**Team:** Brian Alfano, Sung Bae, Eric Lindemann, Artur Meletyan

**Title:** Project Brian

**Project Summary:**

Our program will help users form teams to organize their projects by creating specific tasks and assigning them to each team member. To use the software, a potential user must create an account that uses their “@colorado.edu” email. Once signed up, users can view any project boards they are a part of, join a board that they were invited to, or create a new board. Users who decide to create a new board will be designated as that board’s team leader, allowing them to add new members to the project team as well as creating and assigning new tasks to current members. All team members will be able to move a task between three sections: Backlog, In-Progress, and Done. A member of a board can click the filter button to only see the tasks that they are assigned to.

**Project Requirements:**

*Business Requirements*

| **ID** | **Description** | **Priority** |
|---|---|---|
| BR-01 | Login must be @colorado.edu | Low |
| BR-02 | Max number of board members should be 10 | Medium |

*User Requirements*

| **ID** | **Description** | **Priority** |
|---|---|---|
| US-01 | As a user, I want to be able to sign up so that I can use this saas. | High |

| | | |
|---|---|---|
| US-02 | As a user, I want to be able to login so that I can view my project boards. | High |
| US-03 | As a team leader, I want to be able to make a board so that I can invite my members. | High |
| US-04 | As a team leader,  I want to be able to add members using through email verification with the database so that they can join the board. | High |
| US-05 | As a team member, I want to be able to join a project so I can see the board appear on my Hub page. | High |
| US-06 | As a user, I want to see all tasks in order to moderate the tasks. | High |
| US-07 | As a user, I want to be able to see on the Board Page three categories for tasks: backlog, in progress and done so that I know which tasks are in which category. | High |
| US-08 | As a team leader, I want to be able to make tasks for the team so that our team knows what requirements are to be implemented. | High |
| US-09 | As a team leader, I want to be able to assign tasks to team members so that each member know what they are responsible for. | Medium |
| US-10 | As a user, I want to be able to move tasks between categories to show what state of progress they are in. | Medium |
| US-11 | As a user, I want to be able to click show self tasks in order to only see my specific tasks so that the page isn't as clustered. | Low |

*Functional Requirements*

| **ID** | **Description** | **Priority** |
|---|---|---|

| | | |
|---|---|---|
| FR-01 | After signing in a user will be brought to board page. | High |
| FR-02 | Sign up requires @colorado.edu and 8 character password. | Low |
| FR-03 | When making a new board, the system checks if team title is already created from a different team. The system will refresh (saving emails) and make the team leader pick a new team title. | High |
| FR-04 | After a team leader clicks cancel on the board creation page, it will send you back to Hub page where you can make, join, or see boards. | Medium |
| FR-05 | When team leader clicks create on board creation page, the unique board will connect to everyone in the database who already has an account at Project Brian. | Medium |
| FR-06 | When team leader clicks create on board creation page, and the email is not in the database (because they do not already have an account) an email is sent with the steps to join the board, the URL to the homepage, the unique password, and the title. | Medium |
| FR-07 | When a team member finally signs up, they can click join in the Hub page where a pop up asks them to type in the unique password they received in an email from their team leader. | High |
| FR-08 | When a team member is linked to a board by a team leader the board will appear on their Hub page. | High |
| FR-09 | A user is sent to the unique board when they click on the project from the Hub page. | High |
| FR-10 | When the yellow button is clicked on the boards page the task is moved to in progress. | High |
| FR-11 | When the green button is clicked on the boards page the task is moved to done. | High |

