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HIGH LEVEL DESIGN:

We believe that the most effective architecture pattern for our project is a layered architecture. This pattern provides a hierarchy of layers that can communicate with each other and is well-suited for applications that must communicate with a server. We think that the Model-View-Controller pattern would be the best fit for our project. This pattern is very common for web applications and is generally suitable for developing user interfaces. Our application must store information about tasks on a server (model), retrieve and display this information to users (view), and allow users to add and modify tasks for themselves or their teams (controller).

LOW LEVEL DESIGN:

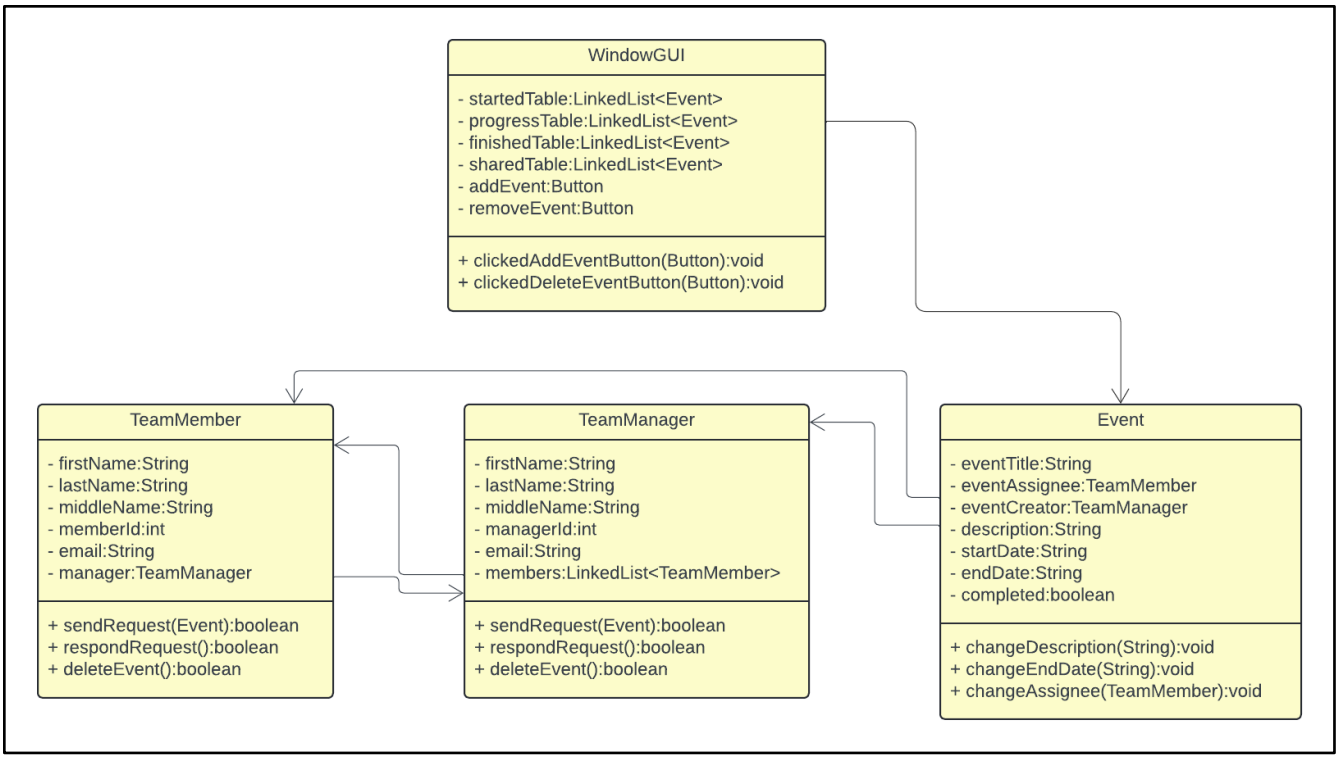
For implementing our TODO application, we believe that the most helpful design family would be the Behavioral family. This family focuses on ways for classes and objects to interact with each other and distribute tasks. As our application will share information between users (specifically team members and managers), we want to focus greatly on how this information can be distributed.

