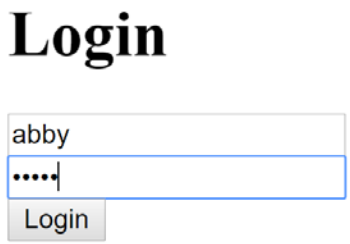
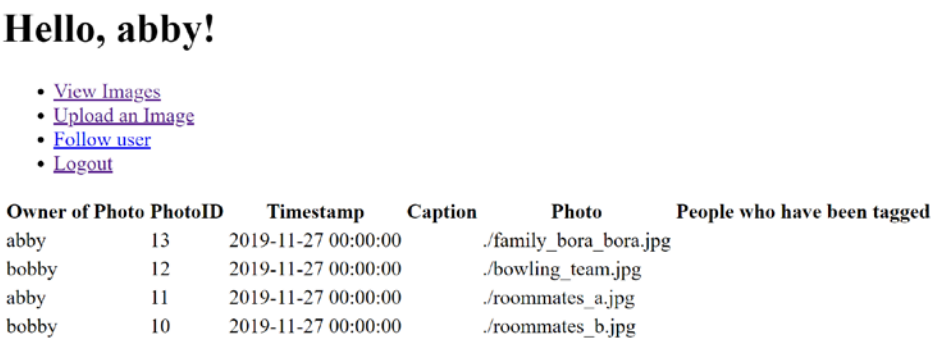
This report focus on the feature implemented for part 3

The first step is to insert all the tuple given for testing process.

This is the main page. By clicking login button we get the next page.



Because we have already insert the abby as a person tuple into the database, we can just by type the username and password stored in the table, which is in this case is abby and pass1

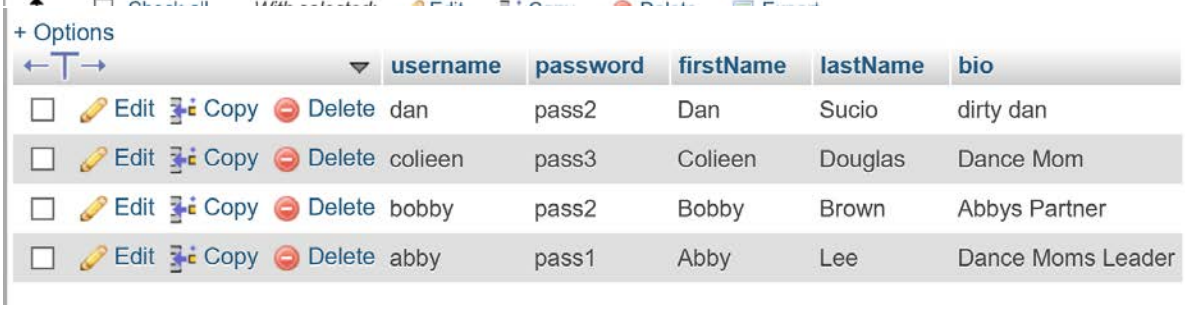


After clicking the login in button we can get into our home page. In the home page, we can see all the photo visible to abby. In this case, the photoID which is visible for abby is 10, 11, 12, 13.

In order to show this feature is valid, we need to get information from all the table.

