Design Document

Web Application Purpose

The purpose of the web app is to help people manage their tasks. By using Tasker, users can create their own task lists. Task lists will contain multiple tasks he/she created as well as some details, including task name, deadline, description, and priority level. People can also view their tasks in various ways. For example, the user can look at different tasks in different lists, and he/she can also sort tasks by deadline or priority to look at what tasks he/she needs to deal with right now. What's more, users are able to create groups in Tasker. Group members will have shared task lists where they can add tasks they need to handle together. We are sure Tasker will greatly improve people's productivity and make lives more efficient.

Information Included and How It Meets the Goal of the Web Site

People who browse this website will find the following:

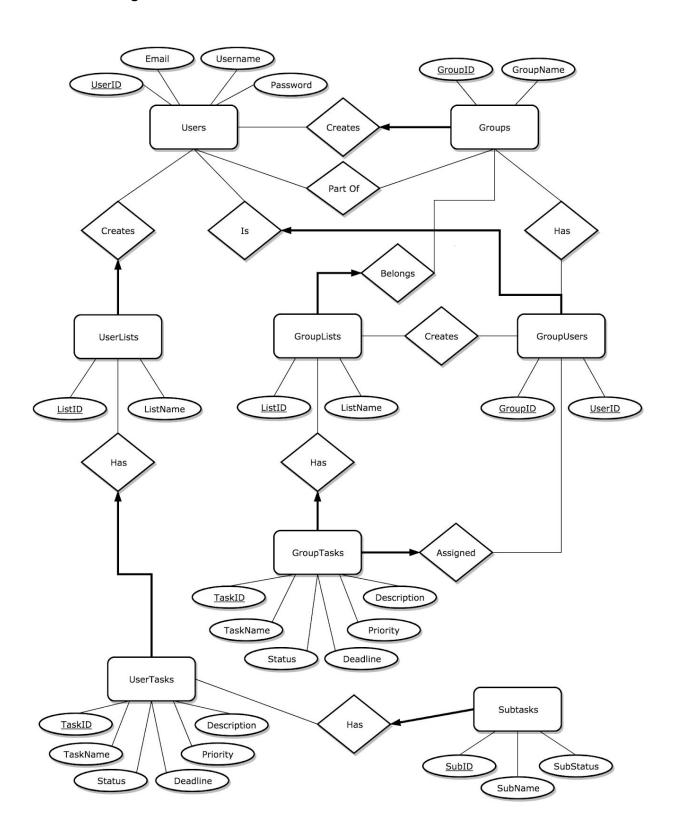
- 1. Personal account (or button to create a new account)
- 2. Task lists the user have
- 3. Tasks in each task list
- 4. Subtasks of each task
- 5. Button to sort the tasks
- 6. Button to create a new task list
- 7. Groups the user is in
- 8. Group members of each group
- 9. Group task lists each group has
- 10. Group tasks in the group task list
- 11. Button to create a new group
- 12. Button to delete the groups he/she created

Developer Tools

Our frontend will be done in Javascript with the use of React.js and possibly other libraries. Our backend will be done in Java, using Spring Framework. We will use MySQL Workbench for our database management.

Classes Design Session + user: User + getUser(): User User Group + email: String + name: String + username: String + users: List<User> + password: String + creator: String + lists: Map<String, List> + lists: Map<String, List> + addList(String): void + setName(String): void + deleteList(String): void + setCreator(String): void + isCreator(String): bool + addUser(User): void + createGroup(String): void + deleteGroup(): void + deleteUser(User): void + addList(String): void + deleteList(String): void + getUsers(): List<User> List + name: String + tasks: List<Task> + setName(String): void + addTask(String): void + deleteTask(String): void Task + name: String + deadline: + priority: int + description: String + status: bool + subtasks: List<String> + setName(String): void + setDeadline(): void + setPriority(int): void + set Description(String): void + setStatus(bool): void + addSubtask(String): void + deleteSubtask(String): void + isComplete(): bool Subtask GroupTask + name: String + assignee: String + status: bool + setAsignee(String): void + setName(String): void + setStatus(bool): void + isComplete(): bool

Database Design



User table						
Name	Primary key	Foreign key	Referenced table	Data type	constraint	
User ID	√	×	×	string	Not null	
password	×	×	×	string	Not null	
username	×	×	×	char(50)	Not null	

Group table						
Name	Primary key	Foreign key	Referenced table	Data type	constraint	
GID	√	×	×	string	Not null	
CreatorName	×	×	×	char(10)	Not null	
GName	×	×	×	char(50)	Not null	

UserList table						
Name	Primary key	Foreign key	Referenced table	Data type	constraint	
LID	V	×	×	string	Not null	
ListName	×	×	×	char(50)	Not null	
UID	×	×	User	string	Not null	

GroupList table						
Name Primary key Foreign key Referenced Data type constraint table						
LID	√	×	×	string	Not null	
ListName	×	×	×	char(50)	Not null	

GID X Grou	string Not null
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UserTask table						
Name	Primary key	Foreign key	Referenced table	Data type	constraint	
TaskName	V	×	×	char(50)	Not null	
ListID	×	V	List	string	Not null	
Status	×	×	×	boolean	Not null Default false	
DDL	×	×	×	date		
Priority	×	×	×	int		
Description	×	×	×	string		

GroupTask table						
Name	Primary key	Foreign key	Referenced table	Data type	constraint	
Tname	√	×	×	char(50)	Not null	
LID	×	√	List	string	Not null	
Status	×	×	×	boolean	Not null Default false	
DDL	×	×	×	date		
Priority	×	×	×	int		
Description	×	×	×	string		
AssigneeID	×	×	User	string		

	Subtask table						
Name	Primary key	Foreign key	Referenced table	Data type	constraint		
Tname	√(?)	√	Task	char(50)	Not null		
LID	√(?)	V	List	string	Not null		
SubTname	(√)	×	×	char(50)	Not null		
Subtstatus	×	×	×	boolean	Not null Default false		

UserinGroup table						
Name Primary key Foreign key Referenced Data type constrain						
GID	√	×	User	string	Not null	
UID	V	×	Group	string	Not null	