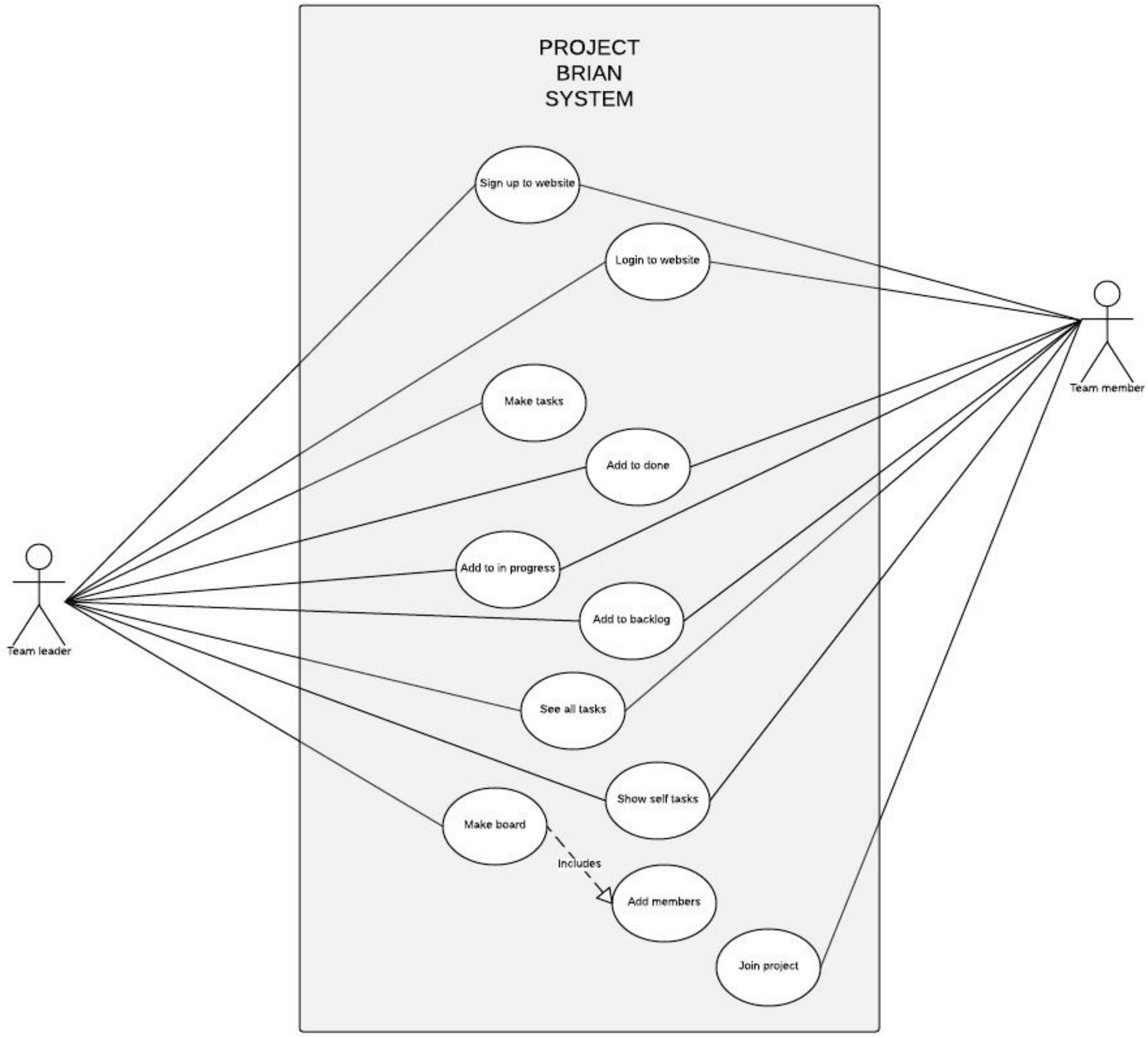
| | | |
|---|---|---|
| FR-12 | When the red button is clicked on the boards page the task is moved back to the backlog. | High |
| FR-13 | When a task is created on the boards page it is placed in the backlog. | Medium |
| FR-14 | Clicking boards button brings you back to boards page. | High |

*Non-functional Requirements*

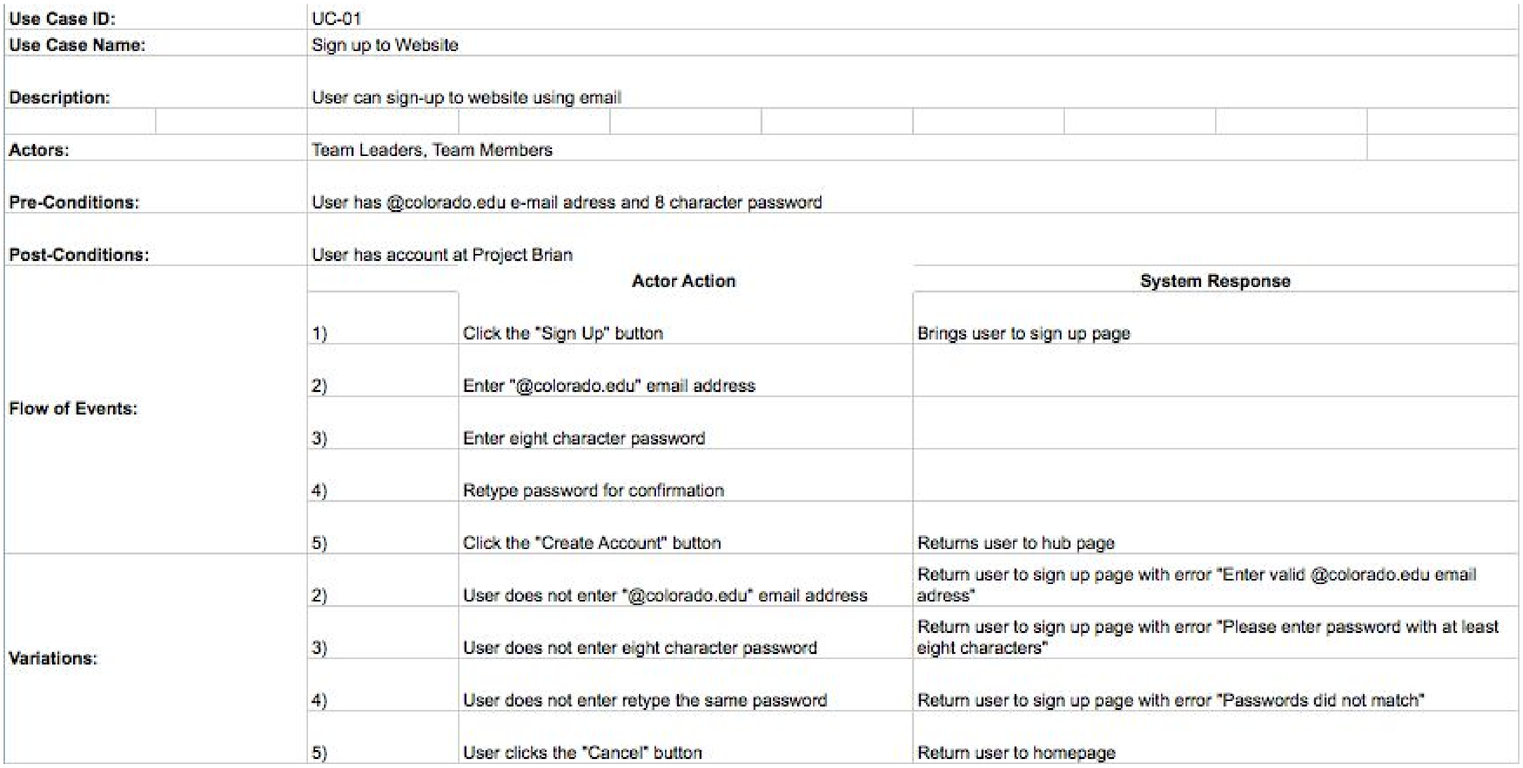
| **ID** | **Description** | **Priority** |
|---|---|---|
| NFR-01 | Accessibility: The site should be accessible from any internet browser (chrome, firefox, safari, etc…) | Medium |
| NFR-02 | Implementation: For each ticket/task in the board, the character limit should be up to 160. | Low |

