

# CS 361 – Software Engineering

## Kanban

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# Agenda

- Kanban agile development
- Trello
- User story definition
- Creating a Trello board
- Creating user story

# Kanban agile development

- Kanban is a popular framework used to implement agile software development in order to combine the works.
- It needs **communication** of capacity and full **transparency** of work in real time.
- Each work item is showcase **visually** on a Kanban board allowing each member of the team to see the progress of each piece of work at any time.
- The principles of Kanban allows a team to match the amount of work in progress to a team's capacity.

# Trello



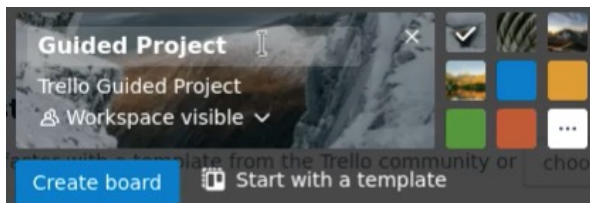
- Trello is used to monitor the team's workload.
- It is a project management collaboration tool that organizes all the projects into boards.
- It provides full transparency of project, what is being worked, and who was working on a particular of work.
- Trello is friendly to new uses, provides responsive design, and updates in real time.
- It utilized Kanban methodology to breakdown the task.
- Trello is a visual tool that is used to visualize work and optimize the flow of the work amongst the team.

# User story definition

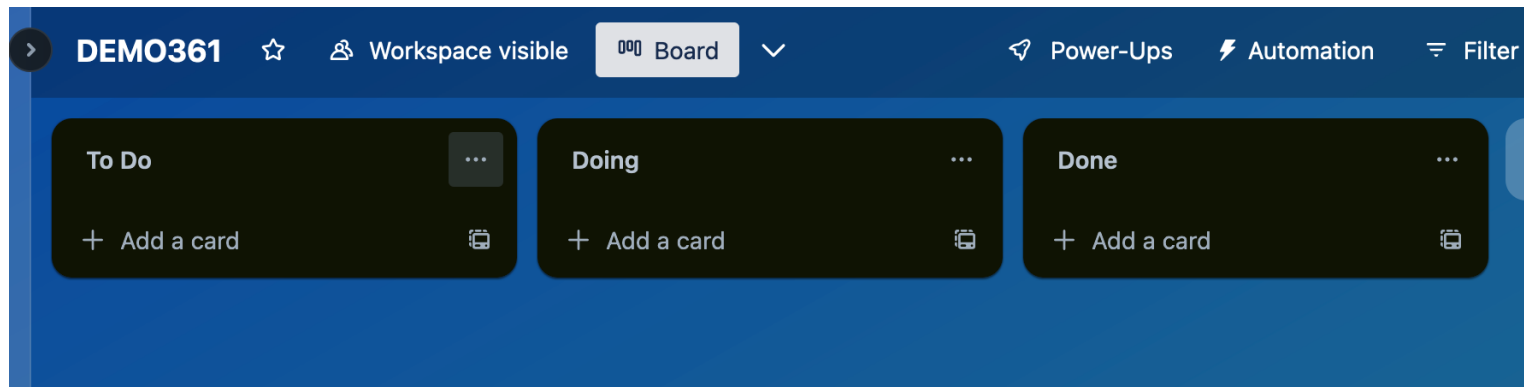
- A user story is the simplest form or an informal general explanation of a software feature which is described from the perception of an end user.
- Its purpose is to outline of how the software feature will provide value to a customer.
- For example, a manager wants to be able to understand his colleague's process, so he can better report his successes and failures to stakeholders.

