

## Scrum Project Report

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# Software Engineering

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Group - 6

Cyber-Physical Social Systems (CPS2)

Professor Incharge:

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Professor in Computer Science, École des Mines

Group Members:

**Anis NEZHADMALAYERI, Utibeabasi DAN, Sogo AMAGAI,  
Shreyas HARINATH**

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Université Jean Monnet



École des Mines



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30-November-2022

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# Introduction

Scrum is an agile software development process to manage software projects. The Scrum framework is fairly simple being made up of a Scrum Team consisting of a Product Owner, a Scrum Master and Developers, each of which have specific accountabilities.

## ***People on the Scrum Team:***

**Scrum Master** - the person on the Scrum Team who uses their knowledge of Scrum to help the team and organization to be as effective as they can be; they do so by taking approaches like coaching, teaching, facilitating and mentoring

**Product Owner** - the person on the Scrum Team who makes sure that the team is creating the most valuable product they can create

**Developers** - the people on the Scrum Team who work together to create the product

## ***Scrum Events:***

**Sprint** - short cycles of one month or less, during which the work is done; the Sprint contains all of the other Scrum events; a new Sprint starts immediately after the conclusion of the previous Sprint

**Sprint Planning** - event dedicated to planning out the work that will take place during the Sprint

**Daily Scrum** - event held every day where the Developers inspect the progress toward the Sprint Goal, uncover anything that may be getting in their way and adapt accordingly

**Sprint Review** - event held at the end of the Sprint where the Scrum Team and key stakeholders review what was accomplished in the Sprint and what has changed in their environment; next, attendees collaborate on what to do next

**Sprint Retrospective** - the Scrum Team gets together during this event to talk about how the last Sprint went and identify the most helpful changes to improve their effectiveness

### ***Scrum Artifacts:***

**Product Backlog** - an evolving, ordered list of what is needed to improve the product; it is the single source of work undertaken by the Scrum Team

**Sprint Backlog** - a highly visible list of work that is the Developer's plan for the Sprint, which may evolve as they learn

**Increments** - small pieces of work that serve as concrete stepping stones toward the Product Goal. You can deliver as often as needed during the Sprint and are not limited to only one release per Sprint.

# Scrum Team

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Product Owner: **Prof Nardin Gustavo**

Scrum Master: **Shreyas Harinath**

Developers:

- **Sogo AMAGAI**
  - **Utibeabasi DAN**
  - **Anis NEZHADMALAYERI**
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# Scrum Artifacts

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*Product Backlogs*

*Sprint Backlogs*

*Sprint Increments*

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# Product Backlog

Story	Estimation	Priority
Understanding the project & its deliverables	1h	1
Trello Setup	1h	2
Identify Actors	.5h	3
List Functional requirements	.5h	4
List Non-functional requirements	.5h	5
Class diagram	3h	6
Identify Use Cases	3h	7
Component diagram	7h	8
Deployment diagram	4h	9
Scrum project report	5h	10
Communication diagram	2h	11
State diagram	1h	12
Activity diagram	1.5h	13
Sequence diagram	1.5h	14
User stories	2h	15
Condition information diagram	1.5h	16
<b>Total</b>	<b>35 hours</b>	

# Sprint Artifacts

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## Sprint-1 Backlogs:

- Project outlook discussion
- Understanding the project problem statement
- Trello setup
- Check project deliverables

## Sprint-1 Increments:

- Deep understanding of the project
- Brainstorming solutions
- Revise Scrum methodology

*Sprint date:* 31-October-2022

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## Sprint-2 Backlogs:

- Time estimation for Product Backlog
- Setting priority for Product Backlog
- Task assignment: Team members pick their tasks
- Brainstorm requirement specifications
- Identify actors

## **Sprint-2 Increments:**

- Time estimation and priority are set for Product Backlog
- Backlog items have been assigned to team members
- Actors have been identified
- Revise Scrum methodology
- Discuss requirement specifications

***Sprint date:** 04-November-2022*

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## **Sprint-3 Backlogs:**

- Finalize functional & non-functional requirements
- Class diagram's initial version is drawn
- Listed out use cases
- Decided our UML diagrams