**User and Tasks:**

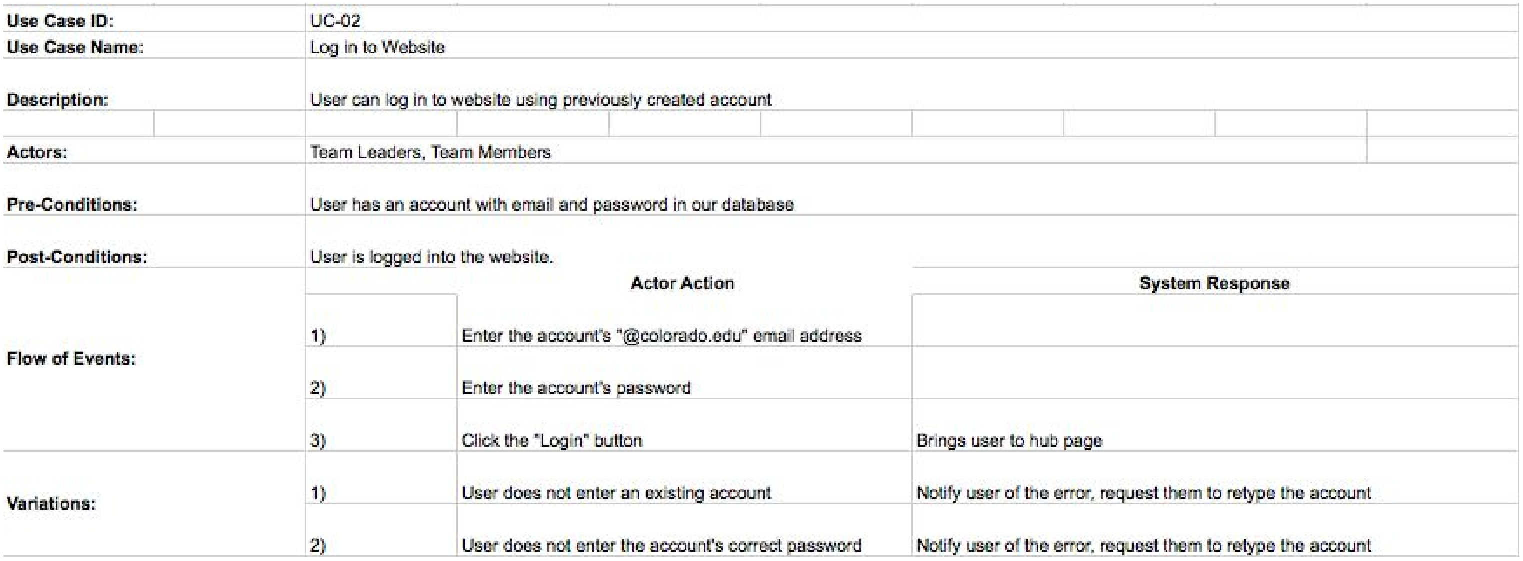
*Case Diagram*



*Use case documents*



| | | | |
|---|---|---|---|
| **Use Case ID:** | UC-01 | | |
| **Use Case Name:** | Sign up to Website | | |
| **Description:** | User can sign-up to website using email | | |
| **Actors:** | Team Leaders, Team Members | | |
| **Pre-Conditions:** | User has @colorado.edu e-mail adress and 8 character password | | |
| **Post-Conditions:** | User has account at Project Brian | | |
| | | **Actor Action** | **System Response** |
| **Flow of Events:** | 1) | Click the "Sign Up" button | Brings user to sign up page |
| | 2) | Enter "@colorado.edu" email address | |
| | 3) | Enter eight character password | |
| | 4) | Retype password for confirmation | |
| | 5) | Click the "Create Account" button | Returns user to hub page |
| **Variations:** | 2) | User does not enter "@colorado.edu" email address | Return user to sign up page with error "Enter valid @colorado.edu email adress" |
| | 3) | User does not enter eight character password | Return user to sign up page with error "Please enter password with at least eight characters" |
| | 4) | User does not enter retype the same password | Return user to sign up page with error "Passwords did not match" |
| | 5) | User clicks the "Cancel" button | Return user to homepage |



| | | | |
|---|---|---|---|
| **Use Case ID:** | UC-02 | | |
| **Use Case Name:** | Log in to Website | | |
| **Description:** | User can log in to website using previously created account | | |
| **Actors:** | Team Leaders, Team Members | | |
| **Pre-Conditions:** | User has an account with email and password in our database | | |
| **Post-Conditions:** | User is logged into the website. | | |
| | | **Actor Action** | **System Response** |
| **Flow of Events:** | 1) | Enter the account's "@colorado.edu" email address | |
| | 2) | Enter the account's password | |
| | 3) | Click the "Login" button | Brings user to hub page |
| **Variations:** | 1) | User does not enter an existing account | Notify user of the error, request them to retype the account |
| | 2) | User does not enter the account's correct password | Notify user of the error, request them to retype the account |

