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CSC 3326: Project MidReport

March 9, 2017

The Show Me AUI database keeps track of users, pictures, events, and locations:

User (userId, username, lastName, firstName, email, userPassword)

Event (eventId, startTime, endTime)

Location (locationId, geolocalization)

Picture (imageId, imagePath, *userId* (FK), *eventId* (FK), description, numberSeen, createTime,

modificationTime, device, size, *locationId* (FK))

InPicture (*userId* (FK), *imageId* (FK))

PictureRating (*userId* (FK), *imageId* (FK), rating)

PictureComment (commentId, commentText, postTime, *userId* (FK), *imageId* (FK))

Tag (tagName)

PictureTag (*tagName* (FK), *imageId* (FK))

Notification (notificationId, *toUser* (FK), message)

**ER diagram:**As shown in the ER diagram attached,

* A User may take and post pictures, give Ratings, send Comments, and appear in pictures.
* A Picture is located in at most one Location, and one Location can have many pictures.
* A Picture may include more than one Tag, and a Tag can be used on many pictures.
* An Event can feature many Pictures, and a Picture can only record at most one event.

**Logical Schema:**We have converted the ER diagram to a relational database, including tables (with their primary keys, candidate keys, foreign keys and necessary directives), indexes, views, triggers and other stored procedures. This can be found in the .sql file.

**Creation and Population of the Database:**We have also created the database and populated it, in order to test data manipulation (insert, update, delete...) transactions and queries. This can be found in the .sql file.

**Queries:**Finally, we have designed and implemented all SQL queries necessary to implement the requirements/functionalities of your DB application (retrieval queries, aggregate and grouping queries necessary to support any interesting analysis and reports...). The following are queries we have created:

* Calculating average rating for a picture
* Retrieving all pictures from one event
* Retrieving all comments on one picture
* Retrieving all pictures posted by one user
* Retrieving all pictures that a user appears in
* Retrieving all pictures that use one tag
* Retrieving all pictures in one location
* Retrieving all users who have posted pictures of one event
* Retrieving all users who appear in one picture
* Retrieving all picture taken by one device
* Showing where one picture is located
* Retrieving all pictures with size less than some given constraint
* Retrieving popular pictures (based on number seen)
* Retrieving all pictures given some time interval
* Data manipulation queries for all nine tables
* Notifying a user after he is tagged in a picture
* Generating a report about a picture
* Generating a report about an event

This can be found in the .sql file.

**Project Proposal:** Below is the text from the original project proposal. There have been very few significant design changes since we have submitted it. Most notably, we have added features such as notifications to allow for the use of triggers in our database. We decided not to work with the Office of International Programs because Show Me AUI is not an application that is exclusive to exchange students, and seeks to connect anyone who is interested in staying updated with AUI.

1. Proposed Project

Title: Show Me AUI

Description: Show Me AUI is an application where users can see pictures of different locations in Al Akhawayn University during a specific time frame. This will allow current students, prospective students, exchange students, and former alumni to either learn more about the beautiful campus or stay in touch with the place where so many great memories and friendships are formed.

2. Requirements’ Gathering

Customer: We will reach out to the Office of International Programs to ask if they would be interested in being our customer for this application.

Users: Anyone interested in AUI are welcome to use the application. The most likely users will be current students, exchange students, and alumni.

3. Requirements’ Specification

Features:

* A user can upload pictures to the database. The pictures uploaded will take into consideration the time and location where they were taken.
* A user can search for pictures in the database based on a specific timeframe and location (e.g: AUI’s Cafeteria on 23/02/2017).
* A user can see recent pictures uploaded by other users.
* A user can follow other users.
* A user can login and see all the pictures that were uploaded by himself and his friends.
* A user can delete photos.
* A user can apply filters to photos before uploading.

4. Project Management Plan

Dates and Tasks:

March 9 Project MidReport

April 9 Implementation Progress

April 30 Demo Files

Implementation/Overall Work

Presentation File

Project Final Report

Who is Working on What:

We will work together on all the parts of the application, from the data modeling and database design stage all the way to database implementation and the development of mobile, desktop, and web applications for use.

III. Different Procedures to Meet Project Requirements and Deadlines

We have created a repository on GitHub where we can work all together: https://github.com/caroqliu/Show-Me-AUI. This will keep the code updated, organized, and synced between members.

We will meet twice a week to discuss the challenges that we have encountered as well as the progress we made, and plan for the following week’s tasks accordingly.