## **Sprint 2**

Group 14

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## **Testing Scenarios**

Activity	Testing Content	Result
Create several different accounts with different types	Account create	
Check the functionalities for different type ccount	Account type	
Add, remove content for profile	Edit profile	
Post job information with description and requirements	Job description/requirements	
Sort job board	Sort by Time/Type	
Login with correct username and password, correct username,wrong password.	User Identification	
Search keyword by the university name	University search	
Search keyword by the zip code	Location search	
Open resume online then edit it	Resume review/edit	
Make comment for person	Person comment	
Use the system without login then login the system, find out the differences	Limit user based on their being login or not Allow user use part of functionalities without login	
After login, post resume-like work experience and education information	The software needs to provide registered users	
Check the work experience table and education table in the database	the ability to post resume- like work experience and education information	

For Model:Database Testing

Check the ERD of the database, find out anything incorrect with relationship. Insert, delete, edit data for the cell of each table in database.

Using SQL to output the data in the database.

For Controller: PHP code

Using php compiler to find the main problem of the code.
Writing the test function to check each function output correctly.
Using framework such as PHPUnit to help with unit test.
Input data into database from website and check that it was stored properly.

### Regression testing

Regression testing is a type of software testing that verifies that software that was previously developed and tested still performs correctly after it was changed or interfaced with other software. Changes may include software enhancements, patches, configuration changes, etc. During regression testing new software bugs or *regressions* may be uncovered. Sometimes a software change impact analysis is performed to determine what areas could be affected by the proposed changes. These areas may include functional and nonfunctional areas of the system. --Wikipedia

#### Testing plan:

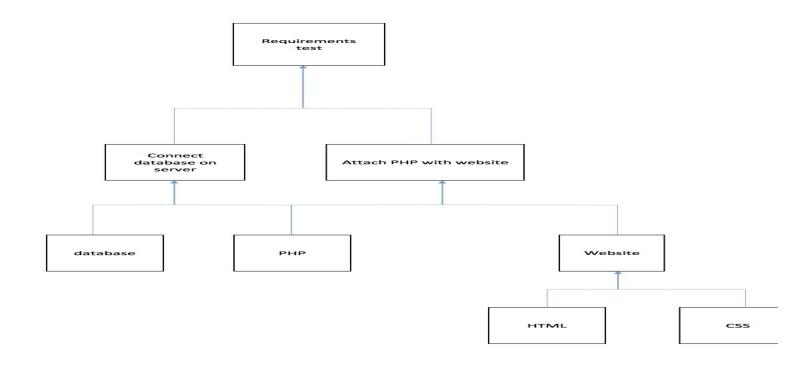
Determining what is changed in the code and what is that changed mean to implement in the view. Run the program to check whether the implementation is the same as expect. Do the regression testing every time fix a bug or make enhancement to the code.

## Integration testing

This test is to test program components integrate and interact as expected. We will use Bottom Up Testing to perform integration testing. Bottom-up testing is an approach to integrated testing where the lowest level components are tested first, then used to facilitate the testing of higher level components. The process is repeated until the component at the top of the hierarchy is tested. All the bottom or low-level modules, procedures or functions are integrated and then tested. After the integration testing of lower level integrated modules, the next level of modules will be formed and can be used for integration testing.

We may make the integration testing after every Unit Testing.

We need to make some components integrated. For example, PHP integrates with database, PHP integrates with HTML, various function integrates with database in HTML, functional requirements integrate with non-functional requirements.