# Creating a Trello board

1. Login
2. Select “Create new board”
3. Give a board title > Select “Create board”

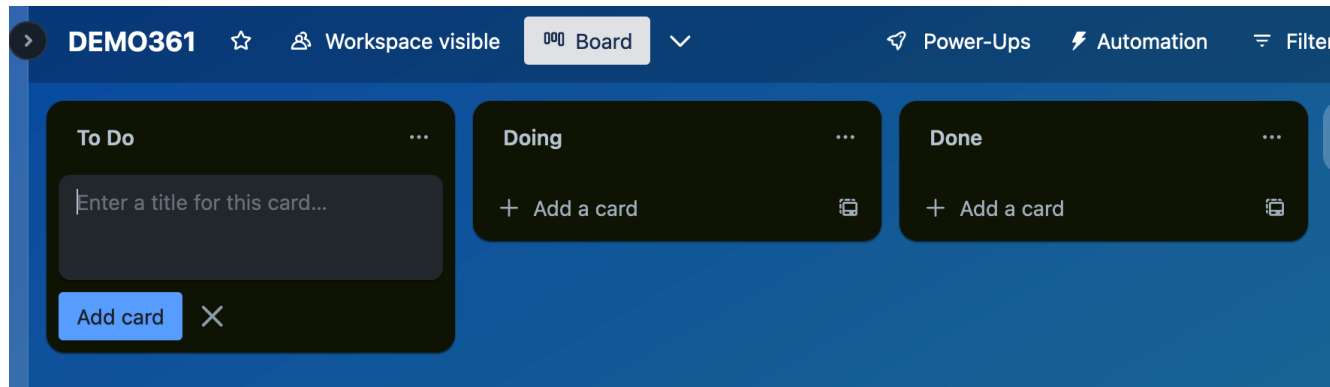


4. To Do/Doing/Done has popped up



# Creating a Trello board

## 5. Add work items in Todo > Select “Add card”



6. Select work items from “To Do” to “Doing”  
(It means that user chooses some works from backlog to do.)
7. Select work items from Doing to Done (It means that user has finished those works.)

# Creating user story

1. Add a card on To Do > Give a card title
2. Give a card information

**DEMO361**

**To Do**

- User Log In
- + Add a card

**User Log In**  
in list To Do

**Notifications**

- Watch

**Description**

Add a more detailed description...

**Activity** Show details

KS Write a comment...

**Add members and objects to card**

**Add to card**

- Members
- Labels
- Checklist
- Dates
- Attachment
- Cover
- Custom Fields

**Power-Ups**

- + Add Power-Ups

**Automation** ⓘ

- + Add button

**Actions**

- Move

**Add details of card**

**Add comments or special message of this activity**

**Define actions on card**



# Creating user story

## 3. Add a card description

The screenshot shows a Trello card editor for a card titled "User Log In" in the "To Do" list. The card is open, showing the description field. The description contains a user story and acceptance criteria. The right sidebar shows various options to add to the card, such as Members, Labels, Checklist, Dates, Attachment, Cover, Custom Fields, Power-Ups, Automation, and Actions.

**Card Title:** User Log In  
in list [To Do](#)

**Notifications:** Watch

**Description:**

User Story:

As a User, I want to create an account so that I can use an application.

Acceptance Criteria:

- a user can log into the application
- a user can create an account
- must be a log in and register page
- design has to follow the design specs

Priority:

- deadline - Jan 22

**Right Sidebar:**

- Add to card
  - Members
  - Labels
  - Checklist
  - Dates
  - Attachment
  - Cover
  - Custom Fields
- Power-Ups
  - + Add Power-Ups
- Automation
  - + Add button
- Actions
  - Move
  - Copy
  - Make template

**Bottom Bar:** Save Cancel Share feedback

# Creating user story

## 4. Add members to card

The screenshot shows a Trello workspace named 'DEMO361'. On the left, a 'To Do' list contains a card titled 'User Log In'. The main area displays the details of this card. The card is titled 'User Log In' and is in the 'To Do' list. It has a 'Watch' notification button. The description section is titled 'Description' and contains the text 'User Story: As a User, I want to create an account so that I can use an application.' and 'Acceptance Criteria: a user can log into the application, a user can create an account, must be a log in and register page, design has to follow the design specs'. A 'Members' modal is open on the right, showing a search bar and a list of board members, including 'Kamonphop Srisopha (kamonpho...)'. The modal also has a 'Show other Workspace members' button.

**DEMO361**

**To Do**

User Log In

+ Add a card

**User Log In**  
in list To Do

Notifications

Watch

**Description** Edit

User Story:

As a User, I want to create an account so that I can use an application.

Acceptance Criteria:

- a user can log into the application
- a user can create an account
- must be a log in and register page
- design has to follow the design specs

**Add to card**

Members

**Members**

Search members

**Board members**

KS Kamonphop Srisopha (kamonpho...)

Show other Workspace members

**Power-Ups**

+ Add Power-Ups

# Creating user story

## 5. Add label to card

### User Log In

in list To Do

Labels

User Login



**DEMO361**

**User Log In**  
in list To Do

Notifications  
Watch

**Description** Edit

User Story:  
As a User, I want to create an account so that I can use an application.

