

MiniSocialMediaPlatform.java

Attributes of MiniSocialMediaPlatform:

• accounts: hashmap in the form accountID:accountObject

• posts: hashmap in the porm postID:postObject

Methods:

Constructor for SocialMediaPlatform

• VALIDATION - NOT IN PROVIDED FILE - checkAccountHandle() checks if account is less than 30 chars, has no whitespace, and isn't already taken. Throws corresponding exception if there is an issue

• int createAccount(String handle) throws IllegalHandleException, InvalidHandleException

Calls checkAccountHandle() to see if the handle is valid, then calls account constructor, creates account using provided handle, adds account to accounts hashmap (key - accountID, value - created account object)

void removeAccount(int id) throws AccountIDNotRecognisedException

Searches for account in hashmap using findAccount(id), removes specified account from the accounts hashmap if it is found. All posts and likes also removed

void changeAccountHandle(String oldHandle, String newHandle) throws HandleNotRecognisedException,

IllegalHandleException, InvalidHandleException

Finds matching account in hashmap using findAccount(oldHandle), calls account.setHandle

• String showAccount(String handle) throws HandleNotRecognisedException

Finds matching account in accounts hashmap using findAccount(handle), prints account.toString

- int createPost(String handle, String message) throws HandleNotRecognisedException, InvalidPostException
- Checks post content provided with checkMessage(message). Uses post constructor to create new post with PostType.ORIGINAL, adds newly created post to posts hashmap
- int endorsePost(String handle, int id) throws HandleNotRecognisedException, PostIDNotRecognisedException, NotActionablePostException

Checks if post can be endorsed using isPostEndorsement(id). Uses post constructor to create new post with PostType.ENDORSEMENT, sets 'parents' attribute to the post being endorsed, sets post content to the contents of the parent post, adds newly created post to posts hashmap, uses parentPost.addEndorsement() to add the endorsement post object to the endorsed posts endorsements arraylist

• int commentPost(String handle, int id, String message) throws HandleNotRecognisedException,

PostIDNotRecognisedException, NotActionablePostException, InvalidPostException;

Uses post constructor to create new post with PostType.COMMENT, sets 'parents' attribute to the post being commented on, sets post content to the message provided, adds newly created post to posts hashmap, uses parentPost.addcomment() to add the comment post object to the parent post's comments arraylist

• void **deletePost**(int id) throws PostIDNotRecognisedException

Removes specified post from posts hashmap

• String showIndividualPost(int id) throws PostIDNotRecognisedException (returns formated string containing the details of

Uses findPost() to get post object from hashmap, prints post.tostring

• StringBuilder showPostChildrenDetails(int id) throws PostIDNotRecognisedException, NotActionablePostException (shows the details of the current post and all its children posts)

Iteratively runs post toString() for the parent post and all it's children (and children's children etc.) Makes tree structure out of

int getMostEndorsedPost()

For each post in posts where PostType = PostType.ORIGINAL

int endorsementCount = length(post.getEndorsements) ++

Return post with highest endorsementCount

• int qetMostEndorsedAccount()

For each account in accounts:

int endorsementCount = account.getEndorsementCount

Return account with highest endorsementCount

• void erasePlatform() (empties this SocialMediaPlatform of its contents and resets all internal counters) Reset hashmaps, reset counters to 0 delete all objects (not sure how to do that, hopefully it's done when hashmaps are reset?)

• void savePlatform(String filename) throws IOException (saves this SocialMediaPlatform's contents into a serialised file, with the filename given in the argument - using serialize module)

Use serialize module to save all data to specified file

• void loadPlatform(String filename) throws IOException, ClassNotFoundException (Method should load and replace this SocialMediaPlatform's contents with the serialised contents stored in the file given in the argument Use serialize module to read data from specified file

Social media CA3 project UML

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SocialMediaPlatform.java (extends MiniSocialMediaPlatform.java)

Attributes inherited from MiniSocialMediaPlatform

Methods

• int createAccount(String handle, String description) throws

IllegalHandleException, InvalidHandleException Calls account constructor, creates account using provided handle and account description, adds account to accounts hashmap (key - accountID, value - created account object)

- void removeAccount(int id) throws AccountIDNotRecognisedException Removes specified account from the accounts hashmap. All posts and likes also removed
- void **updateAccountDescription**(String handle, String description) throws HandleNotRecognisedException

Search accounts hashmap for matching account, call account.setDescription(description)

• int getNumberOfAccounts()

Returns number of accounts in accounts hashmap

• int getTotalOriginalPosts()

Iterates through every item in posts hashmap, returns count of posts where post.getType() == PostType.ORIGINAL, make sure deleted posts arent included

• int getTotalEndorsmentPosts()

Iterates through every item in posts hashmap, returns count of posts where post.getType() == PostType.ENDORSEMENT, make sure deleted posts arent included

• int getTotalCommentPosts()

Iterates through every item in posts hashmap, returns count of posts where post.getType() == PostType.COMMENT, make sure deleted posts arent included

> Serializable (provided by Java) A module that allows us to export social media data as bytestream or import another socialmedia bytestream

Attributes:

Account class (Account.java)

- ID: int (needed as this number will never change, handle might. Will be easier for posts
- handle: string
- description: string
- userPosts: arrayList() of post objects that the account has created
- endorsementCount(): int, called when a post is endorsed, account found with AuthorID

Methods:

- constructor setHandle(String newHandle)
- getHandle()
- clearAccount() getDescription()
- addPost()
- toString()
- setDescription(String newDescription)
- setNewId()
- addEndorsement()
- getEndorsementCount()
- isHandleValid(String handle)

InvalidHandleException

InvalidHandleException

Thrown if the new handle is empty, has more than 30 characters, or has white spaces

Object classes and their methods

Post (parent) class (Post.java) **Attributes of Post objects** PostType enum PostID: int Values: Author: Account • ORIGINAL • content: String (default value = COMMENT • ENDORSEMENT endorsementCount: int • DELETED postType: PostType Methods: Post: Account, string Post: int addComment() • isAuthorValid() isPostEndorsable() addEndorsement() addEndorsementList() removeEndoresement() getId() getEndorsementCount() setNewPostId() getContents() getPostType()

Comment extends Post

- isOrphan: optional boolean for orphaned comments
- parent: Post
- comments: arraylist() of comment
- endorsements: an arraylist of
- endorsements postType.COMMENT
- constructor

getAuthor()

getId() • toString()

Original extends Post

endorsements: arrayList() of

comments: arraylist() of

postType.ORIGINAL

children: arraylist() of child

addEndorsementArrayList()

post objects

comments

constructor

• isContentValid()

getComments()

addComment()

toString()

getEndorsements()

addEndorsement()

- isContentValid()
- makeOrphan()
- getComments()
- addEndorsementArrayList()
- setParent()
- getEndorsements()
- toString()

parent: post object of parent

Endorsement extends Post

- (original) post) postType.ENDORSEMENT
- posts's content) removeEndorsementFromParent()

constructor (set content to parent

- getParent()
- toString()