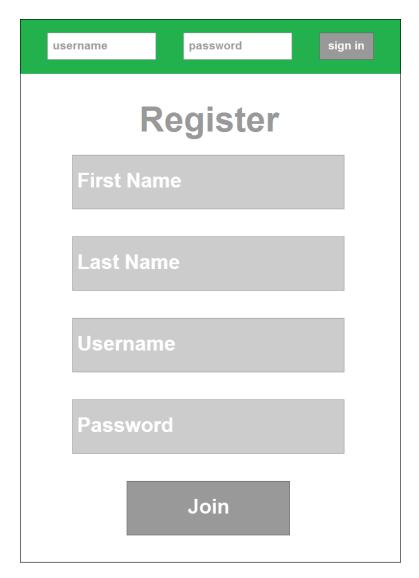


Verification tests: Unit Testing

Regression testing Integration testing

Validation tests: User acceptance testing

## **User Interface**



1. Sign-in and Registering Page

## 2. User Home Page

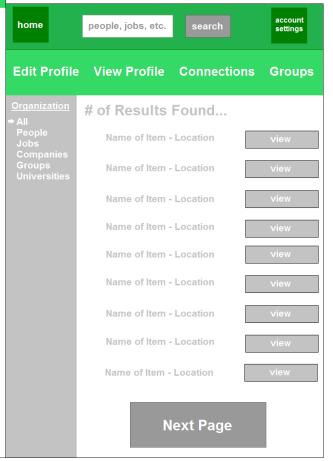
# 3. Profile Editing Page

home people, jobs, etc. search account settings	home people, jobs, etc. search account settings
Edit Profile View Profile Connections Groups	Edit Profile View Profile Connections Groups
-Status- This is an example of what the status will look like when there is text here.  Upload Photo Update Status  Interesting Jobs Job Position - Company - Location Job Position - Company - Location Job Position - Company - Location	-Status- This is an example of what the status will look like when there is text here.  Upload Photo Update Status  Full Name Occupation City, State School Update Info
Recent Activity  So-and-so updated their status.  A company has an open job position.  So-and-so got a new job.	Background  Summary update  Experience add  Education add  Skills add

## 4. Profile View Page

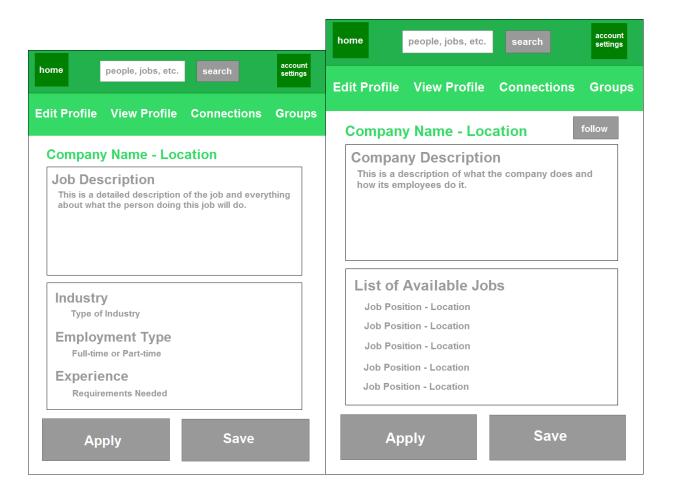
## account settings home people, jobs, etc. Edit Profile View Profile Connections **Groups Full Name Occupation** City, State **School** Status: This is an example of what the status will look like when there is text here. **Background** Summary A summary of what the person has accomplished. Position - Company - Time Period Position - Company - Time Period Education School - Time Period School - Time Period Skills A list of skills that the person holds. Recommendations Recommended by this person Recommended by this person Recommended by this person **Followed Groups** Following this company Following this company Following this company

