

# CS 3704 Requirements Workshop

0.a Come up with a team name for your group.

## **Kanban Pioneers**

0.b Please list the names and PIDs of the team members who are present today (or knowingly absent)

- **Maddie Gonzalez (maddiegonzalez)**
- **Shivani Vaddepalli (shivaniv)**
- **Ziad ElGataa (ziad21)**
- **Xinchen Liao (xinchen)**
- **Ludwig Olaru (vocaloidfan)**
- **Jiale Song (sjiale)**

0.c Provide your preliminary project idea (or set of ideas). This is not a commitment to a project. Using the approved idea for your group's course project, complete the following activities related to requirements analysis.

**Our idea is to create an improved version of the basic kanban board offered by companies currently. Most kanban board applications only offer very basic board structure with little customization. We want to create a kanban board tool that also offers users ways to improve their productivity and emphasize tasks that need attention. While our aim is to provide more customization we also want to emphasize simplicity and usability.**

1. Provide an example of five hypothetical non-functional requirements for this system. Be sure to include the specific type of requirement discussed in class, with each requirement coming from a unique category.

- **The system must be very simple and user-friendly. Users should not require help to operate the tool. (Usability)**
- **The system should allow frequent changes to be made to the kanban board (Supportability)**
- **Using the board should feel fluid - any action taken by a user should complete the desired action(bringing up a menu, etc.) in under 200 ms, and any changes made should be reflected for all other users within 5 seconds(Performance)**
- **Will be implemented using web based languages such as HTML/CSS and javascript with a database language such as SQL (Implementation/Constraints)**
- **This will have an error-checking function to avoid the whole program crash. (If an error is caught, prompt messages first) (Reliability)**

2. Provide an example of five hypothetical functional requirements for this system.

- **The system must have a basic kanban board at its core.**
- **The system must offer customizable columns for the kanban board.**
- **The system must have a feature that changes the color of blocked tasks in order to draw attention to items that need attention.**
- **The system must have a “To Do List” function for users to keep track of their own tasks.**
- **The system must be able to allow users to organize different tasks into different sprints/timeframes**

3. Think of a specific task required to complete each of the functional requirements and non-functional requirements mentioned above (10 total). Estimate the amount of effort needed to complete this task using function points (i.e., using the values

<https://www.scrumpoker-online.org/en/room/44441241/scrumpoker> ). Briefly explain your answer.

- **Create functionality of a basic kanban board. This would involve a table with editable numbers of columns, adding/deleting tasks, and moving tasks. (40)**
  - *This is the most important functionality of our project, so it will require a large amount of effort to ensure it is done correctly. It will also need to be revisited often as we build more features on top of this framework.*
- **Add customizable columns to the basic kanban board. This would entail saving changes to the text in the columns when a user edits the text field. (5)**
  - *Once we have the kanban board set up, this will be a very simple upgrade to implement. It should not require more than a day or work.*
- **Add “To Do List” functionality to the web page. This could look like a widget on the side of the page that has editable text fields and checkboxes. (8)**
  - *This task should be relatively simple as long as we understand the basics of using html and javascript. It is a relatively simple feature and should be easy to create after creating a kanban board with editable fields.*
- **Add a feature to change the color of blocked tasks. The user should be given a color palette to choose from when a task becomes blocked. (1)**
  - *This feature would be simple to implement but will provide the user with a more readable and user friendly design. Less than 1 hour to implement.*
- **Add a feature to organize tasks in different sprints or iterations. This can be added to the top of the kanban board and has options for increments of time/dates/weeks. (8)**
  - *This allows the users to be more organized in their planning and allows for synchronization between members. This will take about a day or less to implement into the program.*