## **Sprint-3 Increments:**

- completed functional & non-functional requirements
- work on class diagram has begun
- a few use cases are listed
- discussed UML diagrams to be implemented

***Sprint date:** 09-November-2022*

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## **Sprint-4 Backlogs:**

- Scrum project report
- improve class diagram
- Design component diagram
- clarity on communication protocols
- Discuss deployment diagram

## **Sprint-4 Increments:**

- Initiated scrum project report
- improved class diagram
- clarity on communication protocols
- Brainstormed information about deployment and component diagrams

***Sprint date:*** 14-November-2022

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## **Sprint-5 Backlogs:**

- Present first version of the scrum project report
- Present first version of component diagram
- Present first version of deployment diagram
- Discuss activity and state diagrams

## **Sprint-5 Increments:**

- Reviewed first version of scrum project report, component + deployment diagrams
- compile information about state and activity diagrams

***Sprint date:*** 18-November-2022

## **Sprint-6 Backlogs:**

- Finalize class diagram
- Review & improve component diagram
- Review & improve deployment diagram
- clarity on communication protocols
- Discuss sequence diagram

## **Sprint-6 Increments:**

- Initiated scrum project report
- finalized class diagram
- clarity on communication protocols
- updated deployment and component diagrams
- Discussed sequence diagram

***Sprint date:*** 23-November-2022

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## **Sprint-7 Backlogs:**

- Final version of Scrum project report
- Finalize deployment diagram
- Finalize component diagram
- Review sprint review reports
- Check final project deliverables for submission

## Sprint-7 Increments:

- finalized scrum project report - ready for submission
- finalized deployment diagram and component diagram - ready for submission
- Reviewed sprint review reports
- Submission folder is complied & ready for submission

*Sprint date:* 30-November-2022

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## Task's Distribution & Completion

Features from Product Backlog:	Assigned to:	Completed by:
Understanding the project & its deliverables	Team	Team
Trello Setup	Shreyas	Shreyas
Identify Actors	Team	Team
List Functional requirements	Shreyas	Sogo
List Non-functional requirements	Shreyas	Sogo
Class diagram	Sogo	Sogo
Identify Use Cases	Sogo, Shreyas, Dan	Dan, Sogo, Shreyas
Component diagram	Anis	Anis
Deployment diagram	Dan	Dan
Scrum project report	Shreyas	Shreyas

