CECS 277 Project #2

Due Week 7: Wednesday, October 9, 2019

Directions

Write an object-oriented solution that incorporates the concepts of inheritance and abstract classes to address the following problem:

You are tasked with designing the back-end data structures for the social media application "Impact". The goal of this social media platform is to link users with nonprofit organizations and volunteer opportunities. These are the interactions that the platform supports:

 I. All users can post images and status updates to a feed.

   Volunteer opportunity accounts stop appearing on the feed if the date of the opportunity has passed.

 II. Individuals 18 or over. can donate to non-profit organization accounts

   If the user makes a public donation, the donation appears on the feed. e.g.
   `Mariah donated $10 to ''6th Floor Families"`

III. All individuals can register to attend a volunteer opportunity.

   (a) The feed must update every time a user registers for an event to reflect the number of attendees expected for the event.

   e.g. `''Shore clean-up'' now has 45 registered volunteers.  Please join us!`

Tester Requirements

1. To see if your design will accommodate the front-end requirements, you must create a back-end tester. The tester must have the following menu options:

   MAIN MENU

   - `C)reate a new user`
     - Asks to select the type of profile: Individual, Organization, or Volunteer Page
     - For all types: name, email, username, password, bio
     - Additional for an individual: date of birth, bank account information (optional and only if over 18 y.o. Becomes mandatory when attempting to donate)
     - Additional for an organization: mailing address, phone number, tax-exempt number, bank account information
     - Additional for a volunteering event: date(s) & time(s) of event, location address, contact number
   - `A)ct as user`
     - displays a list of current users and allows the selection of one. A sub-menu appropriate to the type of user selected is given:

       Individual User Menu

       `P)ost Update`: can consist of message only or message and image (display file location and name of image "uploaded" to the feed).

       `M)ake a Donation`: requires existing organization or event username. Can only be made by users 18 y.o or older. If user does not have bank information already stored, then information must be additionally entered.

       `R)egister for Event`: requires username of existing event.

       `E)xit to main`

       Event Page User Menu

       `P)ost Update`: same as for individual user

       `M)odify Date/Time/Location`: allows for user to edit the given field. If user leaves field blank, it is understood that no changes are to be made.

       `E)xit to main`

       Organization User Menu

       `P)ost Update`: same as for individual user

       `E)xit to main`
   - `D)isplay Feed`: displays the feed with updates of all existing users.

2. Your tester must incorporate the use of a polymorphic method `displayUpdatesFor(User u)` whose purpose is to display the latest updates for the given user.

Submission Instructions

1. **Dropbox:** Each code file as a .txt or .rtf

2. **Hardcopy:** UML diagram & Grade Sheet

3. **Show During Demo:** Javadoc HTML pages