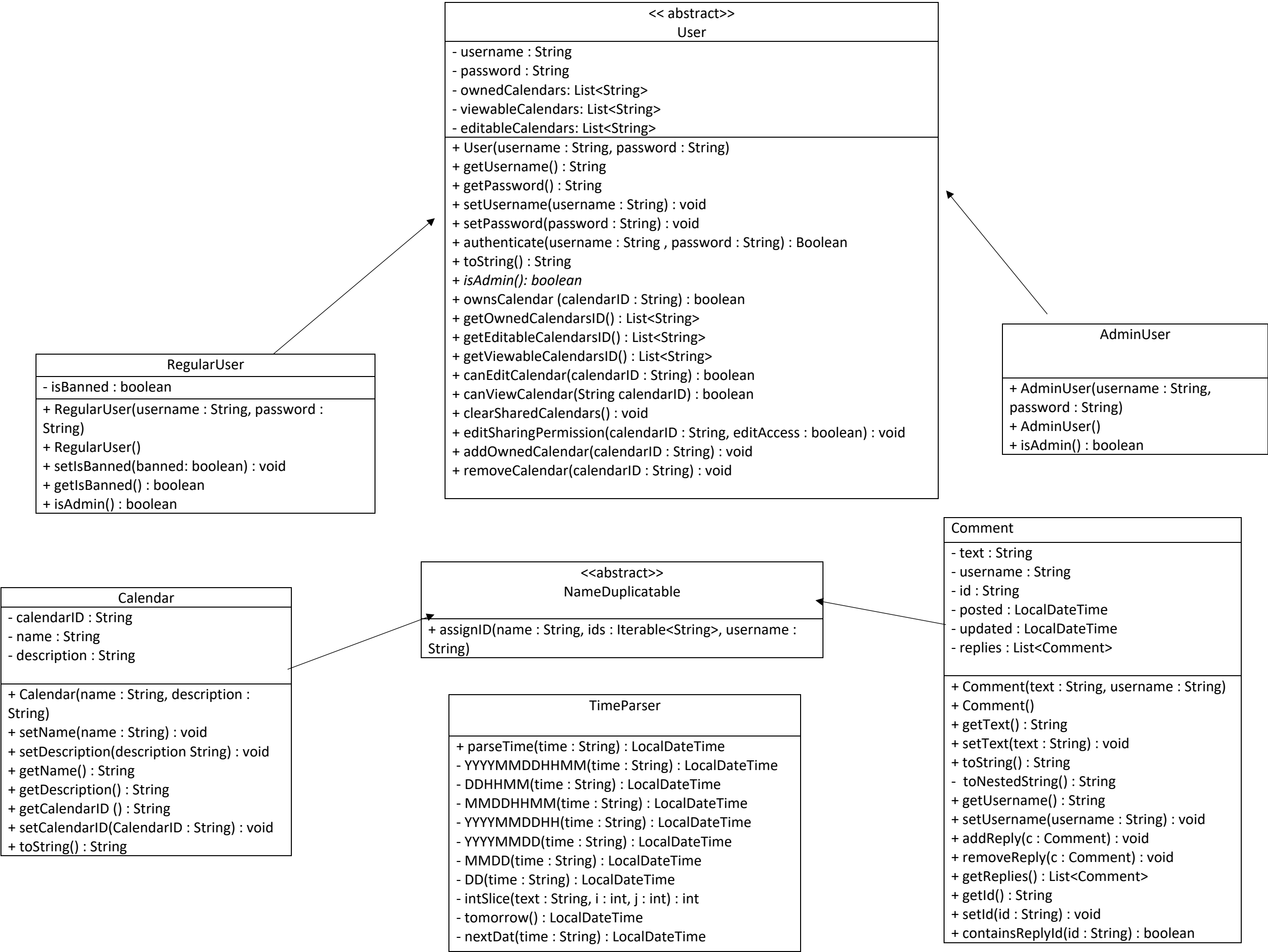