| | | | |
|---|---|---|---|
| **Use Case ID:** | UC-03 | | |
| **Use Case Name:** | Make Board | | |
| **Description:** | Team leader can create a new board and invite others | | |
| **Actors:** | Team Leaders | | |
| **Pre-Conditions:** | Team leader has an account | | |
| **Post-Conditions:** | Team leader owns one more board | | |
| | | **Actor Action** | **System Response** |
| **Flow of Events:** | 1) | Click on the "Make Board" button | Brings user to "Make Board" page |
| | 2) | Enter the board's title | |
| | 3) | Enter team member accounts that can work on the board | |
| | 4) | Click on the "Create Board" button | If the team member account is already signed up for website, add them to this board. If not send them an email with steps to join and a unique randomly generated password they need. Bring team leader to board page |
| **Variations:** | 3) | User enters more than 10 accounts | Notify user of the error, request them to retype the accounts they want such that there are less than 10 accounts |
| | 4) | User clicks the "Return to Hub Page" button | Return user to "Hub" page |

| | | | |
|---|---|---|---|
| **Use Case ID:** | UC-04 | | |
| **Use Case Name:** | Make task | | |
| **Description:** | Team leader adds a new task with members assigned to it to an existing board | | |
| **Actors:** | Team Leaders | | |
| **Pre-Conditions:** | User has to have at least one board | | |
| **Post-Conditions:** | A new task is added to the board's backlog section | | |
| | | **Actor Action** | **System Response** |
| **Flow of Events:** | 1) | Go to a board's page | |
| | 2) | Input the task | |
| | 2) | Input the assigned members | |
| | 3) | Click the "Create Task" button | Add task to Backlog section |
| **Variations:** | 2) | Inputted email address is not a member assigned to this board | Notify user of the error, request them to retype |

|  |  |  |  |
|---|---|---|---|
| **Use Case ID:** | UC-05 |  |  |
| **Use Case Name:** | Join board |  |  |
| **Description:** | Team member can join already existing board |  |  |
|  |  |  |  |
| **Actors:** | Team Members |  |  |
| **Pre-Conditions:** | Board has to exist with a matching randomly generated password |  |  |
| **Post-Conditions:** | A new task is added to the board's backlog section |  |  |
|  |  | **Actor Action** | **System Response** |
| **Flow of Events:** | 1) | Click "Join" button | Prompt user to enter unique random password for group |
|  | 2) | Enter the group password |  |
|  | 3) | Click "Confirm" button | Brings user to hub page with new group added |
| **Variations:** | 2) | Enter password that does not match with any existing groups | Notify user of error and request them to re-type password |
|  |  |  |  |

|  |  |  |  |
|---|---|---|---|
| **Use Case ID:** | UC-06 |  |  |
| **Use Case Name:** | Add to Done |  |  |
| **Description:** | Sends a task to the Done section |  |  |
|  |  |  |  |
| **Actors:** | Team Leaders, Team Members |  |  |
| **Pre-Conditions:** | Task exists and is not in the Done section |  |  |
| **Post-Conditions:** | Task is in the Done section |  |  |
|  |  | **Actor Action** | **System Response** |
| **Flow of Events:** | 1) | Go to a board's page |  |
|  | 2) | Click on the "Green" button on the task | Send task to Done section |
| **Variations:** |  |  |  |

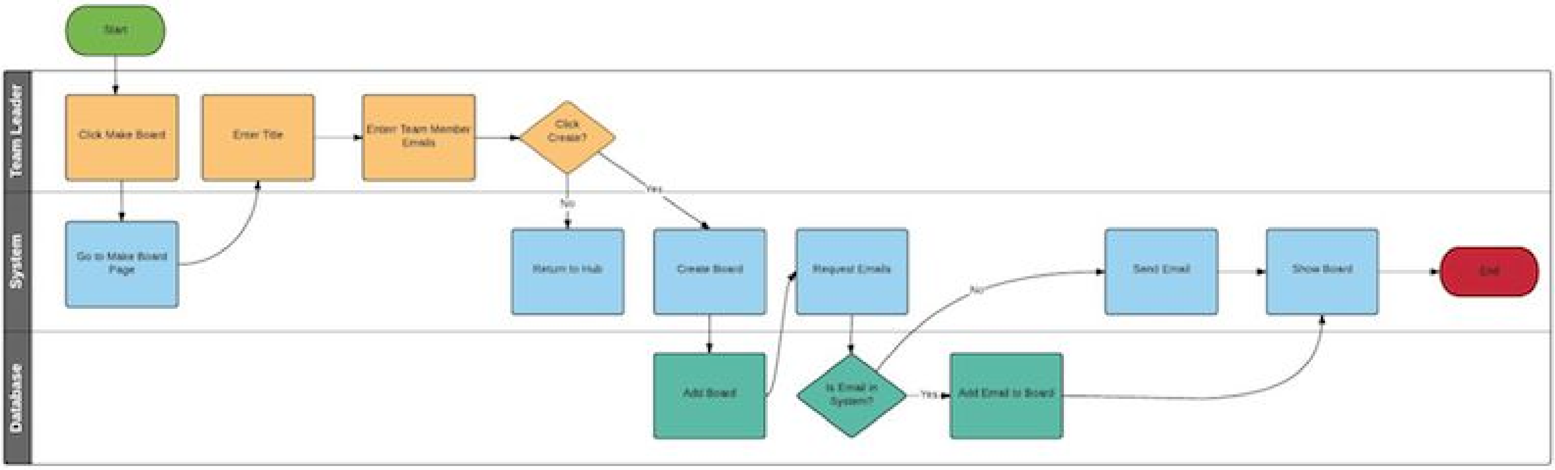
|  |  |  |  |
|---|---|---|---|
| **Use Case ID:** | UC-07 |  |  |
| **Use Case Name:** | Show Self Tasks |  |  |
| **Description:** | From the board page make it so the user can only see his/her own tasks |  |  |
|  |  |  |  |
| **Actors:** | Team Members, Team Leaders |  |  |
| **Pre-Conditions:** | Board has to exists |  |  |
| **Post-Conditions:** | Show user his/her own tasks |  |  |
|  |  | **Actor Action** | **System Response** |
| **Flow of Events:** | 1) | Go to the board page |  |
|  | 2) | Click checkbox under tasks that says "Show my tasks" | Show user his/her own tasks, if they have none show no tasks |
|  |  |  |  |

