# - username : String - password : String - dateCreated : LocalDate + User(username: String, password: String) + User(username: String, password: String, date: String) + toString() : String + getUsername() : String + getPassword() : String + getDateCreated() : LocalDate + setUsername(username: String) : void +setPassword(password: String) : void

### Admin borrowedItems: List<Integer> isApproved : boolean - wishlist : List<Integer> - trades: HashMap<Integer, LocalDate> + Admin(username: String, password: String) - frozen : boolean + Admin(username: String, password: String, flagged : boolean date: String, isApproved: boolean) requestToUnfreeze : boolean + setApproved(approved: boolean) : void inactive : boolean + isApproved() : boolean - numLent : int + toString() : String - numBorrowed : int numIncomplete : int - homeCity : String + Trader(username: String, password: String) + toString() : String + isFrozen() : boolean + setFrozen(frozen: boolean) : void + getNumLent() : int

+ setNumLent(numLent: int) : void

+ setFlagged(flagged: boolean) : void

+ isRequestToUnfreeze() : boolean

+ getWishlist() : List<Integer>

+ aetNumIncomplete() : int

+ removeTrade(id: int) : void

+ getInactive() : boolean

+ getHomeCity() : String

+ setInactive(inactive: boolean) : void

+ setHomeCity(newHomeCity: String): void

setNumBorrowed(numBorrowed: int): void

setNumIncomplete(numIncomplete: int): void

+ addTrades(id: int, createdDate: LocalDate): void

+ getTrades() : HashMap<Integer, LocalDate>

+ setRequestToUnfreeze(requestToUnfreeze: boolean) : void

+ getNumBorrowed() : int

· isFlagged() : boolean

+ checkUsername(username: String):
boolean
+ login(username: String, password:
String): boolean
+ changePassword(username: String,
password: String): void

Loginable

# AdminActions - admins: HashMap<String, Admin> + AdminActions(admins: HashMap<String, Admin>) + newAdmin(username: String, password: String): void + approveAdmin(username: String, approved: boolean): void + checkUsername(username: String): boolean + login(username: String, password: String): boolean + changePassword(username: String, password: String): void + getRequestedAdmins(): ArrayList<String> + getIdentifier(): String

### · weeklvLimit : int - maxInComplete : int - moreLend : int + TraderManager(users: HashMap<String, Trader>, weeklyLimit: int, maxInComplete: int, moreLend: int) + login(username: String, password: String) : boolean + getListOfFlagged() : List<String> + aetAllReauestsToUnfreeze() : List<Strina> + checkUsername(username: String) : boolean + getTraders() : ArrayList<String> + getTraderInfo(username: String) : String + newTrader(username: String, password: String): void + addTrader(t: Trader) : void + containTrader(username: String): boolean + freezeAccount(username: String) : boolean + unfreezeAccount(username: String): boolean + getWishlistIds(username: String): List<Integer> + addToWishlist(username: String, id: Integer) : void + getIsFrozen(username: String): boolean + getReguestToUnfreeze(username: String): boolean + setRequestToUnfreeze(username: String, setting: boolean): void + exceedWeeklyLimit(user: String, createDate: LocalDate) : boolean + exceedMaxIncomplete(user: String) : boolean + needMoreLend(user: String) : boolean + getTrades(user: String) : List<Integer> + addNewTrade(user: String, id: int, createDate: LocalDate): void + increaseNumbIncomplete(user: String) : void + decreaseNumIncomplete(user: String) : void + getWeeklyLimit(): int + setWeeklyLimit(weeklyLimit: int) : void + getMaxInComplete() : int + setMaxInComplete(maxInComplete: int): void + getMoreLend() : int + setMoreLend(moreLend: int) : void + setTraderInactive(username: String, bool: boolean) : void + isInactive(username: String) : boolean + changePassword(username: String, newPassword: String): void + getHomeCity(username: String) : String + setHomeCity(username: String, newHomeCity: String) : void + getIdentifier() : String + removeTradeFromTraders(id: int, firstUser: String, secondUser: String) : void