# Sprint Timeline

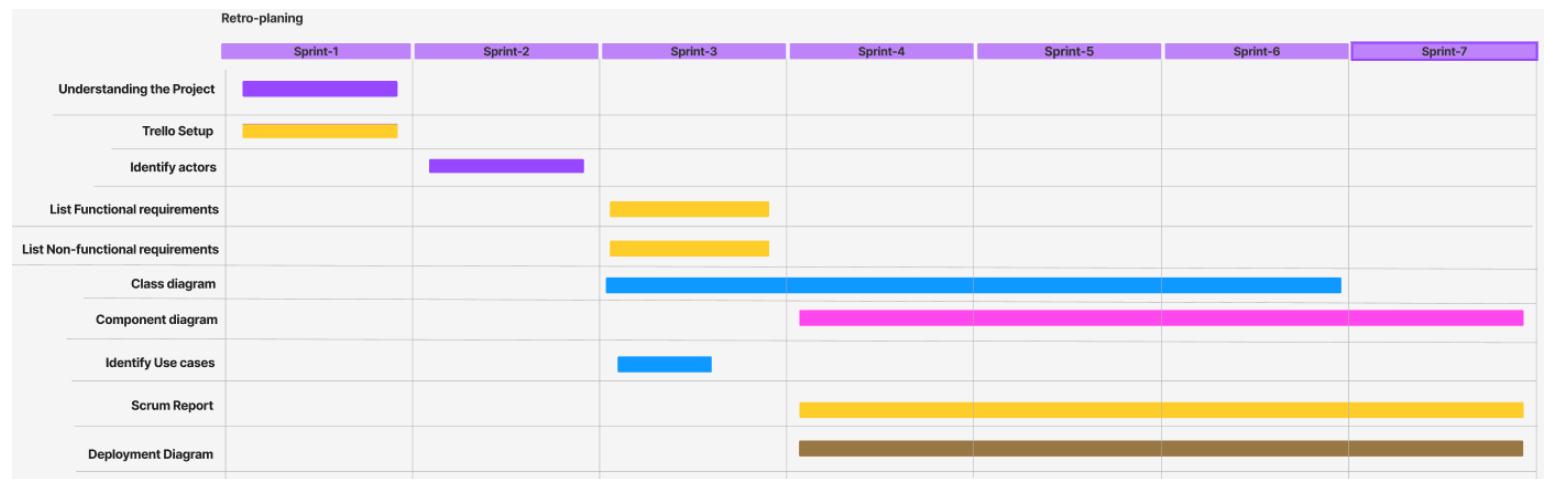


Figure: Sprint Timeline

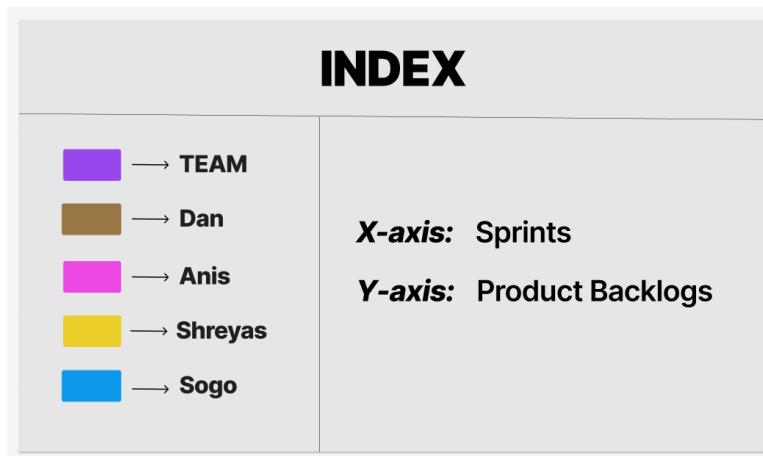


Figure: Index for Sprint Timeline

# Sprint Review Reports

## Sprint-1 Review Report:

### ACTIVITIES COMPLETED DURING THIS SPRINT

- Project outlook discussion
- Understanding the project problem statement
- Trello setup
- Check project deliverables

### SPRINT NUMBER

1

### PROJECT NAME, TASKS OR ACHIEVEMENTS

Software Engineering: Case Study  
Group-6

### ANY OBSTACLES?

NO

### ACTIVITIES TO BE STARTED IN NEXT SPRINT

Begin working on:

- Requirement engineering
- Unified Modeling Language (UML) diagrams

### SUMMARY

- Deep understanding of the project
- Brainstorming solutions
- Revise Scrum methodology

### NOTES

Trello has to setup for Scrum task board & Sprint retrospectives

### SPRINT DATE

OCT 31, 2022

## Sprint-2 Review Report:

### ACTIVITIES COMPLETED DURING THIS SPRINT

- Time estimation for Product Backlog
- Setting priority for Product Backlog
- Task assignment: Team members pick their tasks
- Brainstorm requirement specifications
- Identify actors

### SPRINT NUMBER

2

### PROJECT NAME, TASKS OR ACHIEVEMENTS

Software Engineering: Case Study  
Group-6

### ANY OBSTACLES?

NO

### ACTIVITIES TO BE STARTED IN NEXT SPRINT

- Analise functional & non-functional requirements
- Begin class diagram
- Discuss use cases

### SUMMARY

- Time estimation and priority are set for Product Backlog
- Backlog items have been assigned to team members
- Actors have been identified
- Revise Scrum methodology
- Discuss requirement specifications

### NOTES

More clarity on what specific types of UML to be used

### SPRINT DATE

NOV 4, 2022

## Sprint-3 Review Report:

### ACTIVITIES COMPLETED DURING THIS SPRINT

- Finalized functional & non-functional requirements
- Class diagram's initial version is drawn
- Listed out use cases
- Decided our UML diagrams