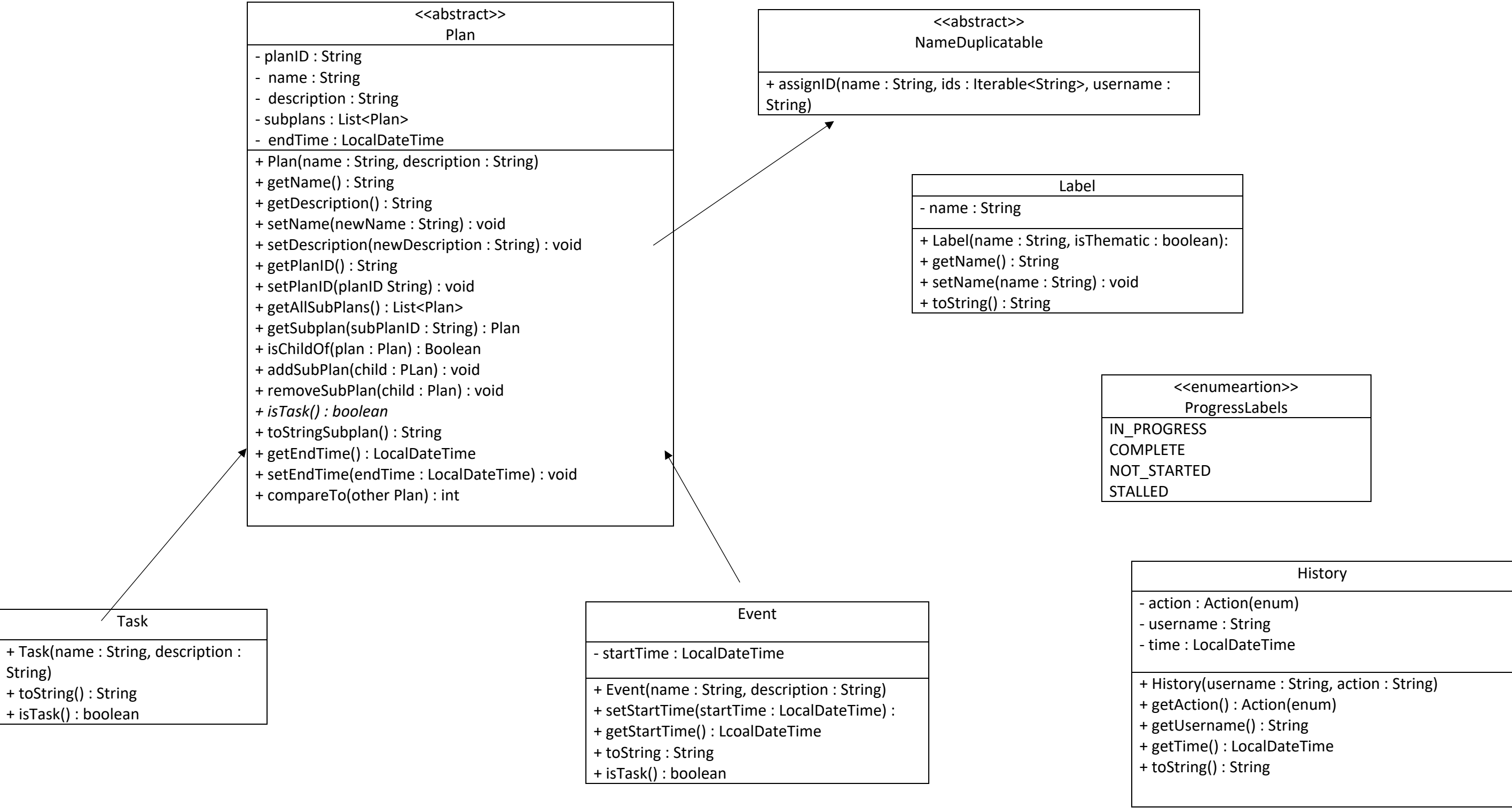