+ flagUser(username: String): void

+ unFlagUser(username: String) : void

+ increaseNumLent(username: String) : void

+ increaseNumBorrowed(username: String) : void

# users : HashMap<String, Trader>

```
ItemManager
# items : HashMap<Integer, Item>
idCounter : int
 + ItemManager(items: HashMap<Integer, Item>)
  - addItem(name: String, owner: String) : int
 + addItemDetails(itemID: Integer, category: String, description: String,
quality: int) : void
 + getItemsNeedingApproval() : List<Integer>
 + getApprovedItems(username: String) : List<Item>
 + setStatusForFrozenUser(username: String) : void
+ setStatusForRegularUser(username: String): void
 + setStatusForInactiveUser(username: String): void
+ getApprovedItemsIDs(username: String): List<Integer>
  getRemovedItemIds(username: String) : List<Integer>
  - getAllApprovedItemsIDs(username: String) : List<Integer>
  getItemInString(itemId: Integer): String
 + getItemName(itemId: Integer) : String
+ getItemDescription(itemId: Integer) : String
+ getListOfItemsInString(itemIds: List<Integer>) : List<String>
+ qetListOfItems(itemIds: List<Integer>) : List<Item>
 + getOwner(itemId: Integer) : String
  - getItemStatus(id: Integer) : ItemStatus
  - changeStatusToFrozen(id: Integer) : void
 + changeStatusToAvailable(id: Integer) : void
 + changeStatusToUnavailable(id: Integer) : void
 + changeStatusToRequested(id: Integer) : void
+ changeStatusToRemoved(id: Integer) : void
 + removeItem(id: Integer) : void
+ editDescription(id: Integer, desc: String) : void
+ editCategory(id: Integer, category: String) : void
+ editQualityRating(id: Integer, rating: int) : void
  convertItemToString(item: Item) : String
 - convertItemListToString(items: List<Item>) : List<String>
+ approveltem(id: Integer, approved: boolean) : void
 + undoRemoval(id: int) : void
+ getItemOwner(id: int) : String
 + getItemQuality(id: int) : String
  - setItemOwner(id: int, owner: String) : void
 + getIdentifier() : String
  - changeStatusToInactiveAva(id: int) : void
```

Thia is the same as the classes on the

left but not covered in arrows

Manager

+ getIdentifier() : String

Item

+ Item(id: Integer, name: String, owner: String)

qualityRating : in

- name : String

- category : String

- owner : Strina

- description : String

- status : ItemStatus

+ getName() : String

+ setName(name: String): void

+ getDescription() : String

+ getQualityRating() : int

+ getStatus() : ItemStatus

+ getOwner() : String

+ toString() : String

+ getId() : int

ItemStatus

TraderManager

+ setCategory(category: String) : void

+ setStatus(status: ItemStatus) : void

+ setOwner(owner: String) : void

+ setDescription(description: String): void

+ setQualityRating(qualityRating: int) : void

- convertToItemStatus(status: String) : ItemStatus

- id : int

## tradeDate : LocalDate - lastTradeDate : LocalDate - location : String - lastLocation : String - tradeStatus : String - returnLocation : String - lastReturnLocation : Sting returnDate : LocalDate - lastReturnDate : LocalDate numberOfEdits : HashMap<String, Integer> - isAgreed : HashMap<String, Boolean> - isConfirmed : HashMap<String, Boolean> - isReturned : HashMap<String, Boolean> - isPermanent : boolean - canBeUndone : boolean + Meeting(tradeId: int) + toString() : String + getTradeDate() : LocalDate + setTradeDate(tradeDate: LocalDate): void + getLastTradeDate() : LocalDate + getLocation() : String + setLocation(location: String) : void + getLastLocation() : String + resetLastInfo() : void + getTradeStatus() : String + setTradeStatus(tradeStatus: String) : void + getIsAgreed(): HashMap<String, Boolean> + getIsConfirmed(): HashMap<String, Boolean> + getNumberOfEdits() : HashMap<String, Integer> + setNumberOfEdits(numberOfEdits: HashMap<String, Integer>) : void + setIsAgreed(isAgreed: HashMap<String, Boolean>): void + increaseNumberOfEdits(user: String) : void + decreaseNumberOfEdits(user: String) : void + setAgree(trader: String, agree: Boolean) : void + setConfirm(trader: String, confirm: Boolean) : void + getTradeId() : int + getReturnLocation() : String + setReturnLocation(returnLocation: String) : void + getLastReturnLocation() : String + getReturnDate() : LocalDate + setReturnDate(returnDate: LocalDate) : void + getLastReturnDate() : LocalDate + isPermanent() : boolean + setPermanent(permanent: boolean) : void + getIsReturned() : HashMap<String, Boolean> + setReturn(trader: String, isReturn: Boolean) : void + getCanBeUndone() : boolean + isEdited() : boolean + isAgreed(username: String) : boolean + hasConfirmed(username: String): boolean + setBothConfirm(b: boolean) : void + bothDisagree() : void

