CS 3704

Requirements Analysis

Kanban Pioneers

- **Example fully dressed use case:** https://www.studocu.com/row/document/riphah-international-university/computer-sciences/fully-dressed-use-case-example-pdf/19676384
- **Use Case diagram examples:** https://canvas.vt.edu/courses/185406/files/32590540?module_item_id=2847123

Use Case 1: Add a task to a To-Do list

Primary Actor: Developer on a software development team

Stakeholders and Interests:

1. **Team Members:** Wants every team member to complete their share of work efficiently.
2. **Manager:** Wants to be able to oversee the workflow (what tasks are in the board/what is the progress) and wants to ensure timely completion of deliverables.

Preconditions: The Kanban Board is accessible to the developers and the managers, and they have necessary permissions to add tasks to the Board.

Postconditions:

1. The new task is successfully added to the appropriate column on the Board.
2. Team members can view the newly added task and any other details related to it.
3. The Board reflects the status of the new task.

Main Flow:

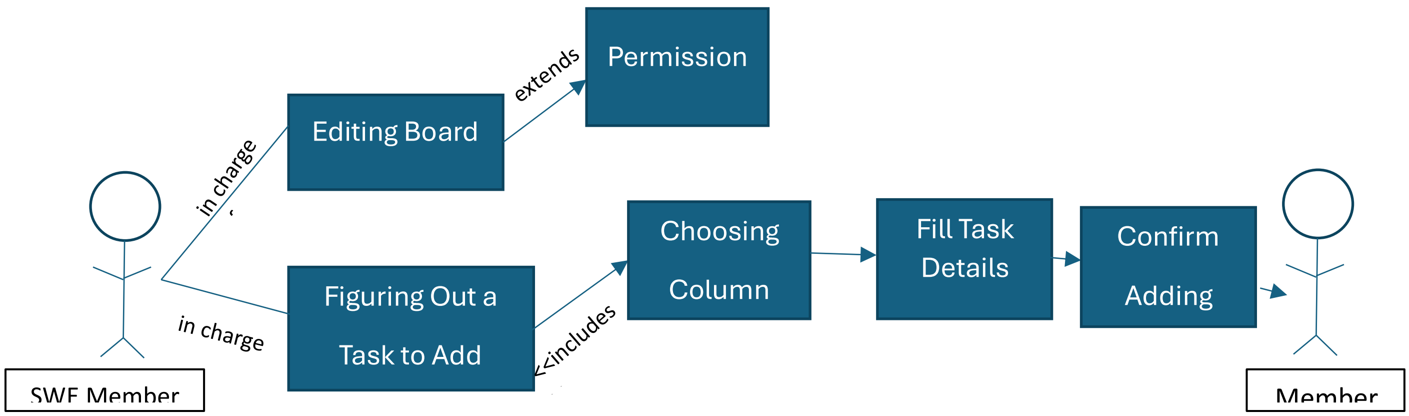
1. The developer accesses the Board
2. They select the column they want to add a new task to
3. They fill up the required details for the task (such as title, assignee, due date, etc)
4. They confirm adding the task
5. Finally, the Kanban Board will update to display the newly added task

Alternative Flows:

- If the developer chooses not to add a task after selecting the option, they can cancel it and return to the unchanged Kanban Board

Exceptions:

- Incorrect Permissions: In the case that the developer does not have the necessary permissions to edit the Board, they will be notified of this restriction



Use Case 2: Assign tasks to a sprint/iteration & track blocked tasks

Primary Actor: Project manager, Team leader

Stakeholders and Interests:

1. **Team members:** wants to know what tasks are in the Kanban board, wants to know what task they should work on
2. **Manager:** wants to know what tasks are in the Kanban board, wants to know the progress of iteration and each task, wants to track blocked tasks

Preconditions: User must be logged into system and has appropriate permissions

Postconditions:

1. All team members can see what tasks are assigned to them
2. Can modify the status of the task they work on(to do/on progress/done/debug)
3. Manager can assign tasks to the team members
4. Manager can assign deadline and modify deadline during the project
5. Manager can track the status of every tasks

Main Flow:

1. The manager clicks 'assign tasks to member' button
2. The manager assigns tasks to each team member

   (1a) in Alternative Flow

3. Team members check their own tasks by clicking 'My Tasks' button
4. Team members update the status of tasks from to-do to on progress
5. The manager tracks the status of tasks