UML Model
Entities:





Use Case Class:

LoggingManager
- currUser : User
+ getCurrUsername() : String + getCUrrPassword() : String + loggedOut() : boolean + userLoggedIn() : boolean + adminUserLoggedIn() : boolean + logIn(user : User) : String + logOut() : String

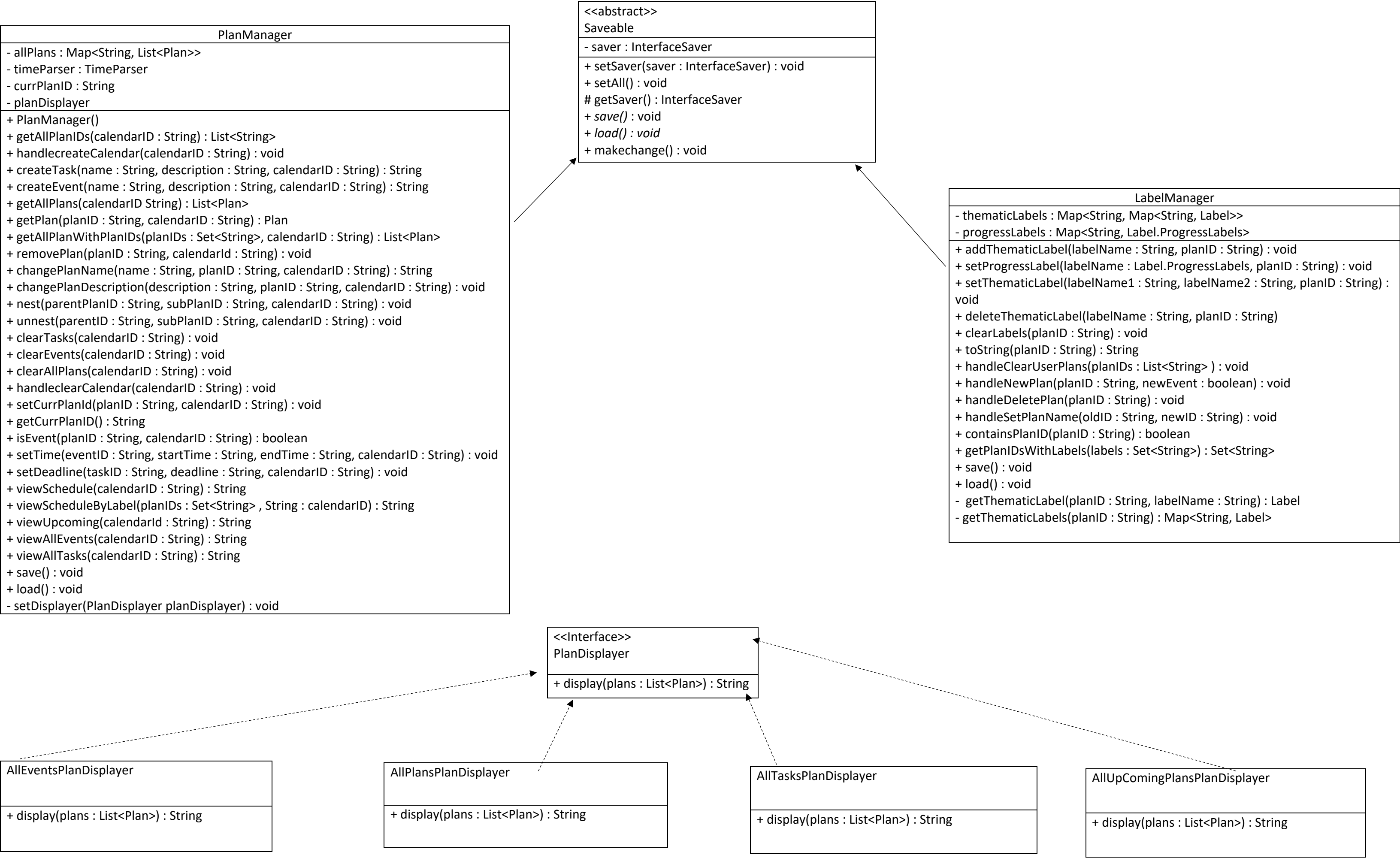
HistoryManager
- histories : Map<LocalDateTime, History>
+ HistoryManager() + addHistory(username : String, action : String) : void + getHistories() : String + getHistoriesByUser(username : String) : String + clearHistoriesByUser(username) : void + handleChangeUsername(username : String, newUsername : String) : void + getHistoryPropertyAsList(username : String, property : String) : List<String> + save() : void + load() :void - getHistoriesByUserAsList(username : String) : List<History>