# Trade\_ - initiator : String - receiver : String - items : List<Integer> - isPermanent : boolean - isCompleted : boolean tradeType : String - createdDate : LocalDate + Trade(id: Integer, initiator: String, receiver: String, tradeType: String, isPermanent: boolean) + toString() : String + isPermanent() : boolean + getId() : int + getItems() : List<Integer> + setItems(items: List<Integer>) : void + setCompleted(isCompleted: Boolean): void + getCompleted() : boolean + getTradeType() : String + getInitiator() : String + aetReceiver() : Strina + getCreatedDate() : LocalDate + getOtherTrader(username: String) : String TradeManager tradeInventory : HashMap<Integer, Trade> counter : int TradeManager(tradeInventory: HashMap<Integer, Trade>) + getIncompleteTrades(trades: List<Integer>) : List<Integer> createTrade(initiator: String, receiver: String, tradeType: String, isPermanent: boolean, items: List<Integer>): Integer + addToTradeInventory(trade: Trade): void + removeFromInventory(id: int) : hoolean + setTradeCompleted(id: int) : void + getTradeType(id: int) : String + getDateCreated(id: int) : LocalDate + getItems(id: int) : List<Integer> + isTradePermanent(id: int) : boolean + getOtherTrader(id: int, username: String) : String + getIdentifier() : String MeetingManager

```
- meetings : HashMap<Integer, Meeting>
 + MeetingManager(meetings: HashMap<Integer, Meeting>)
 + getMeeting(id: int) : Meeting
 + getOnGoingMeetings(tradelds: List<Integer>)
List<Integer>
 + getMeetingDescription(id: int) : String
 + createMeeting(tradeId: int, initiator: String, receiver:
String, isPermanent: boolean) : boolean
 + setMeetingInfo(id: int. tradeDate: LocalDate, returnDate
LocalDate, location: String, returnLocation: String): void
+ getMeetingStatus(id: Integer) : String
 + removeMeeting(id: int) : boolean
+ editLocation(id: int, location: String) : void
+ editDate(id: int. date: LocalDate) : void
+ increaseNumEdit(user: String, id: int) : void
+ isValid(user: String, id: int) : boolean
 + confirmMeeting(id: int, username: String) : boolean
  · checkAllConfirmed(id: int): boolean
+ agreeOnTrade(id: int, username: String) : boolean
 - checkAllAgreed(id: int) : boolean
 - checkAllReturned(id: int) : boolean
+ containMeeting(id: int) : boolean
   undoEdit(id: int, user: String) : void
 + undoAgree(id: int, user: String) : void
 + canUndoAgree(id: int, username: String): boolean
+ canUndoConfirm(id: int, username: String) : boolean
+ undoConfirm(id: int, user: String) : void
+ meetingCanBeUndone(id: int) : boolean
+ getEdits(id: int) : HashMap<String, Integer>
+ getMeetingDate(id: int) : String
 + getMeetingLocation(id: int) : String
+ getEditsLeft(id: int, username: String) : Integer
+ hasAgreed(id: int, username: String) : boolean
+ bothAgreed(id: int) : boolean
+ hasConfirmed(id: int, username: String) : boolean
+ bothConfirmed(id: int) : boolean
 + setReturnInfo(id: int) : void
+ setMeetingCompleted(id: int) : void
+ getReturnLocation(id: int) : String
+ getReturnDate(id: int) : String
+ setBothDisagree(id: int) : void
 + getIdentifier() : String
 + isMaxEditsReached(id: int) : boolean
```

```
username : String
                  password : String
                  dateCreated : LocalDate
                  + User(username: String, password: String)
                  + User(username: String, password: String, date: String)
                                                                                                                                                                                                                                                                                                                                                     - initiator : String
                  + toString() : String
                                                                                                                                                                                                                                                            - tradeId : int
                                                                                                                                                                                                                                                                                                                                                     - receiver : String
                 + getUsername() : String
                                                                                                                                                                                                                                                            - tradeDate : LocalDate
                                                                                                                                                                                                                                                                                                                                                     - items : List<Integer>
                  + getPassword() : String
                                                                                                                                                                                                                                                            - lastTradeDate : LocalDate
                  + getDateCreated() : LocalDate
                                                                                                                                                                                                                                                            - location : String
                                                                                                                                                                                                                                                                                                                                                     - isPermanent : boolean
                  + setUsername(username: String) : void
                                                                                                                                                                                                                                                            - lastLocation : String
                                                                                                                                                                                                                                                                                                                                                     - isCompleted : boolean
                  +setPassword(password: String): void
                                                                                                                                                                                                                                                            - tradeStatus : String
                                                                                                                                                                                                                                                                                                                                                     tradeType : String
                                                                                                                                                                                                                                                            - returnLocation : String
                                                                                                                                                                                                                                                                                                                                                      createdDate : LocalDate

√ lastReturnLocation: Sting

                                                                                                                                     qualityRating : int
                                                                                                                                                                                                                                                                                                                                                     + Trade(id: Integer, initiator: String, receiver: String,
                                                                                                                                                                                                                                                            - returnDate : LocalDate
                                                                                                                                     - id : int
                                                                                                                                                                                                                                                                                                                                                     tradeType: String, isPermanent: boolean)

    lastŘeturnDate : LocalDate

                                                                                                                                     name : String
                                                                                                                                                                                                                                                                                                                                                     + toString() : String
                                                                                                                                                                                                                                                            numberOfEdits: HashMap<String, Integer>
                                                                                                                                                                                                                                                                                                                                                     + isPermanent(): boolean
                                                                                                                                     category : String
                                                                                                                                                                                                                                                            - isAgreed : HashMap<String, Boolean>
                                                                                                                                                                                                                                                                                                                                                     + getId() : int
                 Admin
                                                                                                                                     description: String
                                                                                                                                                                                                                                                                                                                                                     + getItems() : List<Integer>