| | | | |
|---|---|---|---|
| **Use Case ID:** | UC-08 | | |
| **Use Case Name:** | Show All Tasks | | |
| **Description:** | View all tasks on the board page | | |
| **Actors:** | Team Members, Team Leaders | | |
| **Pre-Conditions:** | Board has to exist with a matching randomly generated password | | |
| **Post-Conditions:** | Show user all tasks | | |
| **Flow of Events:** | | **Actor Action** | **System Response** |
| | 1) | Go to the board page | Show board page with all tasks assigned to all users |

| | | | |
|---|---|---|---|
| **Use Case ID:** | UC-09 | | |
| **Use Case Name:** | Add to In Progress | | |
| **Description:** | Sends a task to the In Progress section | | |
| **Actors:** | Team Leaders, Team Members | | |
| **Pre-Conditions:** | Task exists and is not in the In Progress section | | |
| **Post-Conditions:** | Task is in the In Progress section | | |
| **Flow of Events:** | | **Actor Action** | **System Response** |
| | 1) | Go to a board's page | |
| | 2) | Click on the "Yellow" button on the task | Send task to In Progress section |
| **Variations:** | | | |

| | | | |
|---|---|---|---|
| **Use Case ID:** | UC-10 | | |
| **Use Case Name:** | Add to Backlog | | |
| **Description:** | Sends a task to the Backlog section | | |
| **Actors:** | Team Leaders, Team Members | | |
| **Pre-Conditions:** | Task exists and is not in the Backlog section | | |
| **Post-Conditions:** | Task is in the Backlog section | | |
| **Flow of Events:** | | **Actor Action** | **System Response** |
| | 1) | Go to a board's page | |
| | 2) | Click on the "Red" button on the task | Send task to Backlog section |
| **Variations:** | | | |