CommentManager
- comments : Map<String, Map<String, Comment>>
+ addReply(planID : String, commentID : String, username : String, text : String) : void + addComment(planID : String, username : String, text : String) : String + editComment(planID : String, commentID : String, text : editComment) : void + deleteComment(planID : String, commentID : String) : void + clearComments(planID : String) : void + getComment(planID : String, commentID : String) : Comment + getComments(planID : String) : Map<String, Comment> + toString(planID : String) : String + handleClearUserPlans(planIDs : List<String>) : void + handleNewPlan(planID : String) : void + handleDeletePlan(planID : String) : void + handleSetPlanName(oldID : String, newID : String) : void + save() : void + load() : void + containsPlanID(planID : String) - getAllReplyIDs(planID : String, commentID : String) : List<String>

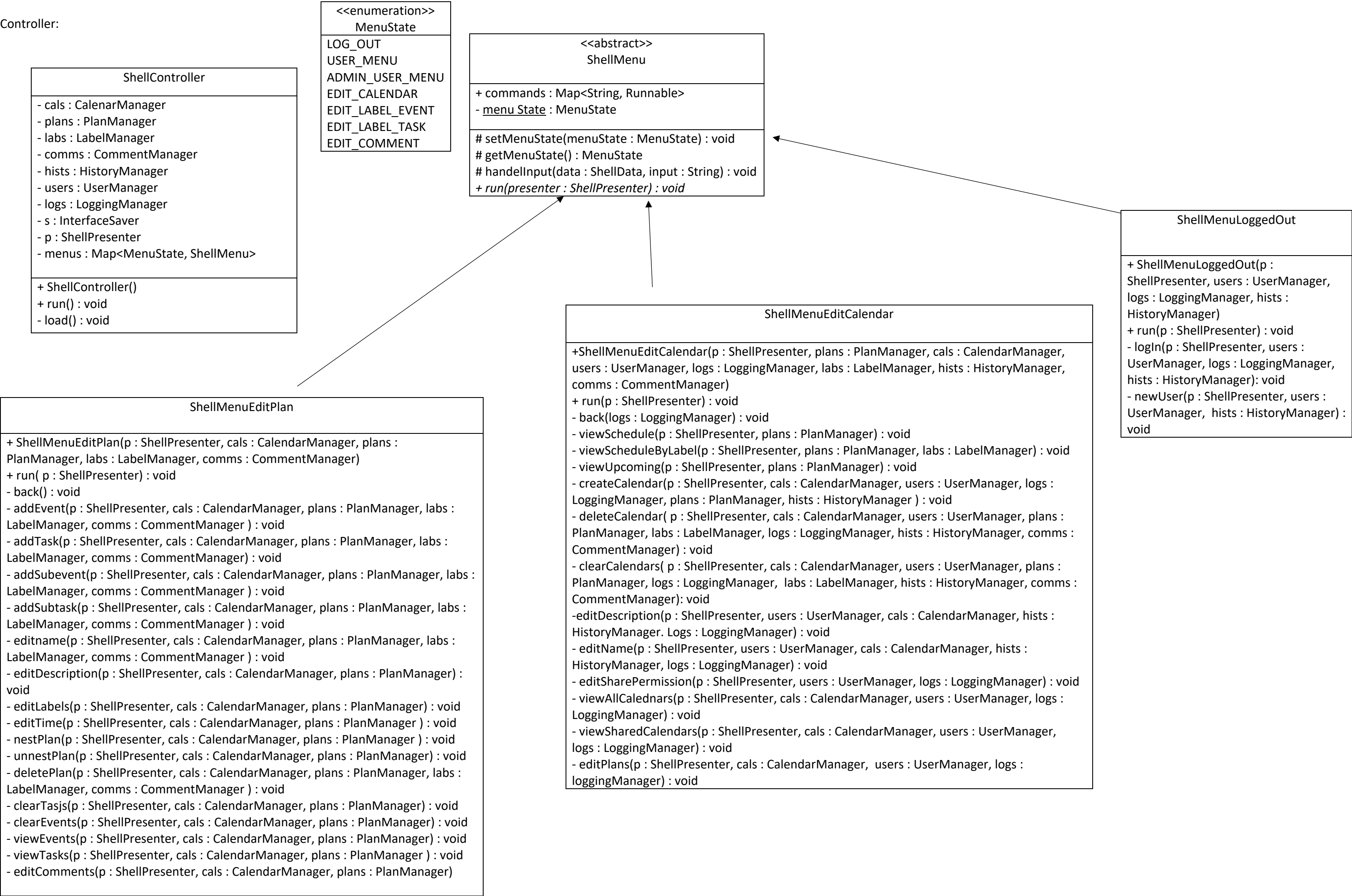
<<abstract>> Saveable
- saver : InterfaceSaver
+ setSaver(saver : InterfaceSaver) : void + setAll() : void # getSaver() : InterfaceSaver + save() : void + load() : void + makechange() : void