## 5. Search Page

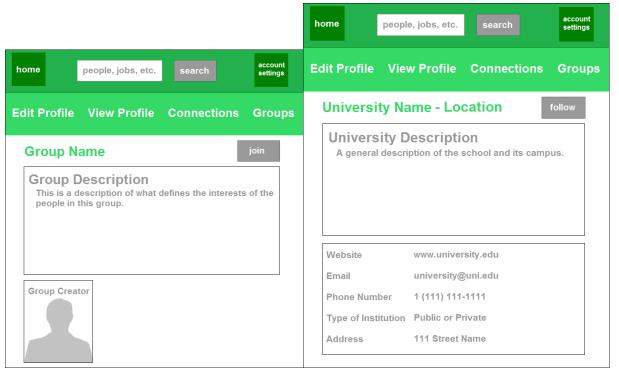


## 6. Job View Page

## 7. Company View Page (Organization)



8. Group View Page (Organization) 9. University View Page (Organization)



Above are the different types of screens that a user will be able to see. On the first page, which is the main page, signing in with a correct username and password by clicking the sign in button will take you to the second page. The second page is the version of your profile page that acts as your home page. To edit the profile, a user clicks the edit profile link from the nav bar to access the third page which allows users to edit all of their details. A user is then able to view the actual profile page by pressing the view profile link on the navigation bar, taking you to the fourth page. After signing into an account, a user is able to use the search bar. This takes the user to the fifth page, allowing them to see the search results. Clicking on one of the search results takes you to either a job opening page or one of the three organization pages to view all of its information.

Interactive UI element

Sign-in and Registering Page:

- Username text field for containing the username.
- Password text field for containing the password.
- Sign in button is for submitting the username and password via SQL and PHP.
- Four text fields contain first name, last name, username and password are required element for register new account.
- Clicking Join button to submit the account information to database.

#### Duplicate Interactive UI element:

- Since there are many duplicate buttons, I'll only describe the duplicate button one time in order to make the description clear. These button appear in all the pages below.
  - Homepage button will lead user return to the homepage.
  - Searching bar contains the search keywords.
  - User info button will display user information in database after click.
  - Add photo button will read a photo file locally.
  - Share update button will update the user information.
  - Edit profile button is switch to the profile editing page.
  - View profile button is switch to profile view page.
  - Connection button is to see the account connection.
  - Group button is to view the groups are connected to the account.

#### User Home Page:

- Update photo button sends update query to the database in order to update the photo.
- Update status button sends update query to the database in order to update the status information.

#### Profile Editing Page:

- Full name, occupation, city, states, school, summary, experience, education and skills text field contain the text will pass to the database via SQL.
- Update Info and Update button will send query order to database to update the information.

#### Profile View Page:

• The four text fields display the summary, background, recommendations, followed group information about this account user.

#### Search Page:

- Home, search, account setting, edit profile, view profile, connections and groups button which are the same to the previous page.
- The listed button in the left side of the page will display the results which only contain selected keyword.
- Next page button will display the next nine.
- View button will turn into job, company, group or university view page.

#### Job View Page:

• The main content in the page is the description for the job in the text area in the page which is not editable for user.

- Apply button will send request or notification to the specific user who post the job.
- Save button will save the information of employer into database for checking later.

#### Company View Page:

• Follow button will save the company information to the account, it can be implemented by store an ID of the company into the account database.

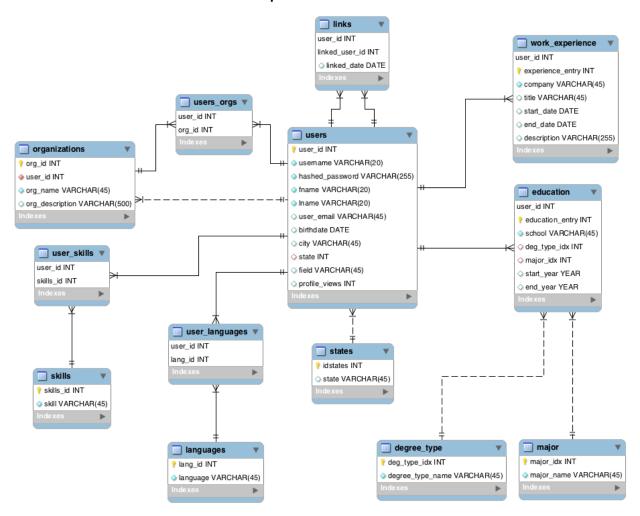
#### Group View Page:

- Text field displays the information about the group.
- Join button will send a request to the administrator or any authorized people of the group, after the administrator or the authorized people accept the request, the user will be in the group.

#### University View Page:

- Text field display the information such as website, contact email, phone number and address about the university.
- Follow button will save the company information to the account, it can be implemented by store an ID of the company into the account database.