                                                                                                                                                                                                                                                             isConfirmed: HashMap<String, Boolean>
                                                         borrowedItems: List<Integer>
                                                                                                                                    - owner : String
                                                                                                                                                                                                                                                                                                                                                     + setItems(items: List<Integer>) : void
- isApproved : boolean
                                                                                                                                                                                                                                                            - isReturned : HashMap<String, Boolean>
                                                       wishlist : List<Integer>
                                                                                                                                     status : ItemStatus
                                                                                                                                                                                                                                                                                                                                                     + setCompleted(isCompleted: Boolean): void
                                                                                                                                                                                                                                                            - isPermanent : boolean,
                                                       - trades : HashMap<Integer, LocalDate>
+ Admin(username: String, password: String
                                                                                                                                                                                                                                                                                                                                                     + getCompleted(): boolean
                                                                                                                                     + Item(id: Integer, name: String, owner: String)
                                                                                                                                                                                                                                                            - canBeUndone : boolean
                                                        frozen : boolean
                                                                                                                                                                                                                                                                                                                                                     →getTradeType() : String
+ Admin(username: String, password: String,
                                                                                                                                     + getName() : String
                                                       - flagged : boolean
                                                                                                                                                                                                                                                                                                                                                     + getInitiator() : String
date: String, isApproved: boolean)
                                                                                                                                                                                                                                                            + Meeting(tradeId: int)
                                                                                                                                     + setName(name: String) : void
                                                        requestToUnfreeze : boolean
                                                                                                                                                                                                                                                                                                                                                     + getReceiver() : String
+ setApproved(approved: boolean) : void
                                                                                                                                                                                                                                                            + toString() : String
                                                                                                                                     + setCategory(category: String) : voj
                                                                                                                                                                                                                                                                                                                                                    + getCreatedDate(): LocalDate
                                                       - inactive : boolean
+ isApproved() : boolean
                                                                                                                                                                                                                                                            + getTradeDate() : LocalDate
                                                                                                                                     + getDescription(): String
                                                                                                                                                                                                                                                                                                                                                     + getOtherTrader(username: String) : String
                                                       - numLent : int
+ toString() : String
                                                                                                                                                                                                                                                            + setTradeDate(tradeDate: LocalDate): void
                                                                                                                                     + setDescription(description: String) : void /
                                                       - numBorrowed : int
                                                                                                                                                                                                                                                            + getLastTradeDate() : LocalDate
                                                                                                                                     + getQualix∕yRating() : int
                                                       - numIncomplete : int
                                                                                                                                                                                                                                                            + getLocation() : String
                                                                                                                                     + getStatus() : ItemStatus
                                                       - homeCity : String
                                                                                                                                                                                                                                                            + setLocation(location: String): void
                                                                                                                                                                                                                                                                                                                                                                                        TradeManager
                                                                                                                                     + setStatus(status: ItemStatus) : void , '
                                                                                                                                                                                                                                                            + getLastLocation() : String
                                                       + Trader(username: String, password: String)
                                                                                                                                     + setOwner(owner: String) : void
                                                                                                                                                                                                                                                                                                                                                           tradeInventory: HashMap<Integer, Trade>
                                                       + toString() : String
                                                                                                                                    + getOwner() : String/
                                                                                                                                                                                                                                                            + resetLastInfo() : void
                                                                                                                                                                                                                                                                                                                                                           counter : int
                                                                                                                                                                                                                                                            + getTradeStatus() : String
                                                       + isFrozen(): boolean
                                                                                                                                     + getId() : int
                                                       + setFrozen(frozen: boolean) : void
                                                                                                                                                                                                                                                            + setTradeStatus(tradeStatus: String): void