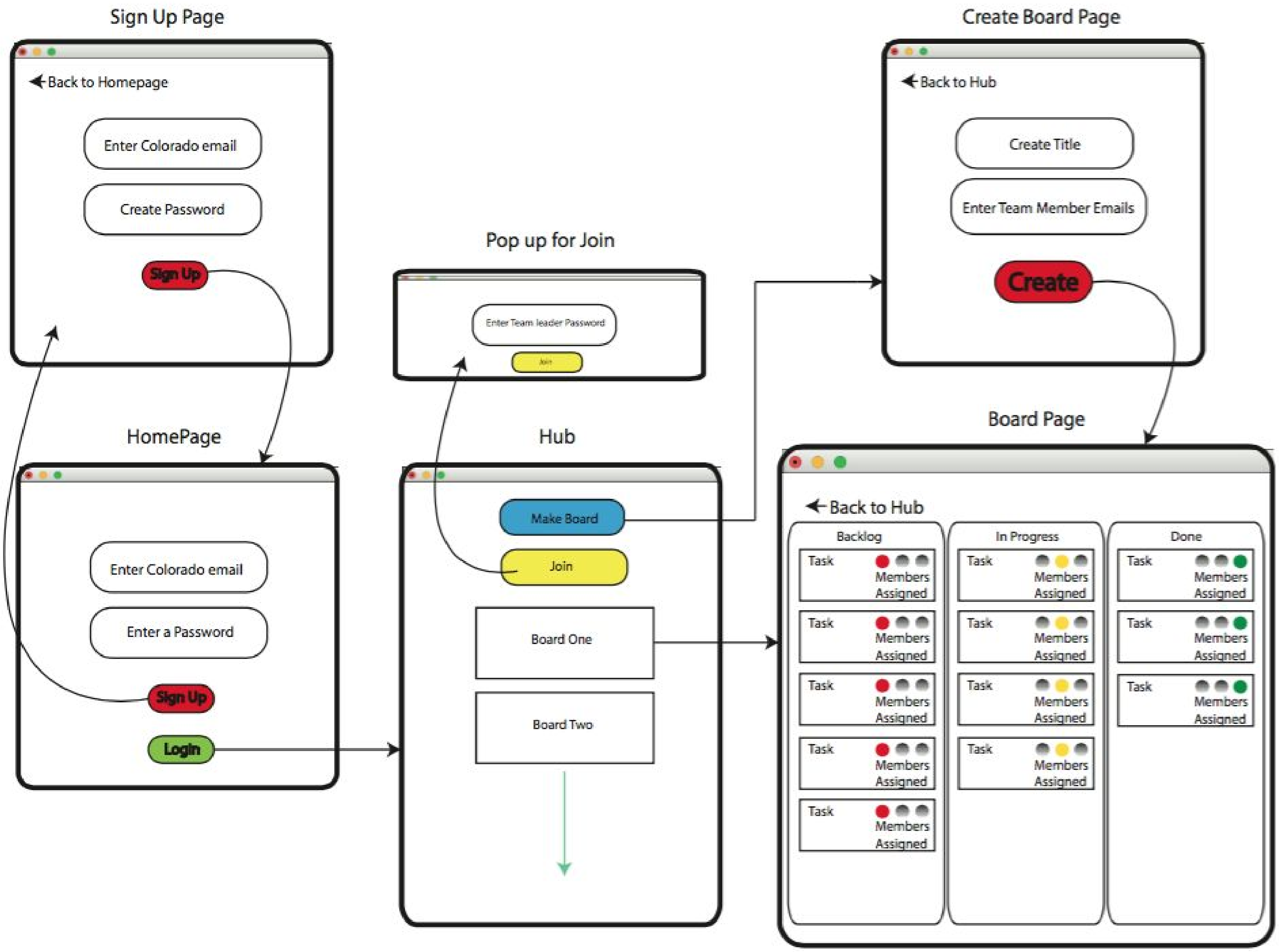
**Activity Diagram:**



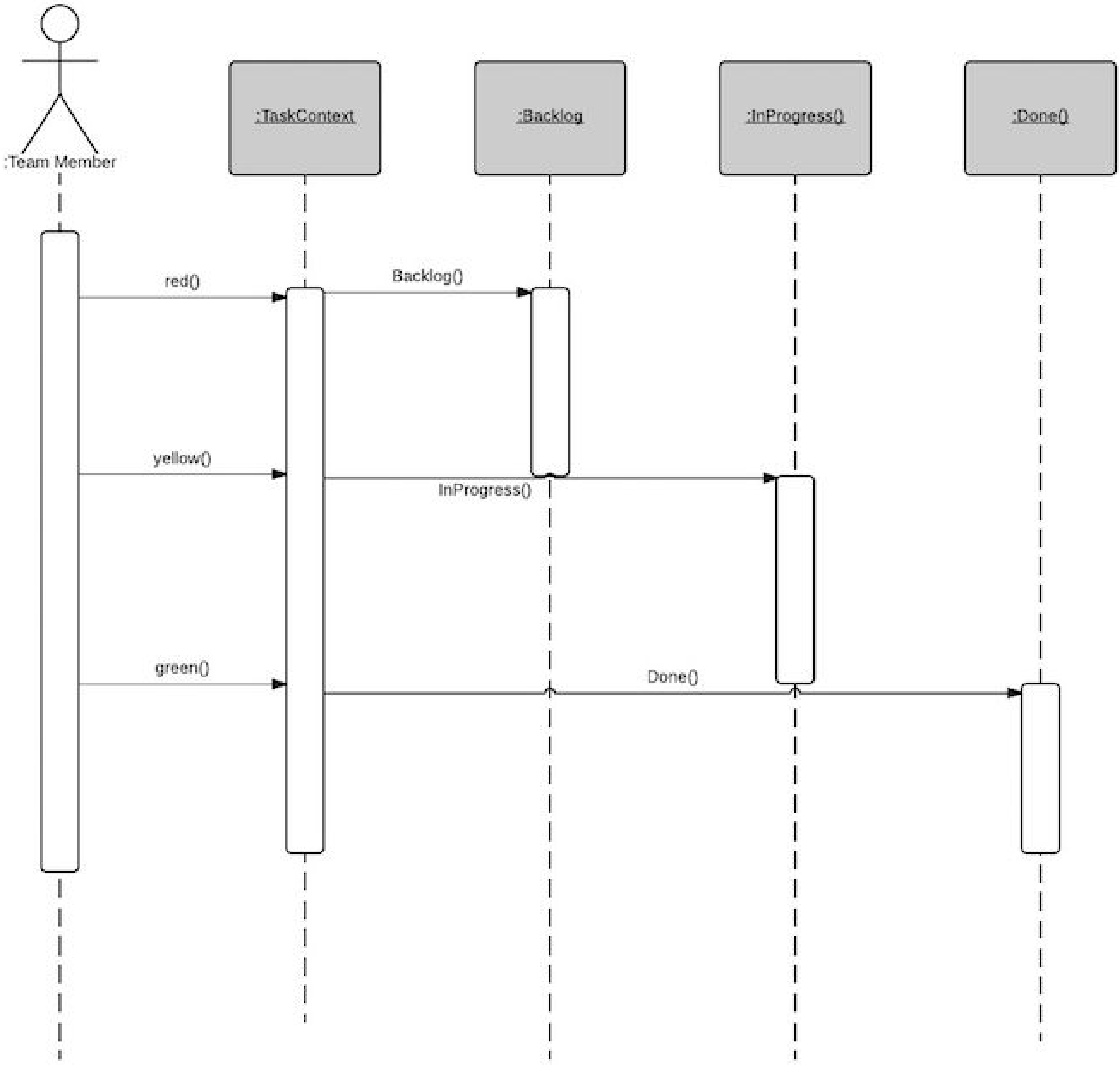
**Data Storage:**

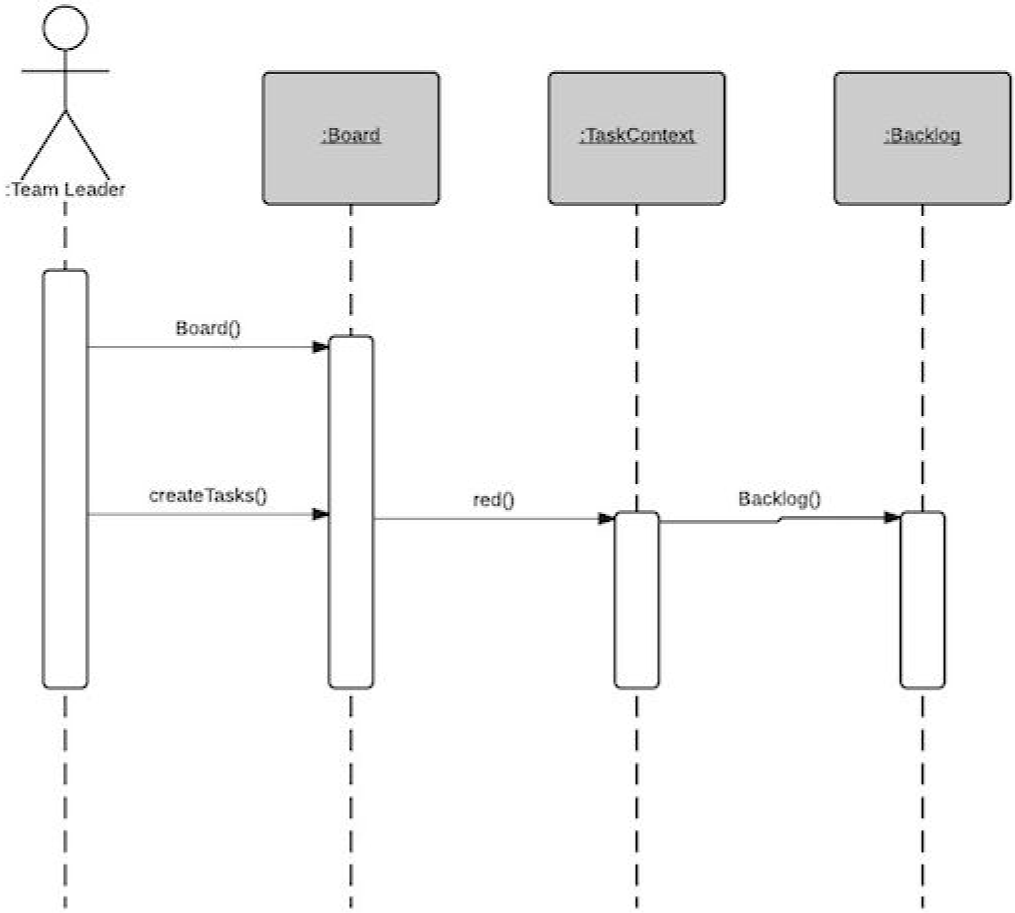
We will be using MySQL to persist the data from our application. Using MySQL, we will store the values of