziger                        | kwamemixtape                         |
| 5  | John                            | Brennan                         | kwamemixtape                         |
| 10 | John                            | Khanda                          | kwamemixtape                         |

## VIEW: USERCHECKINS

#### --Show all user checkins

CREATE VIEW userCheckins AS

SELECT u.user\_id, u.f\_name, u.l\_name, l. place\_name

FROM user\_account u, checked\_in c, location

WHERE u.user\_id = c.user\_id

AND l.loc\_id = c.loc\_id

ORDER BY u.user\_id;

#### Sample Data Preview

|   | f_name<br>character varying(50) | I_name<br>character varying(50) | place_name<br>character varying(50) |
|---|---------------------------------|---------------------------------|-------------------------------------|
| 1 | Kwame                           | Darko                           | Marist                              |
| 2 | Alan                            | Labouseur                       | Rutger                              |
| 3 | Dan                             | Njoku                           | Yale                                |
| 3 | Dan                             | Njoku                           | Marist                              |
| 4 | Ed                              | Achziger                        | marist                              |
| 5 | John                            | Brennan                         | Marist                              |
| 6 | Devin                           | Cividni                         | Yale                                |
| 6 | Devin                           | Cividni                         | marist                              |
| 8 | Nicholas                        | Foster                          | vassar                              |
| 9 | Melvin                          | Forkpa                          | Yale                                |

## VIEW: PROFILEPHOTOFAVORITES

#### --Show all user photo favorites

CREATE VIEW profilePhotoFavorites AS

SELECT DISTINCT u.user\_id, u.f\_name, u.l\_name, p.photo\_title

FROM user\_account u, photos p, profiles pr, favorites f

WHERE pr.user\_id = u.user\_id

AND pr.profile\_id = f.profile\_id

AND f.photo\_id = p.photo\_id

ORDER BY u.user\_id, u.f\_name, u.l\_name;

#### Sample Data Previews

|    | f_name<br>character varying(50) | I_name<br>character varying(50) | photo_title<br>character varying(50) |
|----|---------------------------------|---------------------------------|--------------------------------------|
| 2  | Alan                            | Labouseur                       | My beautiful photo                   |
| 3  | Dan                             | Njoku                           | My beautiful photo                   |
| 3  | Dan                             | Njoku                           | myface                               |
| 4  | Ed                              | Achziger                        | My beautiful photo                   |
| 5  | John                            | Brennan                         | My beautiful photo                   |
| 10 | John                            | Khanda                          | My beautiful photo                   |

## VIEW: PROFILEVIDEOFAVORITES

#### --Show all user video favorites

CREATE VIEW profileVideoFavorites AS

SELECT u.user\_id, u.f\_name, u.l\_name, v.video\_desc

FROM user\_account u, videos v, profiles pr, favorites f

WHERE pr.user\_id = u.user\_id

AND pr.profile\_id = f.profile\_id

AND f.video\_id = v.video\_id

ORDER BY u.user\_id, u.f\_name, u.l\_name;

#### Sample Data Preview

|    | f_name<br>character varying(50) | I_name<br>character varying(50) | video_desc<br>character varying(100) |
|----|---------------------------------|---------------------------------|--------------------------------------|
| 2  | Alan                            | Labouseur                       | my beautiful video                   |
| 3  | Dan                             | Njoku                           | hitting a ball                       |
| 3  | Dan                             | Njoku                           | my beautiful video                   |
| 4  | Ed                              | Achziger                        | my beautiful video                   |
| 5  | John                            | Brennan                         | my beautiful video                   |
| 10 | John                            | Khanda                          | my beautiful video                   |

## STORED PROCEDURES

The three stored procedures don't return any output, but just insert a record into the notification table. The videoNotification function inserts a video notification. The musicNotification function inserts a music notification. Lastly the photoNotification inserts a photo notification. The last trigger function checks for which type of favorite it was, then calls the appropriate notification function from the other 3.

## STORED PROCEDURE: VIDEONOTIFICATION

Fav\_type := 'Video';

```
BEGIN
and adds the corresponding information to the
notifications table
                                                         Usr id := (
CREATE OR REPLACE FUNCTION videoNotification(vid
                                                          SELECT user id
int, pid int)
                                                          FROM videos
RETURNS void AS $$
                                                          WHERE video id = vid):
DECLARE
Usr id INTEGER:
                                                          Fav_name := (
FavUser_name TEXT;
                                                          SELECT video_desc
Fav_name VARCHAR(100);
                                                          FROM videos
Fav_type VARCHAR(20);
                                                          WHERE video_id = vid);
```

### VIDEONOTIFICATION CONTINUED

```
FavUser name := (
                                           INSERT INTO notifications(user_id,
                                           notification_header,
SELECT (F_name || ' ' || L_name) AS
                                           notification_details)
full name
                                           VALUES (usr_id, fav_type || '
FROM user_account
                                           favorited', favUser_name || ' has
                                           favorited ' || fav_name);
WHERE user_id = (SELECT user_id
                                           END;
             FROM profiles
                                           $$ LANGUAGE plpgsql;
             WHERE profile id = pid)
```

### STORED PROCEDURE: MUSICNOTIFICATION

```
--Takes music id and profile id as parameters, and
adds the corresponding information to the
notifications table
CREATE OR REPLACE FUNCTION
musicNotification(mid int, pid int)
RETURNS void AS $$
DECLARE
Usr_id INTEGER;
FavUser name TEXT;
Fav_name VARCHAR(100);
Fav_type VARCHAR(20);
```

```
BEGIN
Usr id := (
SELECT user id
FROM music
WHERE music id = mid);
Fav name := (
SELECT track name
FROM music
WHERE music_id = mid);
```