- **Ensure the overall functionality of the website is very user-friendly and accessible. All movements of tasks should be simple, editable fields should be obvious, etc. (8)**
  - *This task is not a lot of effort if we keep it in mind from the very beginning– designing every stage of the UI around this idea will keep this task short, as opposed to having to focus on UI improvements later in the process sometime*
- **The system should support frequent changes and update any backend systems immediately upon change. Thus, we need to add an account system, project sharing system, and synchronized actions across boards (20)**
  - *This will be a good chunk of the backend work– it is a major task that will take longer than the others as it will be split into several smaller ones: setting up the accounts, then the project groups and sharing, then calls to a system for retrieving account data, etc.*
- **Ensure the system updates and moves efficiently. All changes must be synchronized among users and should take place in under 200 ms. We need to conduct testing to ensure that this is true. (13)**
  - *This task requires a lot of effort because we must conduct thorough testing and ensure our product performs the best that it can. Conducting testing and fixing any bugs can add up to a lot of effort as we implement different features in our system.*
- **Thoroughly test the system to ensure that it catches any errors and accurately displays an error catching message. We must deploy the error-catching functionality and thoroughly test it. (40)**
  - *Testing is a very important component that must be conducted thoroughly. This is to avoid errors that will affect the clients. Testing will be conducted at the end of every iteration of the project to ensure working components. It will start when implementation starts and last until the end of the project.*
- **Add storage of project boards in the cloud, in some kind of database/storage system (13)**
  - *This task requires a decent amount of work due to having to understand the workings of databases. Understanding how they work and then using that knowledge to implement the storage of our system will take a good amount of time.*

4. Write three user stories from the perspective of at least two different actors. Provide the acceptance criteria for these stories.

1. **I am the project manager for a software development team. I want to be able to manage who works on what tasks in two ways: First, by coming up with an extensive list of individual tasks that will sum up to the completion of the project, and second, I want to be able to not only assign those tasks to members of the team, but also to be able to sort them by sprint, so that some tasks will be designated to this week, some for next week, and so on.**

**acceptance criteria under this story:**

- a. The system must have a basic kanban board at its core.*
- b. The system must be able to allow users to organize different tasks into different sprints/timeframes*

2. **One of the software designers in the team:** I have recently working on a big software project, it has lots of complex things to work on, so I was not sure where to start this project. But the good thing is that we have an improved kanban board. Our manager listed most of the tasks to do for individuals. All the tasks to do are on the to-do list, besides that, we can see what task is assigned to a specific person, we have a section on the board so that we can check what is assigned to ourselves, I just click “Mine Task” and then all task assign to me is clear. This new function is nice, since by doing this, everyone will know what’s their responsibilities, and everyone will contribute equally. Also, each task is assigned a deadline, this is much better than only get a big project and telling me that it is due in half a year.

**acceptance criteria under this story:**

- a. The system must have a “Mine Task” section for every teammate to check what tasks are assigned to them.*
- b. The system must have a time check box to make a deadline.*

3. **I am a sales personnel in a small company.** I use phone calls and communication software to communicate with buyers. And I need to track the production and shipping progress when I make a deal. There is too much information and tasks I need to remember and track. And sometimes I will forget them because of facing too much information. I need an easier way to store all tasks that I am working on or follow in a few days or weeks later. It’s better to have a notification that will tell me what tasks I would miss or forget.

**Acceptance criteria under this story:**

- a. The system must have a to-do list functions that can display in a Kanban board or calendar style.*
- b. The system must have a notification function that will remind users of the deadline or day’s summary.*

5. Provide two examples of risk that could potentially impact this project. Explain how you would mitigate these risks if you were implementing your project as a software system.

- **User’s requirements change during the implementation process. We will discuss these requirements and implement some of them which will not affect the current progress. The rest of the requirements will be implemented in the next round of development.**

- **Our goal is to create a new take on kanban boards, but features we add could already exist elsewhere. This could cause our project to be unoriginal. In order to mitigate this risk, we will conduct research on as many pre-existing kanban services as possible to ensure we have new ideas that truly improve the process.**

6. Describe which process your team would use for requirements elicitation from clients or customers, and explain why.

**We will first start with brainstorming out different requirements and design ideas. In this phase we outline the stakeholders within the project. Then we would speak to possible clients and see their perspective on our current requirements. Through back and forth collaboration we would then start flow charts, prototyping, and GUI design of the project. More than likely this would be the continuation of the way our project will continue since we would follow an Agile process.**