subscriptions.py Design Documentation

subscriptions.py

+unfoldToList(tpl:tuple)
+isSubscribed(user:int)
+create_subscription(user:int, topic:int)
+unsubscribe(user:int, topic:int)
+show_notifications(user:int)
+view_notification(user:int, topic:int)
+update_subscription(topic:int)

flaskr.py

schema.sql

Table:subscriptions
- id:primaryKey(int), userID:int, topicID:int, notified:int
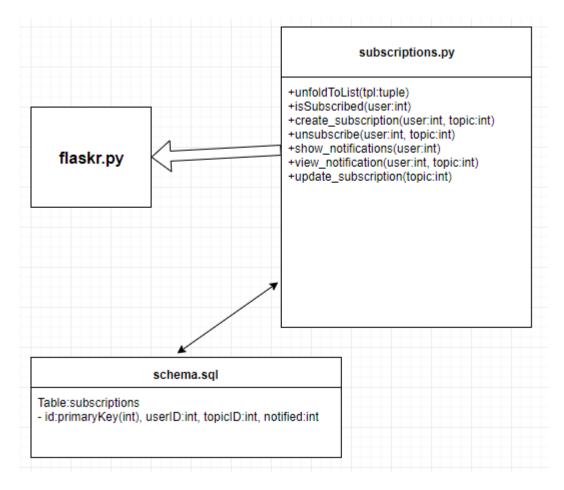
Overview

The subscriptions.py module is used by flaskr.py to implement user subscription to topics and notification of new posts. It does so through the use of a subscriptions table in schema.sql, which is initialized with the database. Each entry in this table contains a primary key (autoincremented integer) for the subscription ID, a userID (integer) for the subscribing user, a topicID (integer) for the subscription topic, and a notified value (integer set to 0 or 1, representing a boolean) which indicates whether or not a notification has been viewed. subscriptions.py is imported into the main flaskr.py module and its functions are called whenever subscription data must be added, updated, used, or removed.

Functionality

When a user is logged in to flaskr, and views the "show topics" page, the isSubscribed function is first called to identify which topics they are subscribed to. This will determine whether the "Subscribe" or "Unsubscribe" button should be displayed on each topic. Pressing "Subscribe" will call create_subscription to add a subscription to the database for that user and topic, while pressing "Unsubscribe" will call the unsubscribe function to delete that subscription. The show_notifications function is also called upon loading the "show topics" page, and will display a *NEW* indicator next to any topics to which a user has subscribed, and which have been updated since they were last viewed by the user. When the user navigates to the page associated with a subscribed topic, the view_notification function is called, removing the notification. When a new post or an edit is made in a topic thread, update_subscription is called, and all users subscribed to that thread will receive a new notification.