Pseudocode for a Team Member:

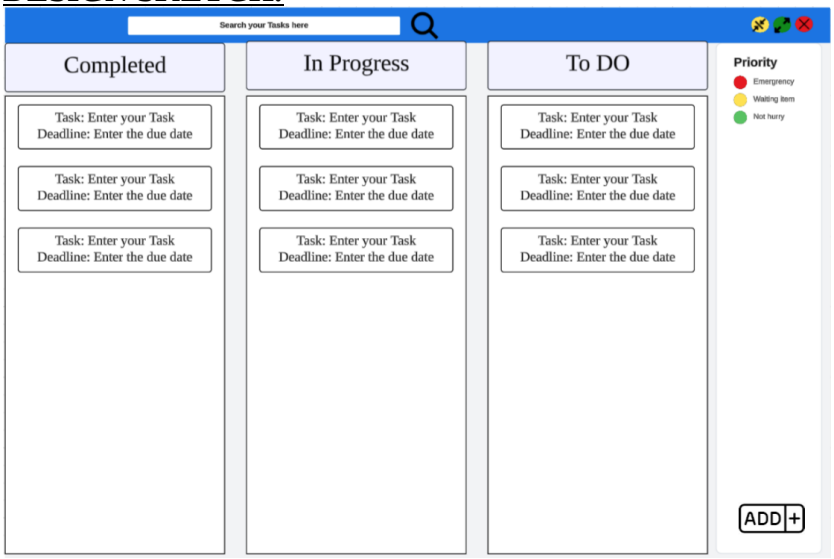
- Log into the system
- Check your accepted events
- Move any events from “Needs to be Started” to “In Progress” if the event has been started
- Move any events from “In Progress” to “Finished” if the event has been completed
- If no events need to be moved, keep the desktop application unchanged
- Check the shared events tables from your manager
- Accept or reject any events from your manager
- If new events arise, create an event and assign yourself as the assignee

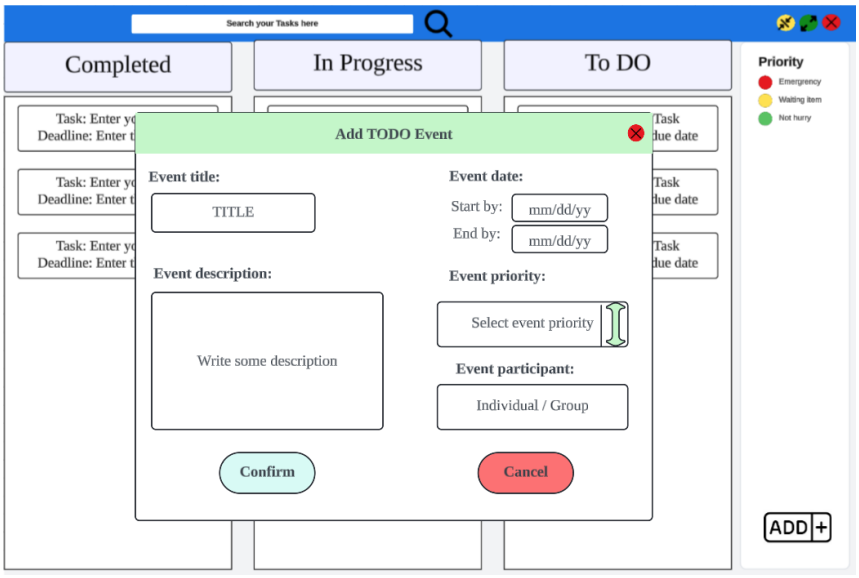
Pseudocode for a Team Manager:

- Log into the system
- Check your accepted events
- Move any events from “Needs to be Started” to “In Progress” if the event has been started
- Move any events from “In Progress” to “Finished” if the event has been completed
- If no events need to be moved, keep the desktop application unchanged
- Check if any events need to be created
- If an event needs to be created, create the event with the appropriate team member as the assignee