every object that gets instantiated and modify them as per the application requires. To restore a session, the associated objects will be re-instantiated using the values stored in MySQL corresponding to that session.

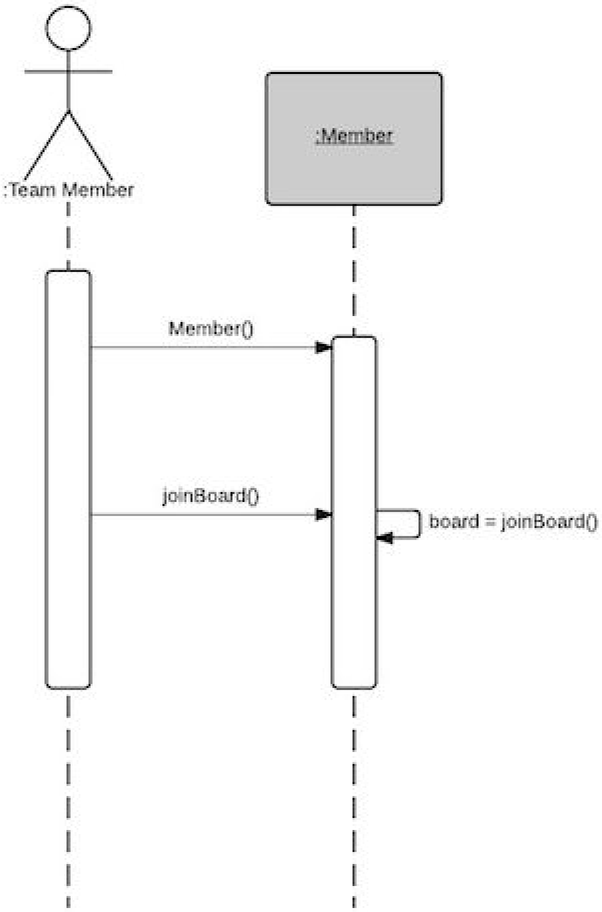
### UI Mockups:


Sign Up Page
Back to Homepage
Enter Colorado email
Create Password
Sign Up
Pop up for Join
Enter Team leader Password
Join
Create Board Page
Back to Hub
Create Title
Enter Team Member Emails
Create
HomePage
Enter Colorado email
Enter a Password
Sign Up
Login
Hub
Make Board
Join
Board One
Board Two
Board Page
Back to Hub
Backlog
Task
Members Assigned
Task
Members Assigned
Task
Members Assigned
Task
Members Assigned
Task
Members Assigned
In Progress
Task
Members Assigned
Task
Members Assigned
Task
Members Assigned
Task
Members Assigned
Done
Task
Members Assigned
Task
Members Assigned
Task
Members Assigned

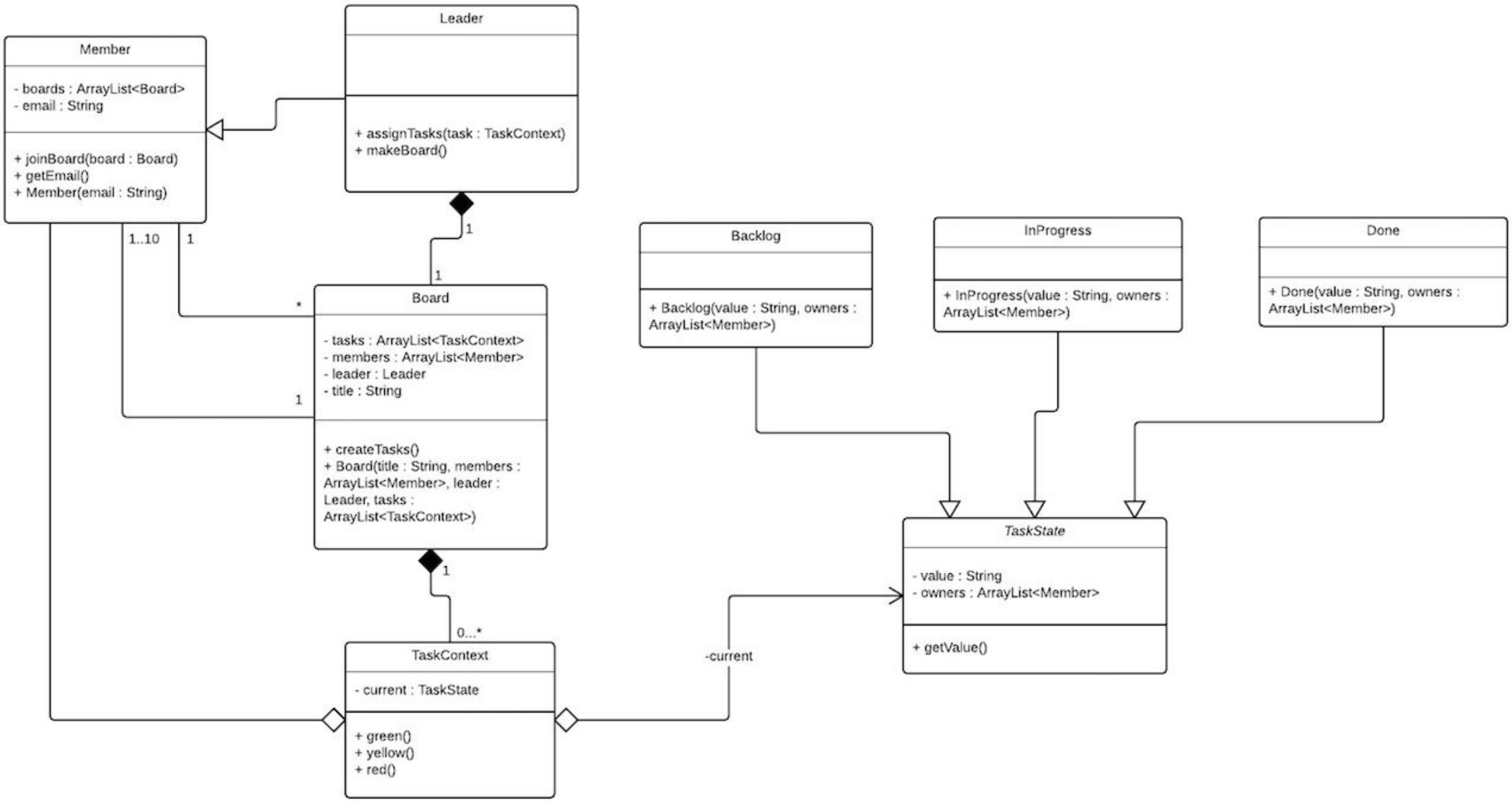
**User Interactions:**




:Team Leader
:Board
:TaskContext
:Backlog
Board()
createTasks()
red()
Backlog()


:Team Member
:Member
Member()
joinBoard()
board = joinBoard()

## Class Diagram:


Member
- boards : ArrayList<Board>
- email : String
+ joinBoard(board : Board)
+ getEmail()
+ Member(email : String)
Leader
+ assignTasks(task : TaskContext)
+ makeBoard()
1..10
1
1
1
*
1
Board
- tasks : ArrayList<TaskContext>
- members : ArrayList<Member>
- leader : Leader
- title : String
+ createTasks()
+ Board(title : String, members : ArrayList<Member>, leader : Leader, tasks : ArrayList<TaskContext>)
1
0...*
TaskContext
- current : TaskState
+ green()
+ yellow()
+ red()
-current
Backlog
+ Backlog(value : String, owners : ArrayList<Member>)
InProgress
+ InProgress(value : String, owners : ArrayList<Member>)
Done
+ Done(value : String, owners : ArrayList<Member>)
TaskState
- value : String
- owners : ArrayList<Member>
+ getValue()