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/***************************************************************
 * TwitterClient.java
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 * PLEDGE:
 *
 * A basic command-line Twitter client.
 * Contains code modified from Professor Gregory Kapfhammer's.
 *
 *  +-----------------------------------------------------+
 *  | Command-line arguments:                             |
 *  |                                                     |
 *  | timeline: prints the twitter home timeline          |
 *  | tweet: prompts the user for a tweet, and posts it   |
 *  | tweet-txt: posts all tweets contained in tweets.txt |
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import java.util.Scanner;
import java.util.ArrayList;
import java.io.File;
import java.io.FileNotFoundException;
import java.util.List;
import twitter4j.*;

public class TwitterClient {
    public static void main(String[] argv) {

        ArrayList<Tweet> validTweets = new ArrayList<Tweet>(0);     // stores all
            valid tweets
        ArrayList<String> invalidTweets = new ArrayList<String>(0);  // stores
            all invalid tweets

        File tweets;    // represents the tweets.txt file to be read from
        Scanner scan;   // scanner to read tweets from tweets.txt

        Twitter twitter;                // Twitter object from twitter4j to be
            initialized later
        User user;                      // User object from twitter4j to be
            initialized later
        List<Status> postedStatuses;    // a List of Status objects from
            twitter4j; will contain
                                        // all the already posted statuses pulled
                                            from twitter.

        final int MAX_LENGTH = 140;     // maximum length for a valid tweet
        final int MIN_LENGTH = 1;       // minimum length for a valid tweet

        String currentLine = new String();  // holds the string being sorted

        // if there are no command-line arguments, print a help file detailing
            accepted CLIs
        if (argv.length == 0) {
           System.out.println ("TwitterClient: Please enter a command-line
               argument. \n"
                               + "Accepted command-line arguments: \n"
                               + " + timeline: prints the prints the twitter home
```

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                           timeline \n"
                       + " + tweet: prompts the user for a tweet, and
                           posts it \n"
                       + " + tweet-txt: posts all tweets contained in
                           Tweet.txt \n");
}

// if there are one or more command-line arguments, decide what to do
    next
else if (argv.length > 0) {
    // loop through argv
    for (String arg : argv) {

        // decide what to do based on the current arg
        switch (arg) {

                case "timeline":
                    // print the home timeline to the console
                    try {

                        // gets Twitter instance with default credentials
                        twitter = new TwitterFactory().getInstance();
                        user = twitter.verifyCredentials();

                        // grab statuses from twitter and put them in
                            postedStatuses
                        postedStatuses = twitter.getHomeTimeline();

                        // print all the statuses in postedStatuses
                        System.out.println("Showing @" + user.
                            getScreenName() + "'s home timeline.");
                        for (Status status : postedStatuses) {
                        System.out.println("@" + status.getUser().
                            getScreenName() + " - " + status.getText());
                        }
                    }

                    // catch TwitterExceptions thrown while connecting to
                        Twitter
                    catch (TwitterException te) {
                        te.printStackTrace();
                        System.out.println("Failed to get timeline: " +
                            te.getMessage());
                    }
                break;

                case "tweet":
                    // set up the scanner to scan from the command line
                    scan = new Scanner(System.in);

                    // prompt the user for a tweet
                    System.out.println ("Please enter a tweet and press
                        return.");
                    currentLine = scan.nextLine();
                    System.out.print("\n")
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                            // if the tweet is valid, put it in the validTweets
                                ArrayList
                            if (Tweet.isValidMessage(currentLine) == true){
                                Tweet tweet = new Tweet();
                                tweet.setMessage(currentLine);
                                validTweets.add(tweet);

                                // otherwise, put it in invalidTweets
                            } else {
                                invalidTweets.add(currentLine);
                            }
                        break;

                        case "tweets-txt":
                            try {
                                // set up the scanner to read from tweets.txt
                                tweets = new File ("tweets.txt");
                                scan = new Scanner(tweets);

                                // loop through all the lines in tweets.txt and
                                    sort them into ArrayLists.
                                while (scan.hasNextLine()) {
                                    currentLine = scan.nextLine();

                                    // if the tweet is valid, put it in the
                                        validTweets ArrayList
                                    if (Tweet.isValidMessage(currentLine) == true
                                        ){
                                        Tweet tweet = new Tweet();
                                        tweet.setMessage(currentLine);
                                        validTweets.add(tweet);

                                    // otherwise, put it in invalidTweets
                                    } else {
                                        invalidTweets.add(currentLine);
                                    }
                                }
                            }

                            // catch any exceptions thrown while reading in
                                Tweets.txt
                            catch (FileNotFoundException e){
                                e.printStackTrace(System.err);
                            }
                        break;

                    default:    // the default case should never trigger.
                        break;
                }

            }

        }

        // print out the valid tweets
        if (validTweets.size() > 0) {
            System.out.println("Valid tweets:");
            for (Tweet tweet : validTweets)
                System.out.println(tweet.toString());
            System.out.print("\n");
        }

        // print out the invalid tweets
        if (invalidTweets.size() > 0) {
            System.out.println("Invalid tweets:");
            for (String invalidTweet : invalidTweets)
                System.out.println(invalidTweet);
            System.out.print("\n");
        }


        // try to post all valid tweets to the timeline
        if (validTweets.size() > 0) {
            try {
                // connect to Twitter
                twitter = new TwitterFactory().getInstance();
                user = twitter.verifyCredentials();
                postedStatuses = twitter.getHomeTimeline();

                // loop through validTweets and post each tweet to Twitter
                for (Tweet tweet : validTweets)
                    twitter.updateStatus(tweet.getMessage());
                }

            // catch any TwitterExceptions thrown while posting valid tweets
            catch (TwitterException te) {
                te.printStackTrace();
                System.out.println("Failed to post tweet " + te.getMessage());
            }
        }
    }
}
```