                                                                                                                                                                                                                                                                                                                                                           TradeManager(tradeInventory: HashMap<Integer, Trade>)
                                                                                                                                     + setQualityRating(qualityRating: int) : void
                                                                                                                                                                                                                                                            + getIsAgreed(): HashMap<String, Boolean>
                                                                                                                                                                                                                                                                                                                                                           + getIncompleteTrades(trades: List<Integer>) : List<Integer>
                                                        + getNumLent() : int
                                                                                                                                     + toString() : String
               Loginable
                                                                                                                                                                                                                                                                                                                                                           + createTrade(initiator: String, receiver: String, tradeType: String, isPermanent:
                                                                                                                                                                                                                                                            + getIsConfirmed(): HashMap<String, Boolean>__
                                                        + setNumLent(numLent: int) : void
                                                                                                                                     convertToItemStatus(status: String) : ItemStatus
                                                                                                                                                                                                                                                                                                                                                          boolean, items: List<Integer>): Integer
                                                                                                                                                                                                                                                            + getNumberOfEdits(): HashMap<String, Integer>
                                                       + getNumBorrowed(): int
                                                                                                                                                                                                                                                                                                                                                           + addToTradeInventory(trade: Trade) : void
                                                                                                                                                                                                                                                            + setNumberOfEdits(numberOfEdits: HashMap<String, Integer>): void
                                                       + setNumBorrowed(numBorrowed: int) : void
                                                                                                                                                                                                                                                                                                                                                           + removeFromInventory(id: int) : boolean
                                                                                                                                                                                                                                                            + setIsAgreed(isAgreed: HashMap<String, Boolean>): void
                                                       + isFlagged() : boolean
                                                                                                                                                                                                                                                                                                                                                          + setTradeCompleted(id: int) : void
                                                                                                                                                                                                                                                             rincreaseNumberOfEdits(user: String): void
  · checkUsername(username: String) :
                                                       + setFlagged(flagged: boolean) : void
                                                                                                                                                                                                                                                                                                                                                           + setTradeCompleted(id: int) : void
                                                                                                                                                                                                                                                            + decreaseNumberOfEdits(user: String) : void
                                                       + isRequestToUnfreeze(): boolean
                                                                                                                                                                                                                                                                                                                                                           + getTradeType(id: int) : String
                                                                                                                                                                                   Manager
 + login(username: String, password
                                                                                                                                                                                                                                                            + setAgree(trader: String, agree: Boolean) : void
                                                                                                                                                                                                                                                                                                                                                          + getDateCreated(id: int) : LocalDate
                                                        + setReguestToUnfreeze(reguestToUnfreeze: boolean) : voic
String) : boolean
                                                                                                                                     enum:
                                                                                                                                                                                                                                                            + setConfirm(trader: String, confirm: Boolean) : void
                                                                                                                                                                                                                                                                                                                                                           + getItems(id: int) : List<Integer>
                                                        + getWishlist() : List<Integer>
 + changePassword(username: String,
                                                                                                                                  ItemStatus
                                                                                                                                                                                                                                                                                                                                                           kisTradePermanent(id: int) : boolean
                                                                                                                                                                                                                                                            + getTradeId() : int
                                                       + getNumIncomplete(): int
password: String) : void
                                                                                                                                                                    + getIdentifier() : String
                                                                                                                                                                                                                                                                                                                                                           + getOtherTrader(id: int, username: String) : String
                                                                                                                                                                                                                                                            + getReturnLocation() : String
                                                       + setNumIncomplete(numIncomplete: int) ; void
                                                                                                                                                                                                                                                                                                                                                           + getIdentifier() : String
                                                                                                                                                                                                                                                            + setReturnLocation(returnLocation: String): void
                                                       + getTrades(): HashMap<Integer, LocalDate>
                                                                                                                                                                                                                                                           + getLastReturnLocation() : String
                                                       + addTrades(id: int, createdDate: LocalDate): void