Fav type := 'Music';

## MUSICNOTIFICATION CONTINUED

```
FavUser name := (
                                           INSERT INTO notifications(user_id,
                                           notification_header,
SELECT (F_name || ' ' || L_name) AS
                                           notification_details)
full name
                                           VALUES (usr_id, fav_type || '
FROM user_account
                                           favorited', favUser_name || ' has
                                           favorited ' || fav_name);
WHERE user_id = (SELECT user_id
                                           END;
             FROM profiles
                                           $$ LANGUAGE plpgsql;
             WHERE profile id = pid)
```

### STORED PROCEDURE: PHOTONOTIFICATION

```
--Takes photo id and profile id as parameters, and adds the corresponding information to the notifications table
```

```
CREATE OR REPLACE FUNCTION photoNotification(phid int, pid int)
```

```
RETURNS void AS $$
```

```
DECLARE
```

```
Usr_id INTEGER;
```

```
FavUser_name TEXT;
```

```
Fav_name VARCHAR(100);
```

```
Fav_type VARCHAR(20);
```

#### BEGIN

```
Usr_id := (
SELECT user id
```

SELECT photo\_title

FROM photos

### PHOTONOTIFICATION CONTINUED

```
FavUser name := (
                                       INSERT INTO notifications(user_id,
SELECT (F_name | | ' ' | | L_name) AS
                                       notification_header,
full name
                                       notification details)
FROM user_account
                                       favorited', favUser_name || ' has
WHERE user_id = (SELECT user_id
                                       favorited ' || fav_name);
            FROM profiles
                                       END;
            WHERE profile_id = pid)
                                       $$ LANGUAGE plpgsql;
```

## TRIGGER FUNCTION

THE FUNCTION CHECKS FOR THE TYPE OF MEDIA THAT HAS BEEN FAVORITED WHEN A NEW RECORD IS INSERTED OR UPDATED IN THE FAVORITES TABLE. IT THAN CALLS THE APPROPRIATE MEDIA FUNCTION TO SEND A NOTIFICATION TO THE USER. (RECORD INSERTED INTO NOTIFICATION TABLE)

### TRIGGER FUNCTION

CREATE OR REPLACE FUNCTION notify()

RETURNS trigger AS \$\$

BEGIN

IF NEW.photo\_id IS NULL

AND NEW.video\_id IS NULL THEN

EXECUTE musicNotification(NEW.
music\_id, NEW.profile\_id);

ELSIF NEW.music\_id IS NULL

AND NEW.video\_id IS NULL THEN

```
EXECUTE photoNotification(NEW.photo_id, NEW.
profile_id);
ELSIF NEW.photo_id IS NULL
AND NEW.music_id IS NULL THEN
EXECUTE videoNotification(NEW.video_id, NEW.
profile_id);
END IF;
RETURN NULL;
END:
$$ LANGUAGE plpgsql;
```

CREATE TRIGGER notification AFTER
INSERT OR UPDATE ON favorites FOR
EACH ROW EXECUTE PROCEDURE
notify();

## SECURITY

THE PURPOSE OF THIS IS TO DEFINE THE USER ROLES AND GRANT PRIVILEGES TO CERTAIN USERS. THERE IS AN ADMIN USER AND A REGULAR USER. THE ADMIN USER HAS FULL ACCESS TO THE DATABASE WHILE THE REGULAR USER IS RESTRICTED. FOR EXAMPLE THE ADMIN USER HAS FULL ACCESS TO INSERT, UPDATE, OR DELETE ALL TABLES WHILE THE REGULAR CAN ONLY ACCESS TABLES THAT HAVE DATA RELATED TO THE USER.

### SECURITY

#### --admin user

CREATE ROLE admin;

GRANT ALL ON ALL TABLES

IN SCHEMA PUBLIC

TO admin;

--social network user, cannot insert new users or profiles, but can access other tables

CREATE ROLE user;

GRANT SELECT, INSERT, UPDATE ON location, user\_messages, profile\_photos, favorites, photos, videos, music, contacts, checked\_in

TO user;

GRANT SELECT, UPDATE ON users, profiles

TO user;

## IMPLEMENTATION NOTES

#### FAVORITES

- MADE TO LIST ALL THE FAVORITE MEDIA A USER HAS FAVORITED. A USER CAN HAVE MANY

#### CHECKEDÓIN

- WHEN A USER ACCESS A LOCATION THAT IS RECOGNIZED BY THE DATABASE A LIST OF KNOWN PLACE NAMES WILL GET SHOWN TO THE USER

#### PROFILES

- A USER ACCOUNT CAN HAVE MULTIPLE PROFILES BUT CAN ONLY LOG INTO A SINGLE ONE AT A TIME. FOR EXAMPLE A USER CAN HAVE A PROFILE WHERE THEY SHARE SPECIFICALLY JUST PHOTOS AND VIDEOS AND ANOTHER PROFILE FOR MUSIC. ALSOSTORES THE BIO.

## KNOWN PROBLEMS

- A USER MEDIA IS ACCESSED PUBLICLY. THERE IS NO RESTRICTION TO WHO CAN SEE THEIR CONTENT
- THERE IS NO LIMIT TO THE NUMBER OF NOTIFICATIONS SENT TO THE USER

## FUTURE ENHANCEMENTS

- **BUMPED INTO:** SEND A NOTIFICATION TO THE USER IF THEY ARE CURRENTLY CHECKED INTO THE SAME LOCATION AS ONE OF THEIR CONTACTS

- ADD A USER RATING TO A USER PROFILE. A USER CAN RATE A USER PROFILE BASED ON THEIR FAVORITE CONTENT.