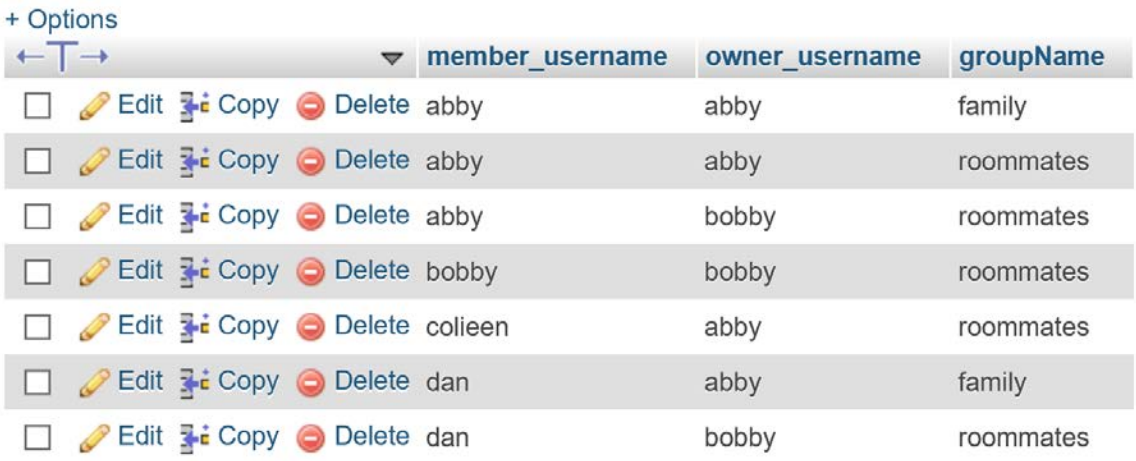
+ Options

	photoID	postingdate	filepath	allFollowers	caption	photoPoster
Edit Copy Delete	13	2019-11-27 00:00:00	./family_bora_bora.jpg	0	family vaca	abby
Edit Copy Delete	12	2019-11-27 00:00:00	./bowling_team.jpg	0	bowlingTeam	bobby
Edit Copy Delete	11	2019-11-27 00:00:00	./roommates_a.jpg	1	roommates	abby
Edit Copy Delete	10	2019-11-27 00:00:00	./roommates_b.jpg	1	roommates	bobby



+ Options

	username	password	firstName	lastName	bio
Edit Copy Delete	dan	pass2	Dan	Sucio	dirty dan
Edit Copy Delete	colieen	pass3	Colieen	Douglas	Dance Mom
Edit Copy Delete	bobby	pass2	Bobby	Brown	Abbys Partner
Edit Copy Delete	abby	pass1	Abby	Lee	Dance Moms Leader



+ Options

	member_username	owner_username	groupName
Edit Copy Delete	abby	abby	family
Edit Copy Delete	abby	abby	roommates
Edit Copy Delete	abby	bobby	roommates
Edit Copy Delete	bobby	bobby	roommates
Edit Copy Delete	colieen	abby	roommates
Edit Copy Delete	dan	abby	family
Edit Copy Delete	dan	bobby	roommates

+ Options

	groupOwner	groupName	description
Edit Copy Delete	bobby	roommates	42 Wallaby Way
Edit Copy Delete	abby	roommates	roommates of 221B
Edit Copy Delete	abby	family	Lee Family
Edit Copy Delete	bobby	bowlingTeam	The Pinhead Larrys

+ Options

	groupOwner	groupName	photoID
Edit Copy Delete	bobby	roommates	12

+ Options

	username_followed	username_follower	followstatus
Edit Copy Delete	bobby	colieen	0
Edit Copy Delete	bobby	abby	1

By showing the feature 1 is valid, I will explain the visible photo one by one.

1. As for photoID is 13, because the photoPoster is abby, this one is visible for abby
2. As for photoID is 11, because the photoPoster is abby, this one is also visible for abby
3. As for photoID is 12, we can see this one is not for all followers, but abby is belong to bobby's roommates group, and this photo is visible for bobby's roommates. Therefore, this one is also visible for abby.
4. As for photoID 10, we can see this one is visible for all follower, and abby is one of bobby's follower. Therefore, this one is also visible for abby.

   The query to find visible photoID is shown below. Please take a look!

```
SELECT
photoID
          FROM photo
          WHERE photoID IN(
                SELECT photoID
                FROM photo
                WHERE photoPoster = 'abby'
                OR photoID IN(
                              SELECT photoID
                             FROM photo JOIN follow ON (photoPoster = username_followed)
                              WHERE (allFollowers = True AND username_follower = 'abby'
          AND followstatus = True)
                              OR photoID IN(
                                            SELECT photoID
                                              FROM friendgroup AS F
                                              JOIN belongto As B ON F.groupName =
          B.groupName AND F.groupOwner = B.owner_username
                                              JOIN sharedwith AS S ON F.groupName =
          S.groupName AND F.groupOwner = S.groupOwner
                                              WHERE member_username = 'abby')))
```