User

-id: int

-username: String

+User(id: int, username: String)

+checkUser(id: int): boolean

+saveUsers(id: int, name: String, userType:

int):void

+rewriteUsers():void

+toString():String

+getId():int

+setId(id:int):void

+getUsername():String

+setUsername(username:String):void

Member extends User

-userType: int

+Member(id: int, username:String)

+createMemberFile(member:Memb

er):void

+loadCheckedOutBooks(id:int):void

+checkOutBook(stage:Stage):Scene

+saveCheckedOutBook(id:int,

name:String, member:Member):void

+returnBook(stage:Stage):Scene

+viewCheckedOutBooks(stage:Stag

e):Scene

+memberLogout():void

+toString():String

+getUserType():int

Admin extends User

-userType:int

+createAdminFile(admin:Admin

):void

+addBook(stage:Stage):Scene

+viewUsers(stage:Stage):Scen

е

+addUser(stage:Stage):Scene

+removeUser(stage:Stage):Sc

ene

+adminLogout():void

+toString():String

+getUserType():int

BinaryTree<Key extends Comparable<Key>, Value>

-M: final int -root: Node -height: int

-n: int

+BinaryTree()

+isEmpty(): boolean

+size(): int +height(): int

+get(key: Key): Value

-search(x: Node, key: Key, ht: int):

Value

+put(key: Key, val: Value): void

-insert(h: Node, key: Key, val: Value,

ht: int): Node

-split(h: Node): Node
+toString(): String

-toString(h: Node, ht: int, indent:

String): String

-less(k1: Comparable, k2:

Comparable): boolean -eq(k1: Comparable, k2:

Comparable): boolean

MultiThread extends Thread

+run(): void

Main extends Application

+main(args: String[]): void +start(stage: Stage): void

Login

+login(stage:

Stage): Scene

+register(stage:

Stage): Scene

Library

-userOnline: User

-books: BinaryTree<Integer, String>

-users: Map<Integer, String>

-checkedOutBooks: Queue<Books>

+memberHome(stage: Stage, id: int, name: String): Scene

+adminHome(stage: Stage, id: int, name: String): Scene

+profile(stage: Stage): Scene

+searchBooks(stage: Stage, userType: int): Scene +viewLibrary(stage: Stage, userType: int): Scene

+saveBook(id: int, bookname: String): void

Book

-bookID: int-name: String

+Book(bookID: int, name: String)

+getBookID(): int

+setBookID(bookID: int): void

+getBookName(): String

+setBookName(name: String): void

+toString(): String