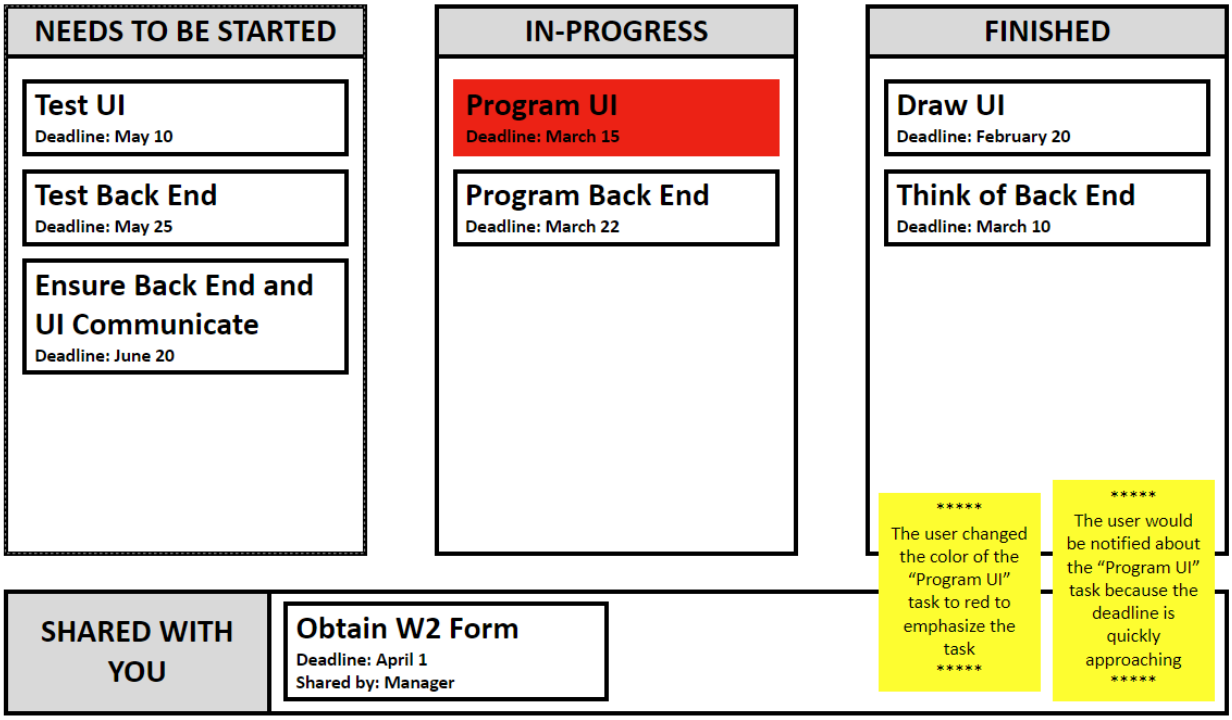
DESIGN SKETCH:

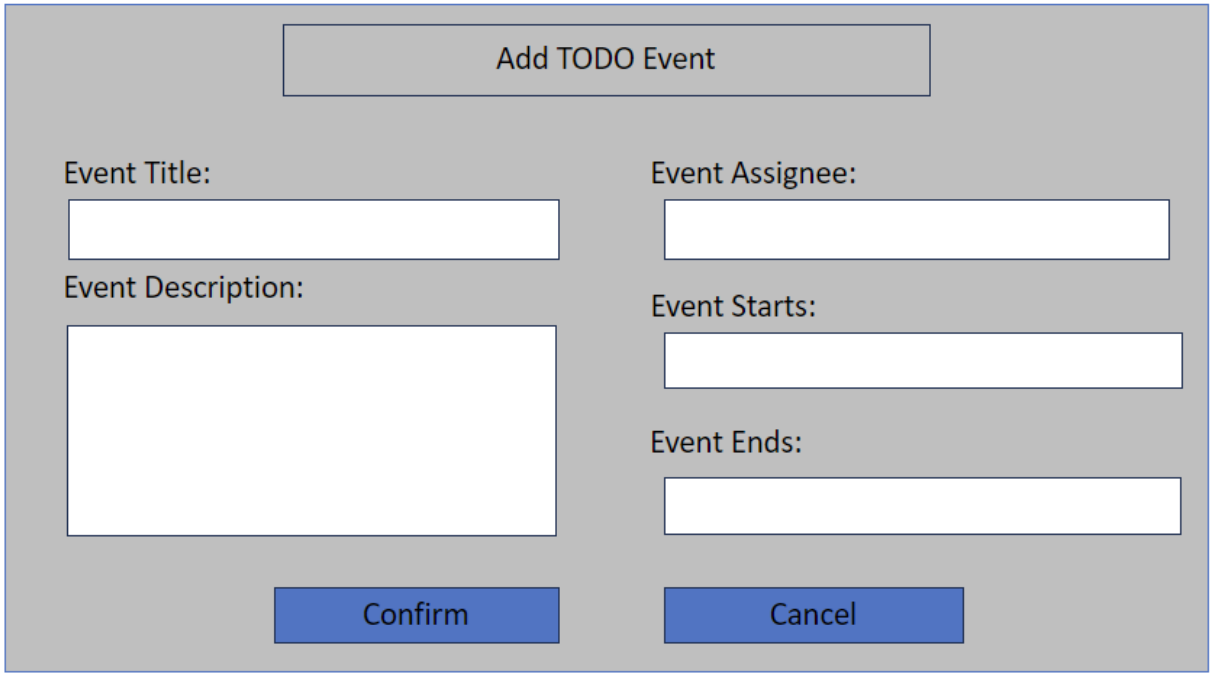




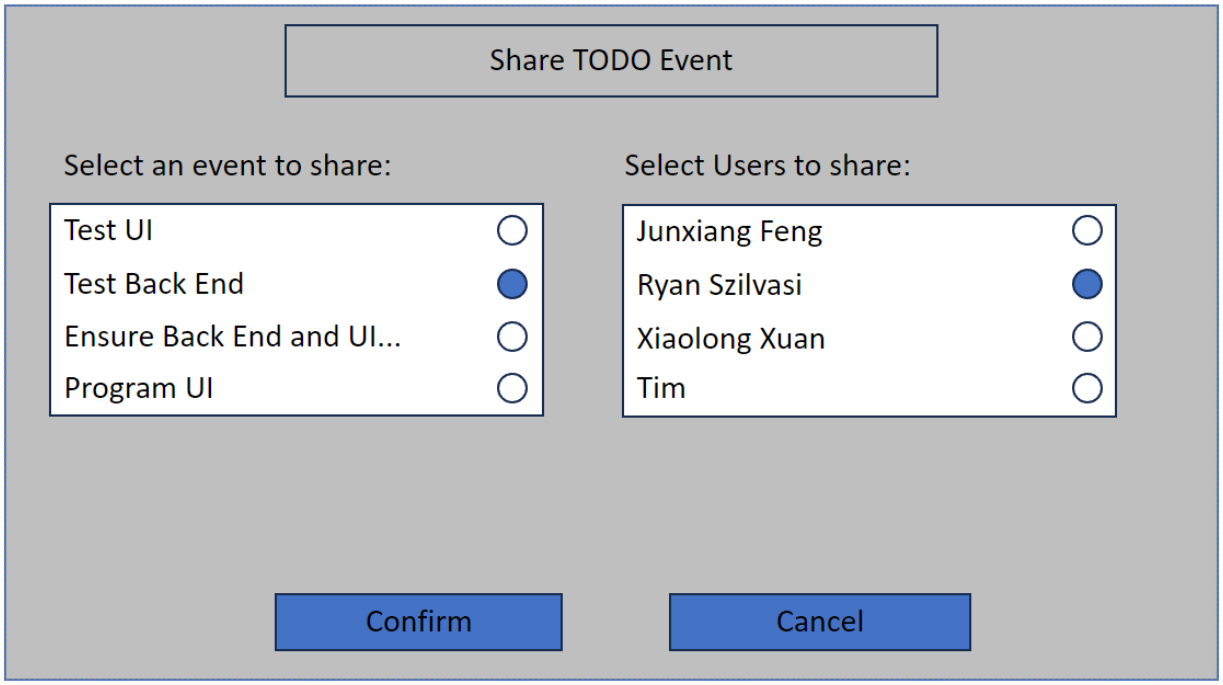
In the wireframe mockup, we consider that simplicity and ease of navigation to make sure users can add and manage tasks easily are the most important goals. The interface is minimalistic. It has “Completed”, “In Progress”, and “To Do” tables, which allow users to plan and track their work progress efficiently. Besides each task entry, intuitive icons are provided for quick editing, marking as complete, or deletion, thereby streamlining the task management process. What’s more, users can choose different colors for different tasks to display their priorities by clicking the task item. Through that, not only can users have an intuitive interface, but also can have a more friendly experience. In the lower right corner of the interface, users can see the Add Event button. We follow the rules that keep our pages simple. When users click this button, they can see our Add TODO event page, which allows users to directly input the task title and various details when setting tasks. The user can exit the Add TODO event page by clicking the red cancel button or the Red Cross in the upper right corner, and confirm to complete the setting of the event. When the user completes the setting of the event, the event will appear on the main page with the title and Deadline of the event for the user to arrange.