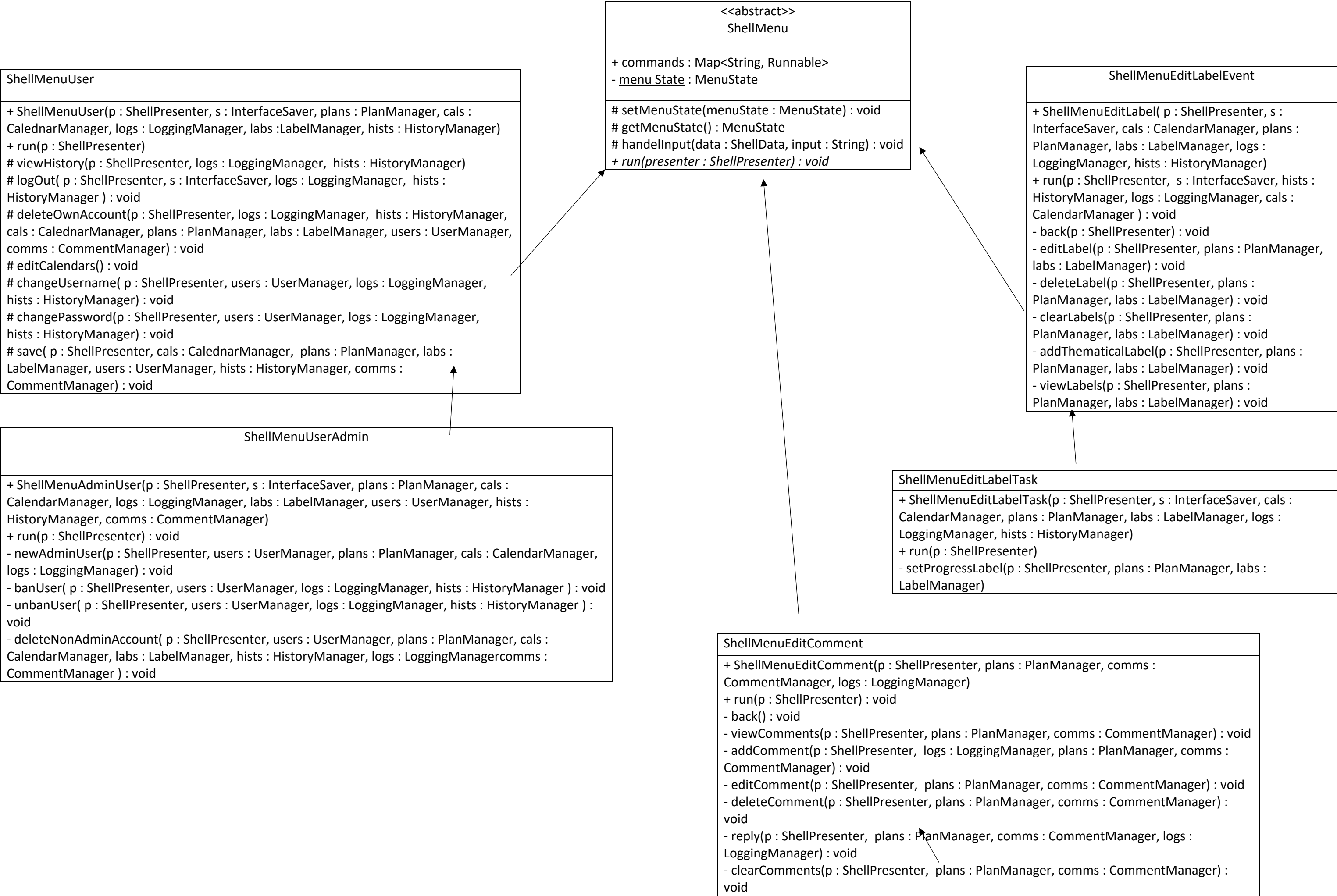
CalendarManager
- calendars : Map<String, Calendar> - currCalendarID : String
+ CalendarManager() + getCalendar(calendarID : String) : Calendar + createCalendar(name : String, description : String, username : String) : String + deleteCalendar(calendarID : String) : String + changeCalendarName(newName : String, calendarID : String) : void + changeCalendarDescription(description : String, calendarID : String) : void + setCurrCalendarID(currCalendarID : String) : boolean + viewAllOwnedCalendars(ownedCalendarIDs : List<String>) : String + viewSharedCalendars(editableCalednarsIDs : List<String>, viewabelCalendarIDs : List<String>) : String + containCalendar(calendarID : String) : boolean + deleteCalendars(calendarIDs : List<String>) : void + getCurrCalendarID() : String + getCalendarName(calendarID : String) : String + getCalendarDescription(calendarID : String) : Strin + save() : void + load() : void - viewEditableCalendars(editableCalendarIDs : List<String>) : String - viewViewableCalendars(viewableCalendars : List<String>) : String - addCalendar(c : Calendar) : void

