



🔍 UserManager		
🔍 users	List<User>	
🔍 UserManager()		
🔍 createUser(String, String, String, String)	boolean	
🔍 userExists(String)	boolean	
🔍 getUser(String)	User	
🔍 getName(User)	String	
🔍 getUserType(User)	String	
🔍 getID(User)	String	
🔍 getPassword(User)	String	
🔍 setName(User, String)	void	
🔍 setUserType(User, String)	void	
🔍 setUsername(User, String)	void	
🔍 setPassword(User, String)	void	
🔍 passwordMatch(User, String)	boolean	

🔍 EventManager		
🔍 registered	HashMapManager	
🔍 eventId	Integer	
🔍 maxPeople	int	
🔍 EventManager()		
🔍 getEventById(int)	Event	
🔍 checkConflict(int, int)	boolean	
🔍 checkConflictHelper(int, int, int, int)	boolean	
🔍 createEvent(int, int, String)	boolean	
🔍 rescheduleEvent(int, int, int)	boolean	
🔍 getAllEvents()	ArrayList<Event>	
🔍 bookForAttendee(User, int)	boolean	
🔍 unBookForAttendee(User, int)	boolean	
🔍 bookSpeaker(User, int)	boolean	
🔍 cancelEvent(int)	boolean	
🔍 getIDByEvent(Event)	Integer	
🔍 getAttendeesById(int)	ArrayList<User>	
🔍 getSpeakerById(int)	ArrayList<User>	
🔍 getEventIdsByUser(User)	ArrayList<Integer>	
🔍 getEventNameById(int)	String	
🔍 getEventIdByName(String)	Integer	

🔍 HashMapManager		
🔍 hashMap	HashMap<Integer, Pair<Pair<Event, ArrayList<User>>, ArrayList<User>>>	
🔍 HashMapManager()		
🔍 getEventById(int)	Event	
🔍 getKeySet()	Set<Integer>	
🔍 ifInKeySet(int)	boolean	
🔍 addEvent(int, int, int, Event)	void	
🔍 getAttendeeById(int)	ArrayList<User>	
🔍 updateAttendee(int, ArrayList<User>)	void	
🔍 getSpeakerById(int)	ArrayList<User>	
🔍 updateSpeaker(int, User)	boolean	
🔍 cancelEventById(int)	void	

🔍 MessageManager		
🔍 conversations	HashMap<String, List<Message>>	
🔍 MessageManager()		
🔍 createMessage(String, String)	Message	
🔍 getAllConversationUsers(User)	ArrayList<String>	
🔍 getConversation(User, User)	List<Message>	
🔍 conversationExists(User, User)	boolean	
🔍 createConversation(User, User)	void	
🔍 sendMessage(User, User, String)	void	

🔍 Serializer		
🔍 serializeUserManager(UserManager)	void	
🔍 serializeMessageManager(MessageManager)	void	
🔍 serializeEventManager(EventManager)	void	
🔍 serializeHashMapManager(HashMapManager)	void	
🔍 deserializeUserManager()	UserManager	
🔍 deserializeMessageManager()	MessageManager	
🔍 deserializeEventManager()	EventManager	
🔍 deserializeHashMapManager()	HashMapManager	

🔍 Message		
🔍 userId	String	
🔍 message	String	
🔍 Message(String, String)		
🔍 getUserId()	String	
🔍 setUserId(String)	void	
🔍 getMessage()	String	
🔍 setMessage(String)	void	

🔍 User		
🔍 name	String	
🔍 userType	String	
🔍 ID	String	
🔍 password	String	
🔍 User(String, String, String, String)		
🔍 getName()	String	
🔍 getUserType()	String	
🔍 getID()	String	
🔍 getPassword()	String	
🔍 setName(String)	void	
🔍 setUserType(String)	void	
🔍 setUsername(String)	void	
🔍 setPassword(String)	void	

🔍 Event		
🔍 eventId	int	
🔍 eventName	String	
🔍 eventDuration	int	
🔍 eventTime	int	
🔍 Event(int, String, int, int)		
🔍 getEventID()	int	
🔍 getEventName()	String	
🔍 setEventName(String)	void	
🔍 getEventDuration()	int	
🔍 setEventDuration(int)	void	
🔍 getEventTime()	int	
🔍 setEventTime(int)	void	