## **Updated ERD**



## Management of users

#### Individuals:

#### Basic account

A Basic account is for anyone who wants to create and maintain professional profile online

- 1. Individual users can create, edit and delete individual profiles
- 2. Individual users can build user professional identity on the web.
- 3. Individual users can build and maintain a large trusted professional network.
- 4. Individual users can find and reconnect with colleagues and classmates.
- 5. Individual users can request and provide recommendations.
- 6. Individual users can request up to five introductions at a time.
- 7. Individual users can search for and view profiles of other members.
- 8. Individual users can receive unlimited online messages.
- 9. Individual users can save up to three searches and get weekly alerts on those searches.

#### Premium accounts

Premium account options for job seekers, sales and talent professionals, as well as the general professional who wants to get more offline.

- 1. Land dream job with Job Seeker
- 2. Unlock sales opportunities with Sales Navigator
- 3. Find and hire talent with Recruiter Lite

#### Companies:

Only users with individual pages can create company pages

- 1. Company user can add and edit a company page
- 2. Company user can add and remove administrator for company page
- 3. Company user can add and remove employees to company page
- 4. Company user can see a list of visitors to the page

Company user can create, edit and delete job list of the company page

#### Database DDL

Database Creation SQL: <a href="https://github.com/MaddenMark1495/Career-Based-Social-Network/blob/master/DDL/LinkedOut.sql">https://github.com/MaddenMark1495/Career-Based-Social-Network/blob/master/DDL/LinkedOut.sql</a>