Acceptance Criteria:

- a user can log into the application
- a user can create an account
- must be a log in and register page
- design has to follow the design specs

Priority:

- deadline - Jan 22

Activity

Share details

Add to card

- Members
- Labels

Create label

User Login

Title  
User Login

Select a color


# Creating user story

## 6. Add tasks to card

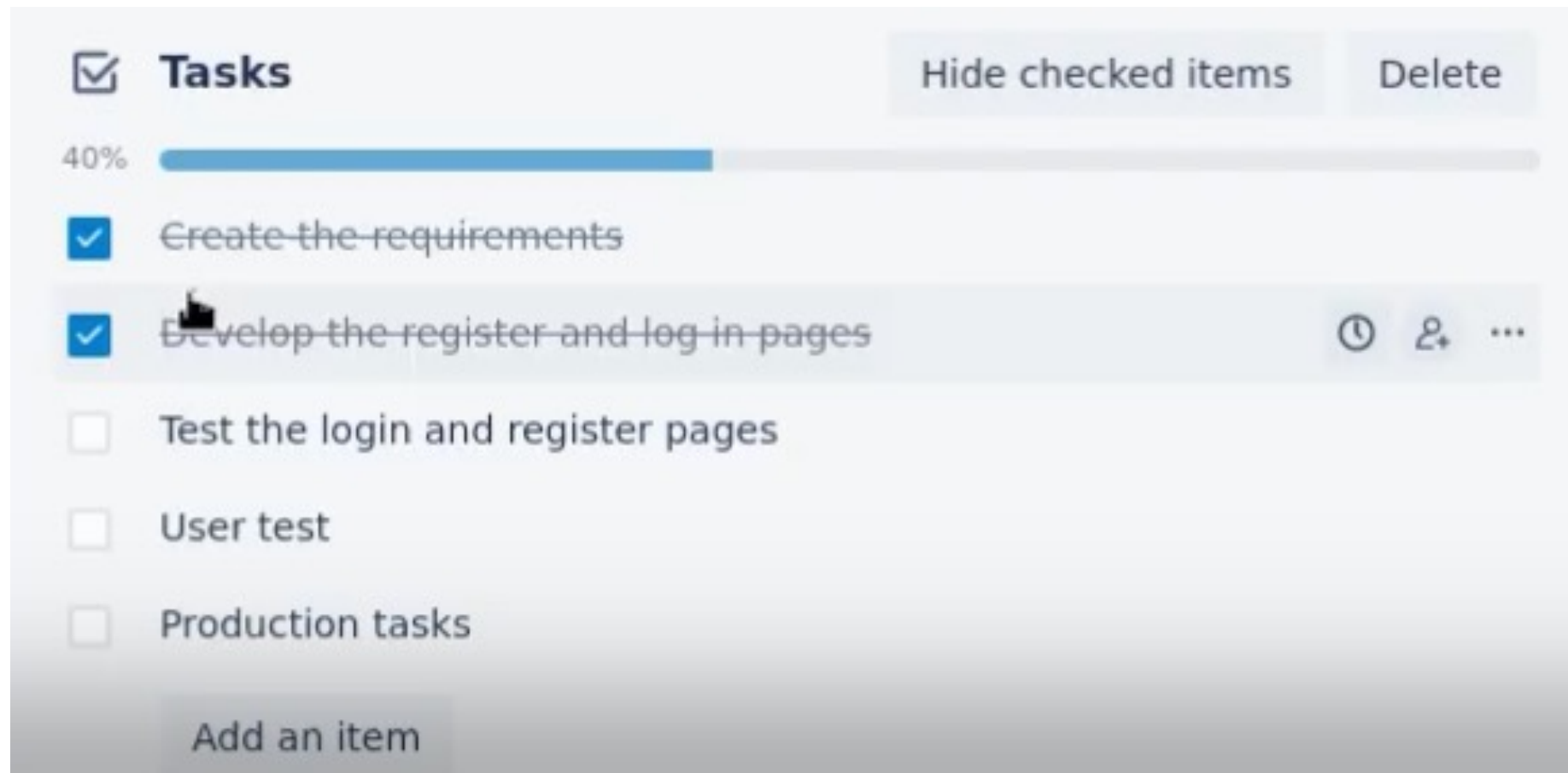
The screenshot shows a Trello card titled "User Log In" in the "To Do" list. The card content includes a "Watch" notification, a "Description" field with the user story "As a User, I want to create an account so that I can use an application.", acceptance criteria, and a priority of "deadline - Jan 22".

On the right side, the "Add to card" menu is open, showing options like Members, Labels, Checklist, Dates, Attachment, Cover, and Custom Fields. The "Checklist" option is highlighted with a red box.