                                                                                                                                                                                                                                                            + getReturnDate() : LocalDate
                                                       + removeTrade(id: int) : void
                                                                                                                                                                                                                                                            + setReturnDate(returnDate: LocalDate) : void
                                                        + setInactive(inactive: boolean). void
                                                                                                                                                                                                                                                            + getLastReturnDate() : LocalDate
                                                       + getInactive() : boolean
                                                                                                                                                                                                                                                            + isPermanent() : boolean
                                                       + getHomeCity() : String
                                                                                                                                                                                                                                                                                                                                                                        MeetingManager
                                                                                                                                                                                                                                                            + setPermanent(permanent: boolean) : void
                                                       + setHomeCity(newHomeCity: String): void
                                                                                                                                                                                                                                                            + getIsReturned(): HashMap<String, Boolean>
                                                                                                                                                                                                                                                                                                                                                     meetings: HashMap<Integer, Meeting>
                                                                                                                                                                                                                                                            + setReturn(trader: String, isReturn: Boolean): void
                                                                                                                                                                                                                                                                                                                                                    + MeetingManager(meetings: HashMap<Integer, Meeting>)
                                                                                                                                                                                                                                                            + getCanBeUndone() : boolean
                                                                                                                                                                                                                                                                                                                                                     + getMeeting(id: int) : Meeting
                                                                                                                                                                                                                                                            + isEdited() : boolean
                                                                                                                                                                                                                                                                                                                                                     + getOnGoingMeetings(tradeIds: List<Integer>):
                                                                                                                     TraderManager
                                                                                                                                                                                                                                                            + isAgreed(username: String): boolean
                                                                                                                                                                                                                                                                                                                                                     List<Integer>
                                                                                                                                                                                                        ItemManager
                                                                                                                                                                                                                                                            + hasConfirmed(username: String): boolean
                                                                                                                                                                                                                                                                                                                                                     + getMeetingDescription(id: int) : String
                                                                                        # users : HashMap<String, Trader>
                                                                                                                                                                                                                                                             + setBothConfirm(b: boolean) : void
                                                                                                                                                                           # items : HashMap<Integer, Item>
                                                                                       weeklvLimit : int
                                                                                                                                                                                                                                                                                                                                                     + createMeeting(tradeId: int, initiator: String, receiver:
                                                                                                                                                                                                                                                            + bothDisagree() : void
                                                                                        - maxInComplete : int

    idCounter : int

                                                                                                                                                                                                                                                                                                                                                   String, isPermanent: boolean) : boolean
                                                                                       - moreLend : int
                                                                                                                                                                                                                                                                                                                                                     + setMeetingInfo(id: int. tradeDate: LocalDate, returnDate
                                                                                                                                                                             + ItemManager(items: HashMap<Integer, Item>)
                                                                                                                                                                                                                                                                                                                                                   LocalDate, location: String, returnLocation: String): void
                                                                                                                                                                              addItem(name: String, owner: String) : int
                                                                                        + TraderManager(users: HashMap<String, Trader>, weeklyLimit: int,
                                                                                                                                                                                                                                                                                                                                                    + getMeetingStatus(id: Integer) : String
                                                                                                                                                                             + addItemDetails(itemID: Integer, category: String, description: String,
                                                                                       maxInComplete: int, moreLend: int)
                                                                                                                                                                                                                                                                                                                                                     + removeMeeting(id: int) : boolean
                                                                                        login(username: String, password: String): boolean
                                                                                                                                                                            quality: int) : void
                                     AdminActions
                                                                                       + getListOfFlagged(): List<String>
                                                                                                                                                                             + getItemsNeedingApproval() : List<Integer>
                                                                                                                                                                                                                                                                                                                                                     + editLocation(id: int, location: String) : void