### SPRINT NUMBER

3

### PROJECT NAME, TASKS OR ACHIEVEMENTS

Software Engineering: Case Study

Group-6

### ANY OBSTACLES?

YES

### ACTIVITIES TO BE STARTED IN NEXT SPRINT

- Review use cases
- Review class diagram
- Discuss communication protocols for the system

### SUMMARY

- completed functional & non-functional requirements
- work on class diagram has begun
- a few use cases are listed
- discussed UML diagrams to be implemented

### NOTES

#### *Obstacles/Issues:*

- Understanding & finalizing functional & non-functional requirements
- Got to add more details to class diagram
- Listing our use cases

### SPRINT DATE

NOV 9, 2022

## Sprint-4 Review Report:

### ACTIVITIES COMPLETED DURING THIS SPRINT

- Scrum project report
- improve class diagram
- Design component diagram
- clarity on communication protocols
- Discuss deployment diagram

### SPRINT NUMBER

4

### PROJECT NAME, TASKS OR ACHIEVEMENTS

Software Engineering: Case Study

GROUP-6

### ANY OBSTACLES?

YES

### SUMMARY

- Initiated scrum project report
- improved class diagram
- clarity on communication protocols
- Brainstormed information about deployment and component diagrams

### NOTES

#### *Obstacles/Issues:*

- *class-diagram:* associate each class with others
- *class-diagram:* determine which methods and properties belong to a class

### SPRINT DATE

NOV 14, 2022

## Sprint-5 Review Report:

### ACTIVITIES COMPLETED DURING THIS SPRINT

- Present first version of the scrum project report
- Present first version of component diagram
- Present first version of deployment diagram
- Discuss activity and state diagrams

### SPRINT NUMBER

5

### PROJECT NAME, TASKS OR ACHIEVEMENTS

Software Engineering: Case Study

GROUP-6

### ANY OBSTACLES?

YES

### SUMMARY

- Reviewed first version of scrum project report
- Reviewed first version of component diagrams
- Reviewed first version of deployment diagrams
- compile information about state and activity diagrams

### NOTES

#### *Obstacles/Issues:*

- choose the component and subsystems
- describe the relationship between components
- choose the kind of relationship between components
- decide on which component can be in a subsystem

### SPRINT DATE

NOV 18, 2022

## Sprint-6 Review Report:

### ACTIVITIES COMPLETED DURING THIS SPRINT

- Finalize class diagram
- Review & improve component diagram
- Review & improve deployment diagram
- clarity on communication protocols
- Discuss sequence diagram

### SPRINT NUMBER

6

### PROJECT NAME, TASKS OR ACHIEVEMENTS

Software Engineering: Case Study

GROUP-6

### ANY OBSTACLES?

YES

### SUMMARY

- Initiated scrum project report
- finalized class diagram
- clarity on communication protocols
- updated deployment and component diagrams
- Discussed sequence diagram

### NOTES

#### *Obstacles/Issues:*

- connecting software & hardware entities for deployment diagram
- Less time for sequence diagram
- Less time for communication protocols

### SPRINT DATE

NOV 23, 2022

## Sprint-7 Review Report:

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### ACTIVITIES COMPLETED DURING THIS SPRINT

- Final version of Scrum project report
- Finalize deployment diagram
- Finalize component diagram
- Review sprint review reports
- Check final project deliverables for submission

### SPRINT NUMBER

7

### PROJECT NAME, TASKS OR ACHIEVEMENTS

Software Engineering: Case Study

GROUP-6

### ANY OBSTACLES?

YES

### ACTIVITIES TO BE STARTED IN NEXT SPRINT

This is the **Last Sprint** before submission!