Below the card, a "Task" checklist interface is shown, also highlighted with a red box. It includes a progress bar at 0%, a list of tasks: "Create the requirements", "Develop the register and login pages", and "Test", and an "Add an item" input field. At the bottom of the task interface are buttons for "Add", "Cancel", "Assign", "Due date", and other actions.

# Creating user story

7. Add check list of tasks, due dates, and members to take care of each tasks



The screenshot displays a task management interface. At the top, there is a header section with a checked checkbox icon and the word "Tasks" in bold. To the right of the header are two buttons: "Hide checked items" and "Delete". Below the header is a progress bar showing 40% completion. The main area contains a list of tasks, each with a checkbox and a text label. The first two tasks, "Create the requirements" and "Develop the register and log in pages", are checked. The third task, "Test the login and register pages", is unchecked. The fourth task, "User test", is unchecked. The fifth task, "Production tasks", is unchecked. To the right of the third task, there are three icons: a clock, a person, and a three-dot menu. At the bottom of the interface is a button labeled "Add an item".

☒ **Tasks** Hide checked items Delete

40%

- ☒ Create the requirements
- ☒ Develop the register and log in pages 🕒 👤 ...
- ☐ Test the login and register pages
- ☐ User test
- ☐ Production tasks

Add an item

# Creating user story

## 8. Add due dates to card

The screenshot shows a Trello card titled "User Log In" in the "To Do" list of a board named "DEMO361". The card is open, showing its details. A "Dates" modal is open on the right side of the card, allowing the user to set a due date and time.

**User Log In**  
in list [To Do](#)

Notifications  
👁 Watch

Description [Edit](#)

User Story:  
As a User, I want to create an account so that I can use an application.

Acceptance Criteria:

- a user can log into the application
- a user can create an account
- must be log in and register page
- design has to follow the design specs

Priority:

- deadline - Jan 22

Task  
67%  
67%  
✓ Create the requirements  
✓ Develop the register and login pages

[Hide checked items](#) [Delete](#)

**Dates**

< January 2024 >

SUN	MON	TUE	WED	THU	FRI	SAT
31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10

Start date  
☐ M/D/YYYY

Due date  
☒ 01/22/2024 6:15 PM

Set due date reminder  
1 Day before

Reminders will be sent to all members and watchers of this card.

[Save](#)  
[Remove](#)

# Creating user story

## 9. Add attachment to card

The screenshot displays a Trello card titled "User Log In" within a board named "DEMO361". The card is currently in the "To Do" list. The card's details include a label "User Login", a "Watch" notification, and a due date of "Jan 22, 2024 at 6:15 PM". The description section contains a user story: "As a User, I want to create an account so that I can use an application." and acceptance criteria: "a user can log into the application", "a user can create an account", "must be log in and register page", and "design has to follow the design specs". The priority is set to "deadline - Jan 22". The card is marked as a "Task" with a 67% completion bar. The task list includes "Create the requirements" and "Develop the register and login pages", both of which are checked, and "Test", which is unchecked. On the right side, the "Add to card" menu is open, showing options for "Members", "Labels", "Checklist", "Dates", and "Attachment". The "Attachment" option is selected, opening a sub-menu titled "Attach from..." with a list of sources: "Computer", "Trello", "Google Drive", "Dropbox", "Box", and "OneDrive". Below this list is a section "Attach a link" with a text input field "Paste any link here..." and an "Attach" button. A tip at the bottom of the sub-menu states: "Tip: You can drag and drop files and links onto cards to upload them."

**DEMO361**

**User Log In**  
in list To Do

Labels: **User Login** +

Notifications: ☒ Watch

Due date: ☐ Jan 22, 2024 at 6:15 PM ▾

**Description** Edit

User Story:  
As a User, I want to create an account so that I can use an application.

Acceptance Criteria:

- a user can log into the application
- a user can create an account
- must be log in and register page
- design has to follow the design specs

Priority:

- deadline - Jan 22

☒ **Task** Hide checked items Delete

67%

☒ Create the requirements

☒ Develop the register and login pages

☐ Test

**Add to card**

- Members
- Labels
- Checklist
- Dates
- Attachment**

**Attachment** Attach from... X

Computer

Trello

Google Drive

Dropbox

Box

OneDrive

**Attach a link**

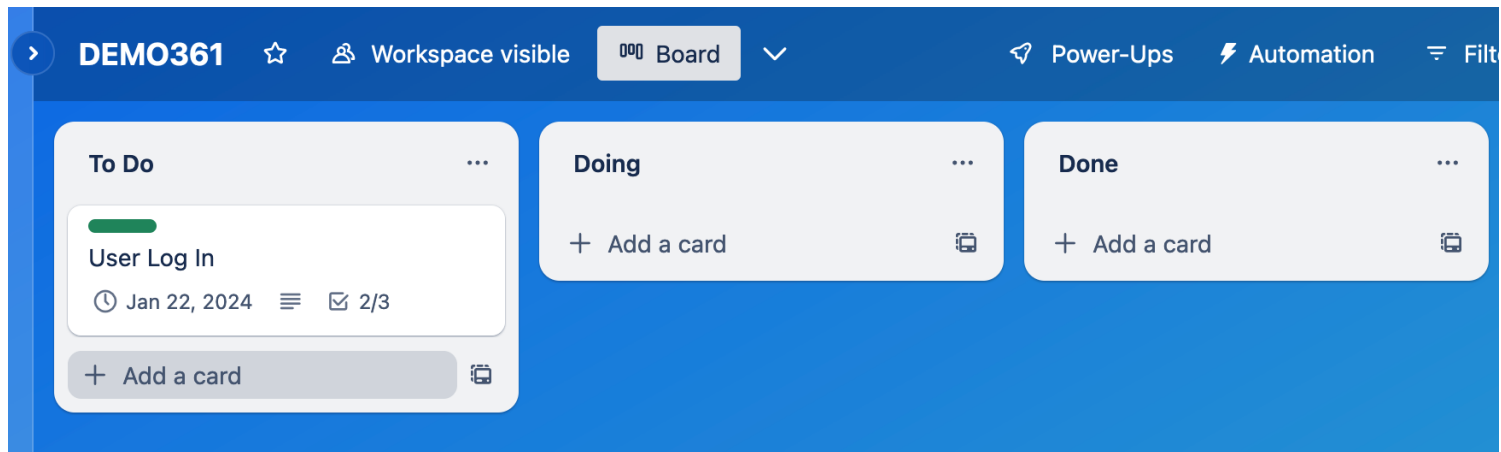
Paste any link here...

Attach

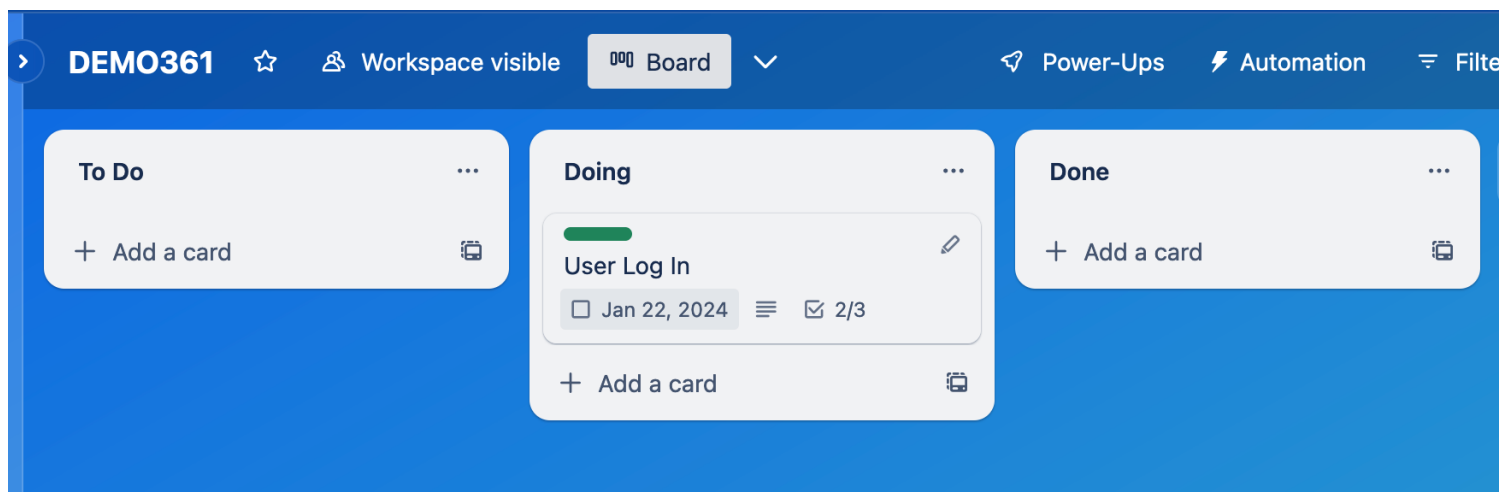
Tip: You can drag and drop files and links onto cards to upload them.

# Creating user story

## 10. Final card



## Moving the card to “Doing”





# Questions ?