-- MySQL Script generated by MySQL Workbench

```
SET @OLD UNIQUE CHECKS=@@UNIQUE CHECKS, UNIQUE CHECKS=0;
SET @OLD FOREIGN KEY CHECKS=@@FOREIGN KEY CHECKS,
FOREIGN KEY CHECKS=0;
SET @OLD SQL MODE=@@SQL MODE,
SQL MODE='TRADITIONAL, ALLOW INVALID DATES';
-- Schema linkedout
-- Schema linkedout
CREATE SCHEMA IF NOT EXISTS 'linkedout' DEFAULT CHARACTER SET utf8;
USE 'linkedout';
-- Table `linkedout`.`states`
______
DROP TABLE IF EXISTS 'linkedout'.'states';
CREATE TABLE IF NOT EXISTS 'linkedout'.'states' (
 'idstates' INT NOT NULL,
'state' VARCHAR(45) NULL,
PRIMARY KEY ('idstates'))
ENGINE = InnoDB;
-- Table `linkedout`.`users`
-- ------
DROP TABLE IF EXISTS 'linkedout'.'users';
CREATE TABLE IF NOT EXISTS 'linkedout'.'users' (
 `user_id` INT NOT NULL AUTO_INCREMENT,
```

```
'username' VARCHAR(20) NOT NULL,
 `hashed_password` VARCHAR(255) NOT NULL,
 'fname' VARCHAR(20) NOT NULL,
 'Iname' VARCHAR(20) NOT NULL,
 `user_email` VARCHAR(45) NULL,
 `birthdate` DATE NULL,
'city' VARCHAR(45) NULL,
 'state' INT NULL,
 'field' VARCHAR(45) NULL,
 `profile_views` INT NULL DEFAULT 0,
PRIMARY KEY ('user id'),
UNIQUE INDEX 'username UNIQUE' ('username' ASC),
INDEX `state_idx` (`state` ASC),
UNIQUE INDEX 'user id UNIQUE' ('user id' ASC),
CONSTRAINT 'user state'
      FOREIGN KEY ('state')
      REFERENCES `linkedout`.`states` (`idstates`)
      ON DELETE NO ACTION
      ON UPDATE NO ACTION)
ENGINE = InnoDB;
-- Table 'linkedout'.'work experience'
DROP TABLE IF EXISTS 'linkedout'.'work experience';
CREATE TABLE IF NOT EXISTS `linkedout`.`work_experience` (
 `user id` INT NOT NULL,
 `experience_entry` INT NOT NULL,
`company` VARCHAR(45) NOT NULL,
 `title` VARCHAR(45) NULL,
 `start_date` DATE NULL,
 'end date' DATE NULL,
 'description' VARCHAR(255) NULL,
PRIMARY KEY ('user_id', 'experience_entry'),
CONSTRAINT `w_user`
      FOREIGN KEY ('user id')
      REFERENCES 'linkedout'.'users' ('user id')
      ON DELETE CASCADE
      ON UPDATE NO ACTION)
ENGINE = InnoDB;
```

```
-- Table `linkedout`.`degree_type`
DROP TABLE IF EXISTS 'linkedout'.'degree type';
CREATE TABLE IF NOT EXISTS 'linkedout'.'degree type' (
 'deg type idx' INT NOT NULL AUTO INCREMENT,
 `degree_type_name` VARCHAR(45) NOT NULL,
 PRIMARY KEY ('deg type idx'),
 UNIQUE INDEX 'deg type idx UNIQUE' ('deg type idx' ASC))
ENGINE = InnoDB;
-- Table `linkedout`.`major`
DROP TABLE IF EXISTS `linkedout`.`major`;
CREATE TABLE IF NOT EXISTS 'linkedout'. 'major' (
 `major_idx` INT NOT NULL AUTO_INCREMENT,
 'major name' VARCHAR(45) NOT NULL,
 PRIMARY KEY (`major_idx`))
ENGINE = InnoDB:
-- Table `linkedout`.`education`
DROP TABLE IF EXISTS 'linkedout'.'education';
CREATE TABLE IF NOT EXISTS 'linkedout'.'education' (
 'user id' INT NOT NULL,
 `education_entry` INT NOT NULL,
 'school' VARCHAR(45) NOT NULL,
 'deg type idx' INT NULL,
 `major_idx` INT NULL,
 `start_year` YEAR NULL,
 'end year' YEAR NULL,
 PRIMARY KEY ('user_id', 'education_entry'),
 INDEX 'deg type idx idx' ('deg type idx' ASC),
 INDEX `major_idx_idx` (`major_idx` ASC),
 CONSTRAINT 'ed user'
      FOREIGN KEY (`user_id`)
      REFERENCES `linkedout`.`users` (`user_id`)
```

```
ON DELETE CASCADE
      ON UPDATE NO ACTION,
 CONSTRAINT 'deg type idx'
      FOREIGN KEY ('deg type idx')
      REFERENCES `linkedout`.`degree_type` (`deg_type_idx`)
      ON DELETE NO ACTION
      ON UPDATE NO ACTION,
 CONSTRAINT `major_idx`
      FOREIGN KEY ('major idx')
      REFERENCES `linkedout`.`major` (`major_idx`)
      ON DELETE NO ACTION
      ON UPDATE NO ACTION)
ENGINE = InnoDB;
-- Table `linkedout`.`links`
DROP TABLE IF EXISTS 'linkedout'.'links';
CREATE TABLE IF NOT EXISTS 'linkedout'.'links' (
 'user id' INT NOT NULL,
 'linked user id' INT NOT NULL,
 'linked date' DATE NULL,
 PRIMARY KEY ('user_id', 'linked_user_id'),
 INDEX `linked_username_idx` (`linked_user_id` ASC),
 CONSTRAINT `user1`
      FOREIGN KEY (`user_id`)
      REFERENCES 'linkedout'.'users' ('user id')
      ON DELETE CASCADE
