# Command QUIT, LOGIN, LOGOUT, CREATE, DELETE, POST, SEARCH, RENT -\_commandString: final String - <u>permissions</u>: State LinkedHashTable<Command, UserType[]> #execute(inoutUser, inoutDataAccess, in - Command() Scanner):User + toString() +showBanner(): void # validateUser() + getUserPermissions() DeleteUser CreateUser + execute(inout User, inout DataAccess, + execute(inout User, inout DataAccess, in Scanner): User in Scanner): User Login Logout + execute(out User, inout DataAccess, in + execute(inout User, inout DataAccess, Scanner): User in Scanner): User PostListing RentListing + execute(inout User, inout DataAccess, + execute(inout User, inout DataAccess, in Scanner): User in Scanner): User SearchListing + execute(inout User, inout DataAccess, in Scanner): User

### Main

+main(in String[]): void

## Log

- \_transactionString: final String
- \_user: final User
- \_listing: final Listing
- + Log(in TransactionCode, in User)
- + Log(in TransactionCode, in User, in Listing)
- + toString(): String

#### <<Enumeration>

### TransactionCode

END\_OF\_SESSION, CREATE, DELETE, POST, SEARCH, RENT

- \_code: String
- TransactionCode(in String)
- toString(): String

# Listing

- \_rentalUnitID: final String
- \_owner: final User
- \_city: final String
- \_rentalPrice: final unsigned double
- \_ numberOfRooms: final unsigned int
- \_ rentedFlag: boolean
- \_ nightsRented: unsigned int
- + Listing(in User, in String, in unsigned double, in unsigned int)
- + getRentalUnitID(): String
- + getOwner(): String
- + getCity(): String
- + getRentalPrice(): unsigned double
- + getNumberOfRooms(): unsigned int
- + isRented(): Boolean
- + getNightsRented: unsigned int
- + <u>isValidRentalID</u>(in String): Boolean
- + <u>isValidCity</u>(in String): Boolean
- + <u>isValidRentalPrice</u>(in double): Boolean
- + <u>isValidNumberOfRooms</u>(in int): Boolean
- + <u>isValidNightsRented</u>(in int): Boolean

## DataAccess

- -\_cachedUsers: final ArrayList<User>
- -\_cachedListings: final ArrayList<Listing>
- \_sessionLogs: final ArrayList<Log>
- \_newListings: final ArrayList<Listing>
- \_usersLocation: final String
- \_listingsLocation: final String
- \_transactionFileLocation: final String
- +DataAccess()
- +DataAccess(in String, in String, in String)
- + getUser(in String): User
- + getListing(in String): Listing
- + addUser(in User): void
- + addListing(in Listing) :void
- + addLog(in Log): void
- + commitNewListings(): void
- +listingExists(in String): Boolean
- + userExists(in String): Boolean
- + isLoaded(): Boolean
- + loadUsers(): void
- + loadListings(): void
- + writeDailyTransactionFile(): void

### User

- \_username: final String
- userType: final UserType
- + User(in String, in UserType)
- + getUsername(): String
- + getUserType(): String
- + <u>isValidUsername</u>(in String): Boolean

#### <=Enumeration>

### UserType

ADMIN, FULL\_STANDARD,
RENT\_STANDARD, POST\_STANDARD

+ <u>isValidUserType</u>(in String): Boolean