                                                                                                                                                                             + getApprovedItems(username: String) : List<Item>
                                                                                        + getAllReguestsToUnfreeze() : List<String>
                                                                                                                                                                                                                                                                                                                                                     + editDate(id: int, date: LocalDate) : void
          admins: HashMap<String, Admin>
                                                                                                                                                                              setStatusForFrozenUser(username: String) : void
                                                                                        + checkUsername(username: String): boolear
                                                                                                                                                                                                                                                                                                                                                     increaseNumEdit(user: String, id: int): void
                                                                                                                                                                             + setStatusForRegularUser(username: String) : void
                                                                                         getTraders(): ArrayList<String>
          + AdminActions(admins: HashMap<String, Admin>)
                                                                                                                                                                                                                                                                                                                                                     + isValid(user: String, id: int) : boolean
                                                                                                                                                                             + setStatusForInactiveUser(username: String) : void
                                                                                        + getTraderInfo(username: String) : String
           newAdmin(username: String, password: String): void
                                                                                                                                                                                                                                                                                                                                                     + confirmMeeting(id: int. username: String): boolean
                                                                                                                                                                             + getApprovedItemsIDs(username: String) : List<Integer>
                                                                                        + newTrader(username: String, password: String): void
           approveAdmin(username: String, approved: boolean): void
                                                                                                                                                                                                                                                                                                                                                     checkAllConfirmed(id: int) : boolean
                                                                                                                                                                             + getRemovedItemIds(username: String) : List<Integer>
                                                                                       + addTrader(t: Trader) : void
          checkUsername(username: String): boolean
                                                                                                                                                                              - getAllApprovedItemsIDs(username: String): List<Integer>
                                                                                                                                                                                                                                                                                                                                                     + agreeOnTrade(id: int, username: String) : boolean
                                                                                        containTrader(username: String): boolean
          Flogin(username: String, password: String) : boolean
                                                                                                                                                                              getItemInString(itemId: Integer) : String
                                                                                                                                                                                                                                                                                                                                                     checkAllAgreed(id: int): boolean
                                                                                        freezeAccount(username: String): boolean
           changePassword(username: String, password: String): void
                                                                                                                                                                             + getItemName(itemId: Integer) : String
                                                                                                                                                                                                                                                                                                                                                     checkAllReturned(id: int): boolean
                                                                                       + unfreezeAccount(username: String): boolean
            getRequestedAdmins() : ArrayList<String>
                                                                                                                                                                             + getItemDescription(itemId: Integer) : String
          getIdentifier(): String
                                                                                       + getWishlistIds(username: String) : List<Integer>
                                                                                                                                                                                                                                                                                                                                                     + containMeeting(id: int) : boolean
                                                                                                                                                                            + getListOfItemsInString(itemIds: List<Integer>) : List<String>
                                                                                      + removeFromWishlist(username: String, id: Integer) : void
                                                                                                                                                                                                                                                                                                                                                    + undoEdit(id: int, user: String): void
                                                                                                                                                                             + aetListOfItems(itemIds: List<Integer>) : List<Item>
                                                                                                                                                                                                                                                                                                                                                    + undoAgree(id: int, user: String) : void
                                                                                                                                                                             + getOwner(itemId: Integer) : String
                                                                                      + getIsFrozen(username: String) : boolean
                                                                                                                                                                             + getItemStatus(id: Integer) : ItemStatus
                                                                                                                                                                                                                                                                                                                                                     + canUndoAgree(id: int, username: String) : boolean
                                                                                       + getReguestToUnfreeze(username: String): boolean
                                                                                                                                                                              changeStatusToFrozen(id: Integer) : void
                                                                                                                                                                                                                                                                                                                                                     + canUndoConfirm(id: int, username: String) : boolean
                                                                                       + setRequestToUnfreeze(username: String, setting: boolean): void
                                                                                                                                                                              changeStatusToAvailable(id: Integer) : void
                                                                                                                                                                                                                                                                                                                                                     + undoConfirm(id: int, user: String): void
                                                                                       + exceedWeeklyLimit(user: String, createDate: LocalDate) : boolean
                                                                                                                                                                              changeStatusToUnavailable(id: Integer) : void
                                                                                       + exceedMaxIncomplete(user: String) : boolean