   (2a) in Alternative Flow

6. Team members update the status from on progress to done

   (3a) in Alternative Flow

7. The manager ensures all tasks are finished and ready to submit to client

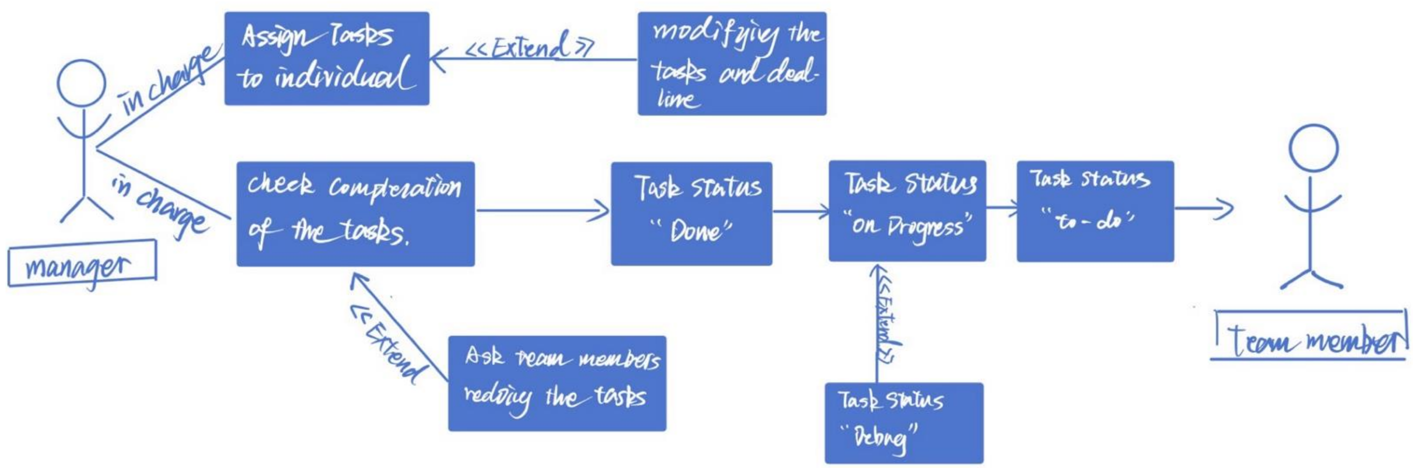
Alternative Flows:

- 1a. The manager modifies the contents or deadline of that task.
- 2a. Team members update the status to debug

- 3a. The manager wants some tasks to be redone

Exceptions:

If the project was accidentally cancelled, then all progress stops



Use Case 3: Managing Project Tasks with the Board

Primary Actor: Project Manager

Stakeholders and Interests:

1. **Team Members:** Want to efficiently complete their assigned tasks
2. **Manager:** Monitoring project progress, foreseeing any potential issues/risks, and ensuring project success

Preconditions: Project goal/scope/requirements are defined, and team members have access to the board.

Postconditions:

1. Tasks are completed with the specified timeframe/requirements/budget
2. Stakeholders are satisfied with the quality of deliverables and adherence to requirements

Main Flow:

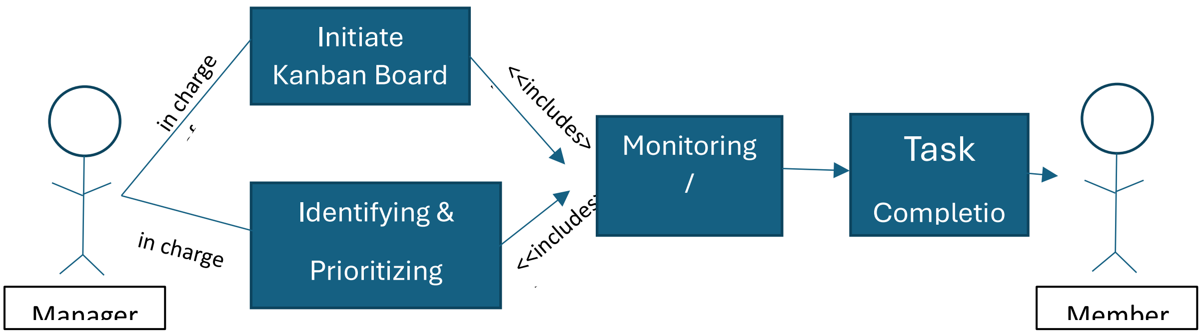
1. The manager initiates the project by creating a Kanban Board
2. The manager collaborates with the team members to identify all the requirements to complete the project successfully and prioritizes the tasks as well
3. The manager assigns different tasks to different team members and team members have the flexibiloty to update the task and move it from different sections when necessary
4. The manager can easily monitor the status of everyone's tasks to be able to identify any potential issues or adjust as necessary
5. All tasks are successfully completed in the necessary timeframe and moved to the "Ready" column

Alternative Flows:

- If new tasks emerge during the project – The manager can add them to the “Backlog” section and priortize them accordingly

Exceptions:

- If a team member is unavailable or unable to complete a task – The manager can easily reassign
- If there is an obstacle or delay – The manager and team members will be able to address the issue and adjust accordingly



Use Case 4: Adding/Removing Member into Kanban Board

Primary Actor: Project Manager

Stakeholders and Interests:

1. **Team Members:** Want to know about their position and authority in the project.
2. **Manager:** Want to have access of higher authority of adding and removing members of project.

Preconditions: The operator must be logged in and have the corresponding authority. The person being added or removed must register an account.

Postconditions:

1. The person being added should be able to see tasks on the Kanban board. They should have correct authority in the project.
2. The person being removed should not be able to see contents in the Kanban board anymore. Their authority should be removed.