UserManager
- users : Map<String, User>
+ getUser(username : String) : User + setPassword(username : String, newPassword : String) : void + setUsernam(username : String, newUsername : String) : void + getAllRegularUsernames() : List<String> + getAllUsernames() : List<String> + authenticateUser(username : String, password : String) : User + isBanned(username : String) : Boolean + createUser(username : String, password : String) : void + createAdminUser(username : String, password : String) : void + deleteUser(username : String, deleteSelf : boolean) : void + banUser(username : String) : void + unbanUser(username : String) : void + addCalendar(calendarID : String, username : String) : void + deleteCalendar(calendarID : String, username : String) : void + clearCalendars(username : String) : void + shareCalendar(calendarID : String, targetUser: String, calOwner: String, access : boolean) + deleteOrRemoveAccess(calendarID : String, username : String) : void + getOwnedCalendars(username : String) : List<String> + getEditableCalendars(username : String) : List<String> + getViewableCalendars(username : String) : List<String> + validateCalendarForEditAccess(username : String, calendarID : String) : boolean + save() : void + load() : void - addUser(newUser : User) : void



Controller:





Presenter

ShellPresenter
+ getInput() : String + displayResult(result : String) : void + getArguments(allowEmpty : String, args : String...) : String[] + getArguments(allowEmpty : boolean, args : String...) : String[] + heyArguments(allowed : List<String>, args : String...) + prompter(firstLine : String, args : String...) : String

GateWay