PROCESS DELIVERABLE:

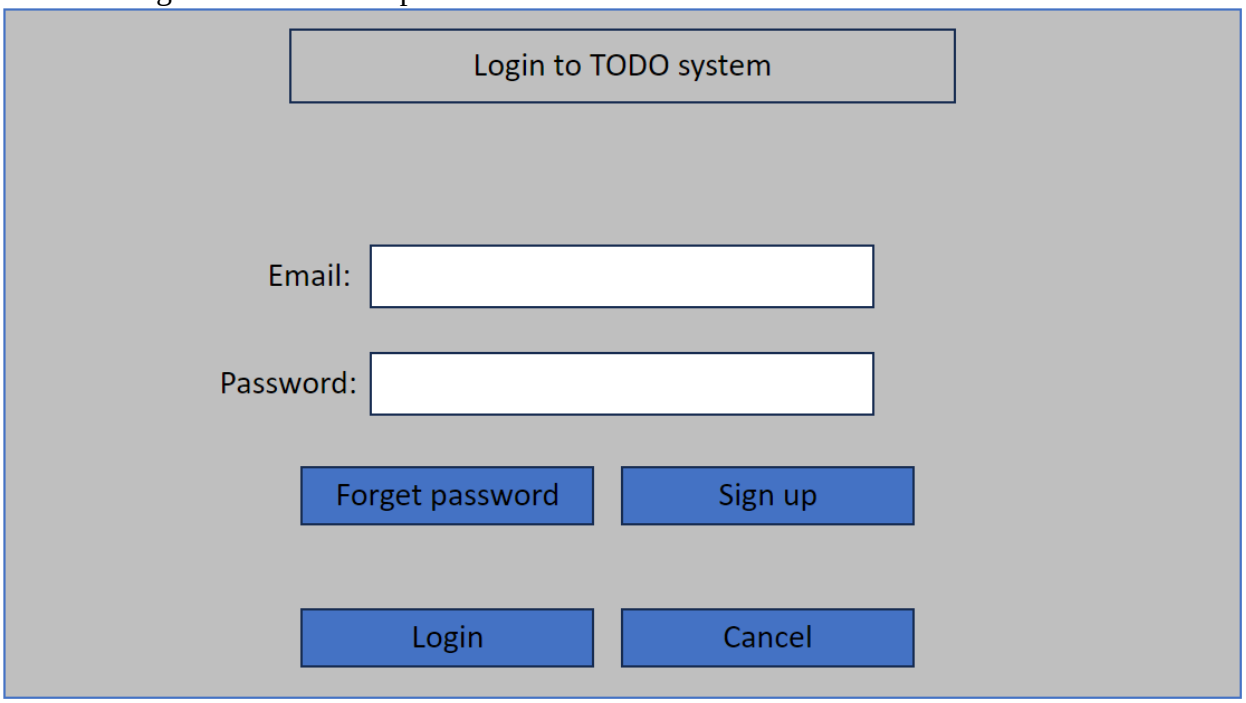

NEEDS TO BE STARTED
Test UI
Deadline: May 10
Test Back End
Deadline: May 25
Ensure Back End and UI Communicate
Deadline: June 20
IN-PROGRESS
Program UI
Deadline: March 15
Program Back End
Deadline: March 22
FINISHED
Draw UI
Deadline: February 20
Think of Back End
Deadline: March 10
*****
The user changed the color of the "Program UI" task to red to emphasize the task
*****
*****
The user would be notified about the "Program UI" task because the deadline is quickly approaching
*****
SHARED WITH YOU
Obtain W2 Form
Deadline: April 1
Shared by: Manager


Add TODO Event
Event Title:
Event Description:
Event Assignee:
Event Starts:
Event Ends:
Confirm
Cancel

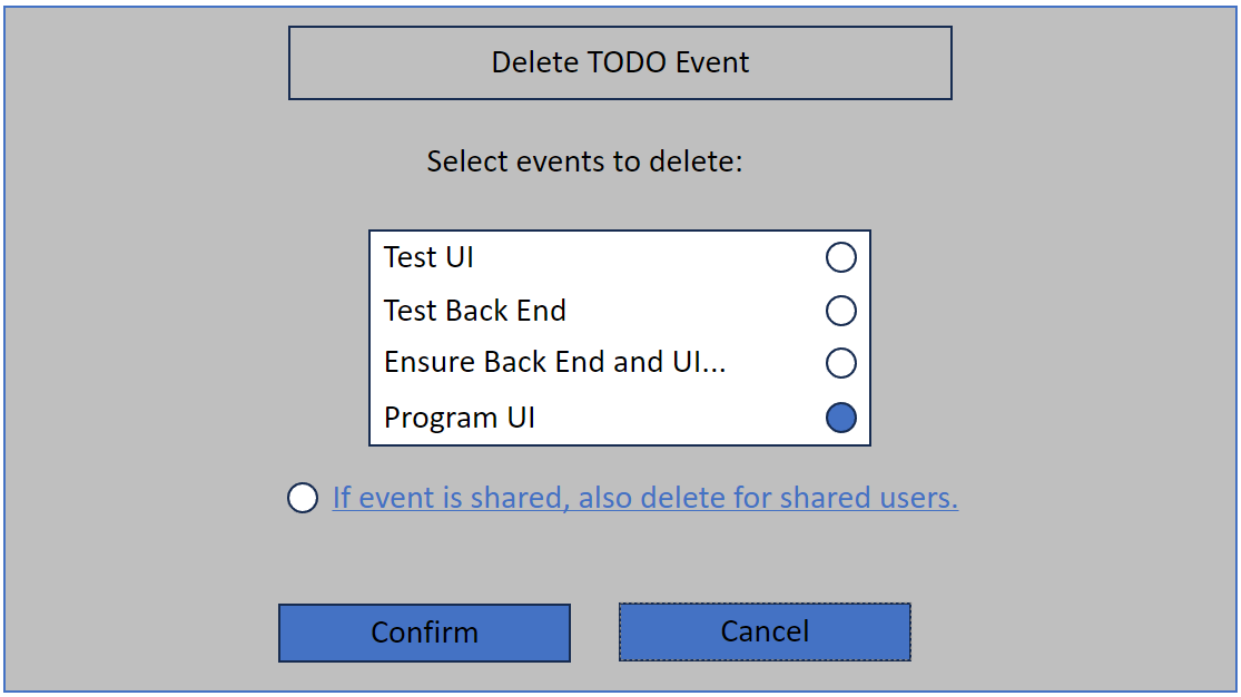
A “Share TODO Event” UI. This UI will allow users to select an event to share with selected users.



A “Login to TODO System” UI, which this UI will allow users to login to the TODO system with their registered email and password.



A “Delete TODO Event” UI, which this UI will allow users to delete an existing TODO event. It also allows users to delete the TODO event even if the event is already shared.



These prototype UI are the continuation of PM2. Our TODO system will allow users to add TODO events, delete TODO events, Login to TODO system, and share TODO events.