      ON UPDATE NO ACTION,
 CONSTRAINT `user2`
      FOREIGN KEY ('linked_user_id')
      REFERENCES 'linkedout'.'users' ('user id')
      ON DELETE CASCADE
      ON UPDATE NO ACTION)
ENGINE = InnoDB;
-- Table `linkedout`.`organizations`
DROP TABLE IF EXISTS 'linkedout'. 'organizations';
```

```
CREATE TABLE IF NOT EXISTS 'linkedout'.'organizations' (
 `org_id` INT NOT NULL,
 'user id' INT NOT NULL,
 'org name' VARCHAR(45) NOT NULL,
 `org_description` VARCHAR(500) NULL,
 PRIMARY KEY ('org id'),
 INDEX 'org admin idx' ('user id' ASC),
 CONSTRAINT 'org_admin'
      FOREIGN KEY ('user id')
      REFERENCES 'linkedout'.'users' ('user id')
      ON DELETE NO ACTION
      ON UPDATE NO ACTION)
ENGINE = InnoDB;
-- Table `linkedout`.`users orgs`
DROP TABLE IF EXISTS 'linkedout'.'users orgs';
CREATE TABLE IF NOT EXISTS 'linkedout'.'users orgs' (
 `user_id` INT NOT NULL,
 `org_id` INT NOT NULL,
 PRIMARY KEY ('user id', 'org id'),
 INDEX `org_idx` (`org_id` ASC),
 CONSTRAINT 'uo_user'
      FOREIGN KEY ('user_id')
      REFERENCES `linkedout`.`users` (`user_id`)
      ON DELETE CASCADE
      ON UPDATE NO ACTION,
 CONSTRAINT `uo_org`
      FOREIGN KEY ('org id')
      REFERENCES `linkedout`.`organizations` (`org_id`)
      ON DELETE NO ACTION
      ON UPDATE NO ACTION)
ENGINE = InnoDB;
-- Table `linkedout`.`skills`
DROP TABLE IF EXISTS 'linkedout'.'skills';
CREATE TABLE IF NOT EXISTS 'linkedout'.'skills' (
```

```
'skills id' INT NOT NULL AUTO INCREMENT,
 'skill' VARCHAR(45) NOT NULL,
 PRIMARY KEY ('skills_id'))
ENGINE = InnoDB;
-- Table `linkedout`.`user_skills`
DROP TABLE IF EXISTS 'linkedout'.'user_skills';
CREATE TABLE IF NOT EXISTS 'linkedout'.'user_skills' (
 `user_id` INT NOT NULL,
 'skills id' INT NOT NULL,
 PRIMARY KEY ('user_id', 'skills_id'),
 INDEX `us_skill_idx` (`skills_id` ASC),
 CONSTRAINT 'us_user'
      FOREIGN KEY (`user_id`)
      REFERENCES `linkedout`.`users` (`user_id`)
      ON DELETE CASCADE
      ON UPDATE NO ACTION,
 CONSTRAINT `us_skill`
      FOREIGN KEY (`skills_id`)
      REFERENCES 'linkedout'.'skills' ('skills id')
      ON DELETE NO ACTION
      ON UPDATE NO ACTION)
ENGINE = InnoDB;
-- Table `linkedout`.`languages`
DROP TABLE IF EXISTS 'linkedout'. 'languages';
CREATE TABLE IF NOT EXISTS 'linkedout'.'languages' (
 `lang_id` INT NOT NULL AUTO_INCREMENT,
 'language' VARCHAR(45) NOT NULL,
 PRIMARY KEY ('lang id'))
ENGINE = InnoDB;
-- Table `linkedout`.`user_languages`
```

```
CREATE TABLE IF NOT EXISTS 'linkedout'.'user languages' (
        `user id` INT NOT NULL,
       'lang id' INT NOT NULL,
       PRIMARY KEY ('user id', 'lang id'),
       INDEX 'ul lang idx' ('lang id' ASC),
       CONSTRAINT `ul_user`
             FOREIGN KEY ('user id')
             REFERENCES `linkedout`.`users` (`user_id`)
             ON DELETE CASCADE
             ON UPDATE NO ACTION.
       CONSTRAINT 'ul_lang'
             FOREIGN KEY ('lang id')
             REFERENCES 'linkedout'. 'languages' ('lang id')
             ON DELETE NO ACTION
             ON UPDATE NO ACTION)
      ENGINE = InnoDB;
      SET SQL MODE=@OLD SQL MODE;
      SET FOREIGN_KEY_CHECKS=@OLD_FOREIGN_KEY_CHECKS;
      SET UNIQUE CHECKS=@OLD UNIQUE CHECKS;
Insert Statements:
      --new user registration
      INSERT INTO 'linkedout'.'users' ('username', 'hashed password', 'fname', 'lname')
        VALUES (?, ?, ?, ?);
      --link request accepted
      INSERT INTO 'linkedout'.'links' ('user id', 'linked user id', 'linked date')
        VALUES (?, ?, CURDATE());
      --add new major
      INSERT INTO 'linkedout'.'major' ('major name')
        VALUES (?);
      --add new degree type
      INSERT INTO 'linkedout'.'degree type' ('degree type')
        VALUES (?);
      --add education entry to resume
      INSERT INTO 'linkedout'.'education' ('user id', 'education entry', 'school',
      `deg_type_idx`, `major_idx`, `start_year`, `end_year`)
        VALUES (?, ?, ?, ?, ?, ?);
```

