Homework Assignment 2: Instasham

In this assignment, you will implement a Web application where registered users will be able to publish/modify and delete photo/caption publication as well as add/modify and delete comments on these publications.

Learning Objectives

Understand how to:

- Use password hashing and password verification functions for registration and login purposes.
- Use and destroy session variables, especially for the Login/Logout process.
- Implement and use Action Filters to restrict user access to secure functionality.
- Manipulate database records to reflect typical eCommerce Web app interactions.
- Manage file uploads and serve files.

Further understand how to:

- Implement a PHP MVC (Model View Controller) Web application.
- Use method parameters and session variables for integrity constraints and data input requirements in Web applications.
- Implement multi-table databases.
- Use PDO and appropriate SQL to interact with this database.

Requirements

The Web app will be built with PHP, specifically using our in-class developed MVC framework and the data storage will be ensured by a MySQL/MariaDB database. **Students must independently define aspects of the application that are not specified in this assignment statement. If in doubt, copy Instagram.**
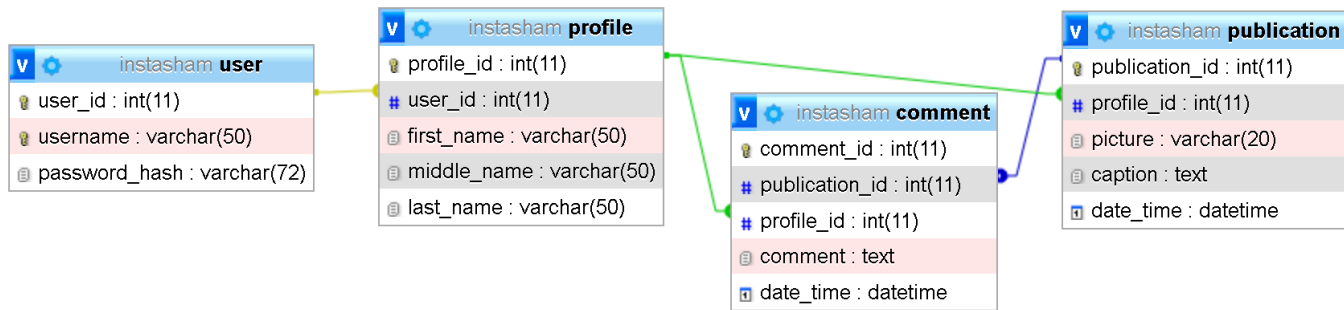
Interactions

The Web app will support two types of users: **persons** and **users**. **Persons** are internet users who have not yet logged in and **users** are internet users that have logged in. The following features will be supported:

- To become a user, as a person, I can register.
- To access the application, as a person, I can log into the application.
- To protect my account, as a user, I can logout of the application.
- To make publications, as a user, I can upload my picture and create my caption.
- To correct publications, as a user, I can edit my caption.
- To avoid embarrassment, as a user, I can delete my publication.
- To provide my opinion, as a user, I can add comments to a publication.
- To correct my comments, as a user, I can edit my comments.
- To retract my comments, as a user, I can delete my comments.
- To see interesting publications, as a person or user, I can see a list of all publications, most recent first.
- To find interesting publications, as a person or user, I can search for captions by search terms.
- To find interesting publications, as a person or user, I can view other user profile pages.
- To manage my online content, as a user, I can view my profile page.
- To manage my profile, as a user, I can edit my profile information.

Database

To store the data, we will have a few tables (refer to the picture below):

1- user: user_id, username(unique), password_hash.
2- profile: profile_id, user_id(FK to user), first_name, middle_name, last_name.
3- publication: publication_id (PK), profile_id (FK to profile), picture, caption, date_time.
4- comment: comment_id (PK), profile_id (FK to profile), publication_id (FK to publication), comment, date_time.

instasham user
- user_id : int(11)
- username : varchar(50)
- password_hash : varchar(72)

instasham profile
- profile_id : int(11)
- user_id : int(11)
- first_name : varchar(50)
- middle_name : varchar(50)
- last_name : varchar(50)

instasham comment
- comment_id : int(11)
- publication_id : int(11)
- profile_id : int(11)
- comment : text
- date_time : datetime

instasham publication
- publication_id : int(11)
- profile_id : int(11)
- picture : varchar(20)
- caption : text
- date_time : datetime

Profile creation process

Upon registration, users will not yet have a profile created for them. However, before they can use the application, they need to build a profile for themselves. By using access filtering, users will be redirected to profile creation if at any moment they are accessing application functionality that requires users to be logged in.

Publication list

All publications are displayed on the main page of the application for anyone to see, whether they are logged in or not. These are displayed as a list of hyperlinks. Each hyperlink points to the publication view and uses the publication title as hyperlink text. When any person or user searches for a publication by title or content, the search results are displayed in the same way. Only public publications appear in the main page and search results.

Profile page

Each user may access their profile page. This page displays all information owned by this user on the application. This includes their profile information, a list of their publications (as a list of hyperlinks) and a list of their comments (as hyperlinks).

Users will be able to navigate to all publication pages through these hyperlinks. Users will be able to modify their profiles using this page as well.

Publication view

In the publication view, users can see the publication and all comments on the publication below the publication. Users can add comments, modify, and delete their own comments (not other user's comments). If the publication is theirs, users are also able to modify and delete their publication.

Evaluation Criteria and Instructions

Each assignment is marked on 10 points. Each requirement part missing will deduct one half mark. Lateness penalties apply as per the course outline. This work must be completed in teams of 2 or 3 students.

What and how to Submit

Export your entire database to the project folder, zip your entire project folder and submit via Omnivox by the deadline on the course outline.

Bonus: teams who deliver functional application that look good will gain 2 bonus marks.