                                                                                                                                                                                                                                                                                                                                                     + meetingCanBeUndone(id: int) : boolean
                                                                                                                                                                             + changeStatusToRequested(id: Integer) : void
                                                                                      + needMoreLend(user: String) : boolean
                                                                                                                                                                                                                                                                                                                                                    + getEdits(id: int) : HashMap<String, Integer>
                                                                                                                                                                             + changeStatusToRemoved(id: Integer) : void
                                                                                       + getTrades(user: String) : List<Integer>
                                                                                                                                                                                                                                                                                                                                                    + getMeetingDate(id: int) : String
                                                                                                                                                                             + removeItem(id: Integer) : void
                                                                                       + addNewTrade(user: String, id: int, createDate: LocalDate): void
                                                                                                                                                                             + editDescription(id: Integer, desc: String) : void
                                                                                                                                                                                                                                                                                                                                                     + getMeetingLocation(id: int) : String
                                                                                       + increaseNumbIncomplete(user: String) : void
                                                                                                                                                                             + editCategory(id: Integer, category: String) : void
                                                                                                                                                                                                                                                                                                                                                    + getEditsLeft(id: int, username: String) : Integer
                                                                                      + decreaseNumIncomplete(user: String) : void
                                                                                                                                                                             + editQualityRating(id: Integer, rating: int) : void
                                                                                                                                                                                                                                                                                                                                                    + hasAgreed(id: int, username: String) : boolean
                                                                                      + getWeeklyLimit(): int
                                                                                                                                                                              convertItemToString(item: Item) : String
                                                                                                                                                                                                                                                                                                                                                     + bothAgreed(id: int) : boolean
                                                                                       + setWeeklyLimit(weeklyLimit: int) : void
                                                                                                                                                                              convertItemListToString(items: List<Item>) : List<String>
                                                                                                                                                                                                                                                                                                                                                   + hasConfirmed(id: int, username: String): boolean
                                                                                       + getMaxInComplete() : int
                                                                                                                                                                             + approveltem(id: Integer, approved: boolean) : void
                                                                                                                                                                                                                                                                                                                                                    + bothConfirmed(id: int) : boolean
                                                                                       + setMaxInComplete(maxInComplete: int) : void
                                                                                                                                                                             + undoRemoval(id: int) : void
                                                                                       + getMoreLend(): int
                                                                                                                                                                             + getItemOwner(id: int) : String
                                                                                                                                                                                                                                                                                                                                                     + setReturnInfo(id: int) : void
                                                                                       + setMoreLend(moreLend: int) : void
                                                                                                                                                                             + getItemQuality(id: int) : String
                                                                                                                                                                                                                                                                                                                                                     + setMeetingCompleted(id: int) : void
                                                                                       + setTraderInactive(username: String, bool: boolean): void
                                                                                                                                                                              setItemOwner(id: int, owner: String): void
                                                                                                                                                                                                                                                                                                                                                     + getReturnLocation(id: int) : String
                                                                                                                                                                             + getIdentifier() : String
                                                                                       + isInactive(username: String): boolean
                                                                                                                                                                                                                                                                                                                                                     + getReturnDate(id: int) : String
                                                                                                                                                                             + changeStatusToInactiveAva(id: int) : void
                                                                                       + changePassword(username: String, newPassword: String): void
                                                                                                                                                                                                                                                                                                                                                     + setBothDisagree(id: int) : void
                                                                                       + getHomeCity(username: String) : String
                                                                                                                                                                                                                                                                                                                                                    + getIdentifier() : String
                                                                                       + setHomeCity(username: String, newHomeCity: String): void
                                                                                                                                                                                                                                                                                                                                                     + isMaxEditsReached(id: int) : boolean
                                                                                       + getIdentifier() : String
                                                                                       + removeTradeFromTraders(id: int, firstUser: String, secondUser: String): void
                                                                                       + flagUser(username: String) : void
                                                                                       + unFlagUser(username: String) : void
                                                                                       + increaseNumLent(username: String) : void
```

+ increaseNumBorrowed(username: String) : void