DROP TABLE IF EXISTS 'linkedout'.'user languages';

```
--insert work experience entry
       INSERT INTO 'linkedout'.'work experience' ('user_id', 'experience entry', 'company',
       `title`, `start_date`, `end_date`, `description`)
         VALUES (?, ?, ?, ?, ?, ?, ?);
       --add new skill
       INSERT INTO 'linkedout'.'skills' ('skill')
         VALUES (?);
       --add user skill
       INSERT INTO `linkedout`.`user_skills` (`user_id`,`skill id`)
         VALUES (?, (SELECT `skill_id` FROM `linkedout`.`skills` WHERE `skill_name` = ?));
       --add new language
       INSERT INTO 'linkedout'.'languages' ('language') VALUES (?);
       --add user language
       INSERT INTO `linkedout`.`user_languages` (`user_id`, `lang_id`)
         VALUES (?, (SELECT `lang_id` FROM `linkedout`.`languages` WHERE `language`
       = ?));
       --add new organization
       INSERT INTO 'linkedout'.'organizations' ('user id', 'org name', 'desription')
         VALUES (?, ?, ?);
       --add new organization member
       INSERT INTO 'linkdedout'.'user orgs' ('user id', 'org id')
         VALUES (?, ?);
Update Statements:
       --general profile information change
       UPDATE 'linkedout'.'users'
         SET /*col1=val1, col2=val2, etc*/
         WHERE 'user id' = ?;
       --update education entry
       UPDATE 'linkedout'.'education'
         SET /*col1=val1, col2=val2, etc*/
         WHERE `user_id` = ? AND `education_entry` = ?;
       --update work experience entry
       UPDATE 'linkedout'.'work experience'
         SET /*col1=val1, col2=val2, etc*/
         WHERE 'user id' = ? AND 'education entry' = ?;
       --update organization
       UPDATE 'linkedout'.'organizations'
         SET /*col1=val1, col2=val2, etc*/
```

```
WHERE `org_id` = ?;
```

#### **Delete Statements:**

```
--delete user profile (cascade deletes all other associations with this user_id)
DELETE FROM `linkedout`.`users`
  WHERE 'user id' = ?;
--delete user skill
DELETE FROM `linkedout`.`user_skills`
  WHERE `user_id` = ?;
--delete user language
DELETE FROM `linkedout`.`user languages`
  WHERE `user_id` = ?;
--delete user organization
DELETE FROM `linkedout`.`user orgs`
  WHERE ('user id' = ? AND 'org id' = ?);
--delete linked friend (not guaranteed which column user_ids are in so have to check for
both directions)
DELETE FROM 'linkedout'.'links'
  WHERE ('user id' = ? AND 'linked user id' = ?)
       OR ('user_id' = ? AND 'linked_user_id' = ?);
--delete education entry
DELETE FROM `linkedout`.`education`
  WHERE (`user_id` = ? AND `education_entry` = ?);
--delete work experience entry
DELETE FROM `linkedout`.`work experience`
  WHERE ('user_id' = ? AND 'experience_entry' = ?);
```