Main Flow:

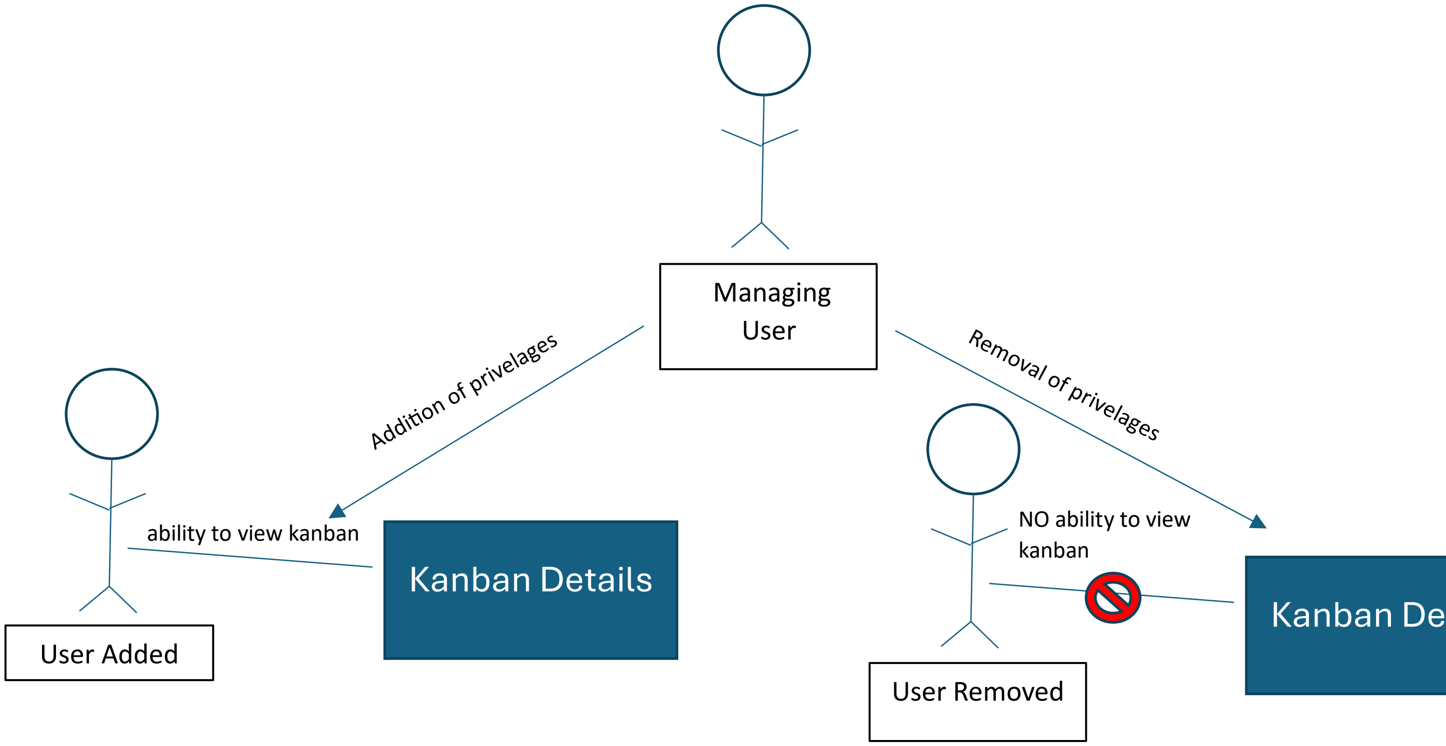
1. The manager accesses the Kanban system.
2. The manager selects the Personnel interface and clicks Edit option.
3. The manager chooses to add or remove existing staff.
4. If the manager wants to add someone, enter that person's email and click to send invitation link.
5. If the manager wants to remove a person, select the target person option, and click Delete.

Alternative Flows:

- The manager can set some configurations when adding new members, such as the expiration date of access and authority of project.

Exceptions:

- The manager needs to specify a new manager when he wants to remove himself and there is no second manager.
- When team member clicks the Edit button of Personnel interface, the system will prompt that permission denied.



<u>Use Case 5: Customizing the Board to the needs of the project</u>

Primary Actor: Project Manager

Stakeholders and Interests:

1. **Team Members:** Want the Board to be as helpful as possible in keeping track of their tasks
2. **Manager:** Wants as much convenience as possible in using the Board to assign work then oversee whether certain tasks are on schedule

Preconditions: Project manager and team members are logged in and all have access to a shared board

Postconditions:

1. All the Board's columns now fit the needs of the current project
2. Custom tags are available for tasks to allow for easy filtering

Main Flow:

1. The manager clicks the "Edit Columns" option on the board
2. The manager removes unnecessary columns and adds new columns that are project-specific, and saves the changes
3. The manager navigates to the "Tags" page on the sidebar
4. The manager adds the custom tags needed for the project, for example, different tags to represent issues as being linked to different clients (in an application being offered as a service), and saves the changes
5. Tasks are added to the board (see Use Case 1), and team members can add tags to tasks and filter by them as necessary

Alternative Flows:

- If the manager changes their mind about the customizations they have made, they can revert to the default board layout

Exceptions:

- If the manager tries to edit the Board's columns and delete a column that is not empty (still has tasks in it), the system will give an error message.