### SUMMARY

- finalized scrum project report - ready for submission
- finalized deployment diagram and component diagram - ready for submission
- Reviewed sprint review reports
- Submission folder is complied & ready for submission

### NOTES

#### *Obstacles/Issues:*

- Could not implement all the discussed UML diagrams

### SPRINT DATE

NOV 30, 2022

# End of Scrum Report

## Completed Product Backlog at the end of SCRUM [≈26h]

Feature/Story	Priority
Understanding the project & its deliverables	1
Trello Setup	2
Identify Actors	3
List Functional requirements	4
List Non-functional requirements	5
Class diagram	6
Identify Use Cases	7
Component diagram	8
Deployment diagram	9
Scrum project report	10

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## Pending/Incomplete/Unaccomplished Product Backlog at the end of SCRUM [≈10h]

Feature/Story	Priority
Communication diagram	11
State diagram	12
Activity diagram	13
Sequence diagram	14
User stories	15
Condition information diagram	16

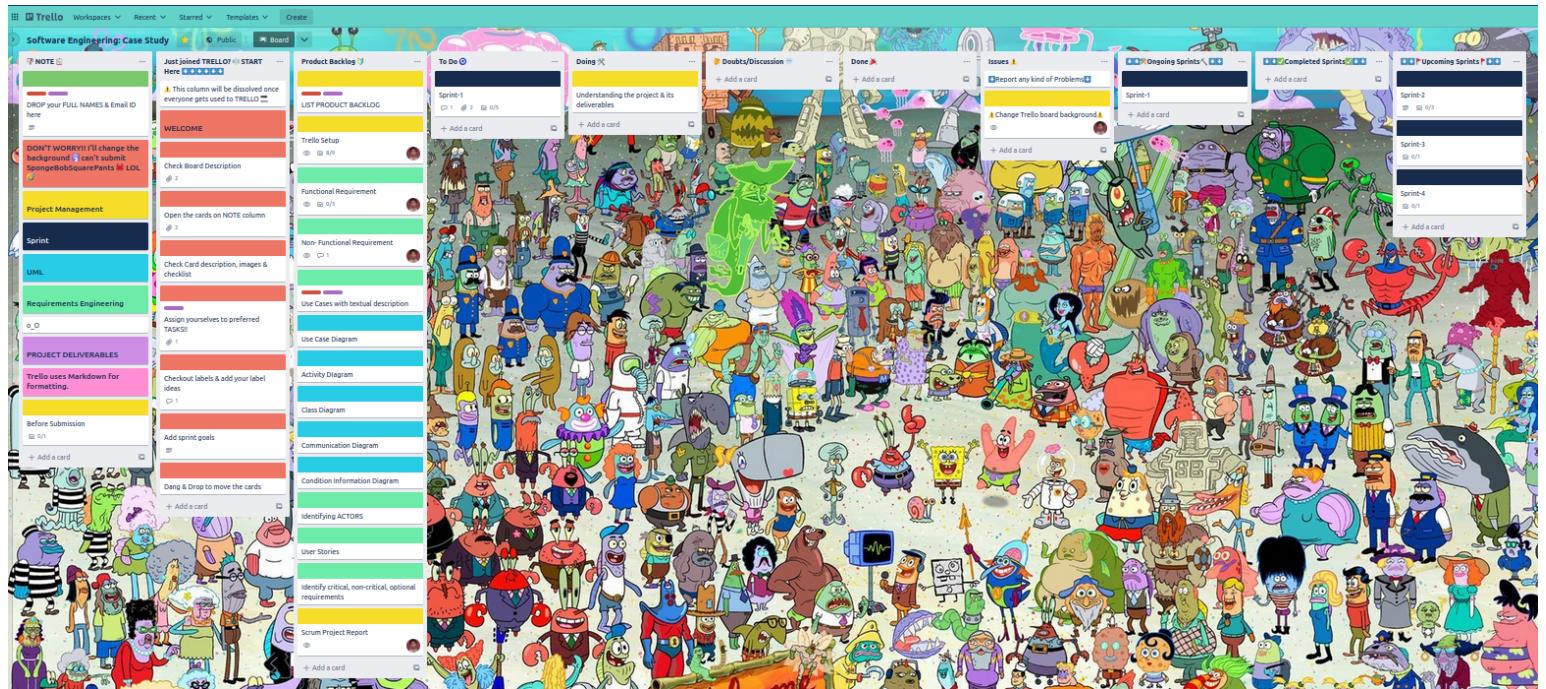
# Scrum Exceptions

Although most of the scrum accountabilities, events and artifacts were attained with deliverables, this scrum project has a **few exceptions**:

- The *Product Owner* [Prof Nardin] has *not been included* in most of the sprints as the team worked from home for the major part of this project
- Only the most important Product Backlogs listed have been achieved, these being the mandatory deliverables for the project. The other unachieved product backlogs are moved to pending/incomplete tasks. These pending/incomplete/unaccomplished tasks had low priorities
- Sprint Retrospective reports have been *omitted* in this report while the *sprint retrospective* was *achieved* on a second *Trello* board in the same workspace
- Product Backlog history has been updated only on Trello board for each sprint
- In this report, Sprint Planning Report is the subset of Sprint Review Report
- In this report, Sprint Retrospective Report is the subset of Sprint Review Report
- Trello images attached in this report can be considered as sprint planning reports and sprint retrospective reports

# Trello

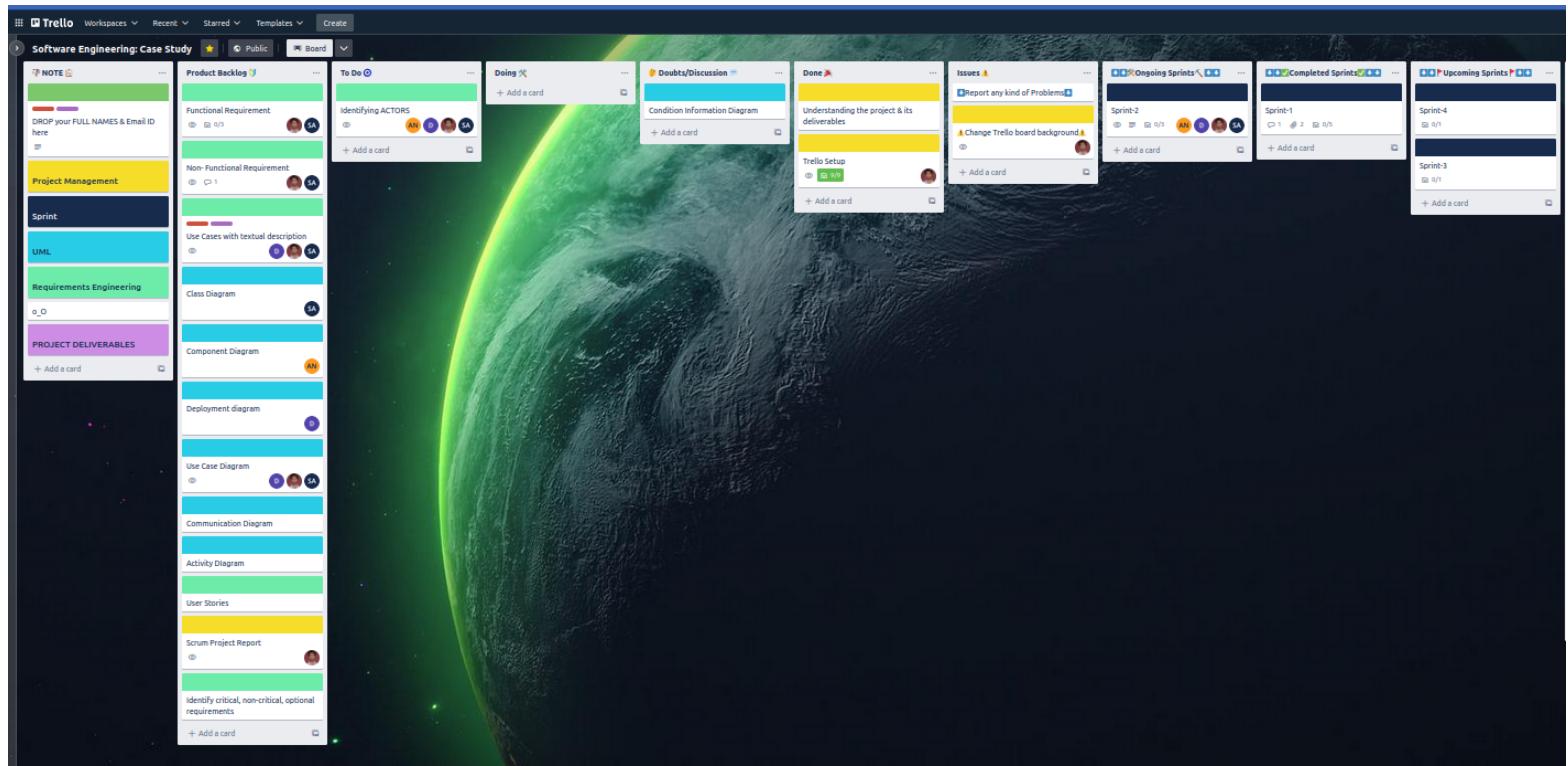
## Initial Trello setup before start of Sprint-1:



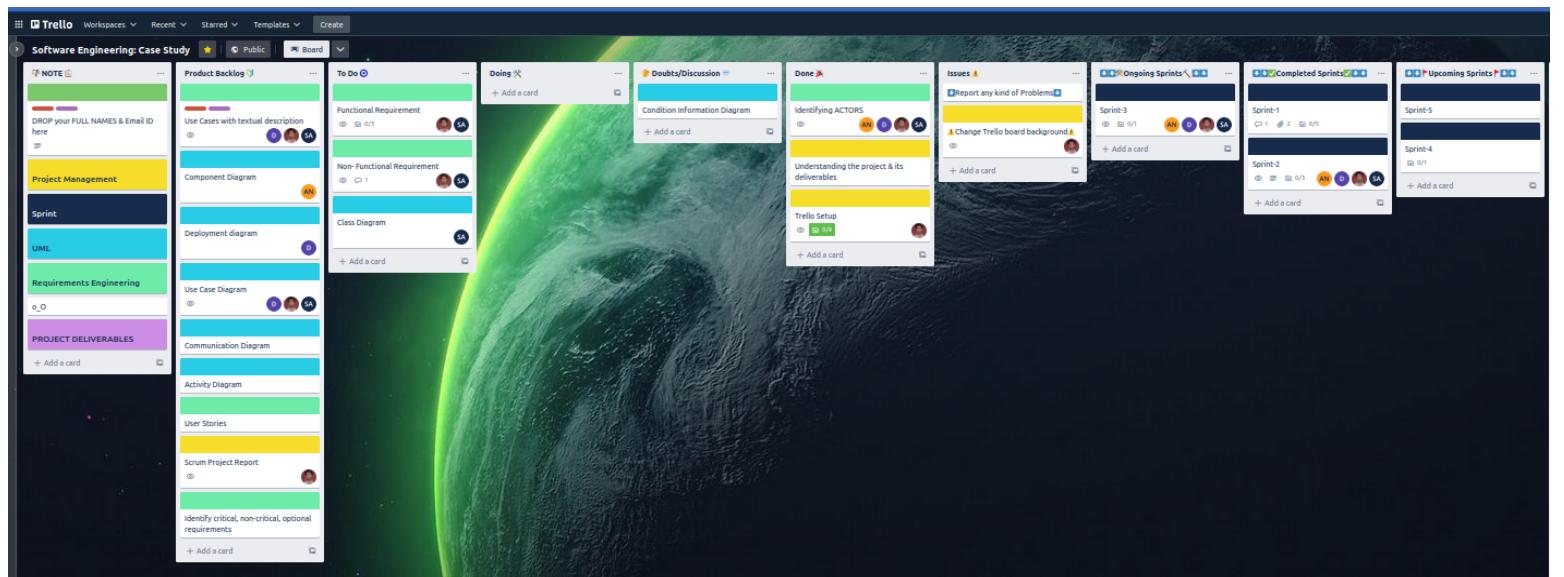
## Post Sprint-1 completion:



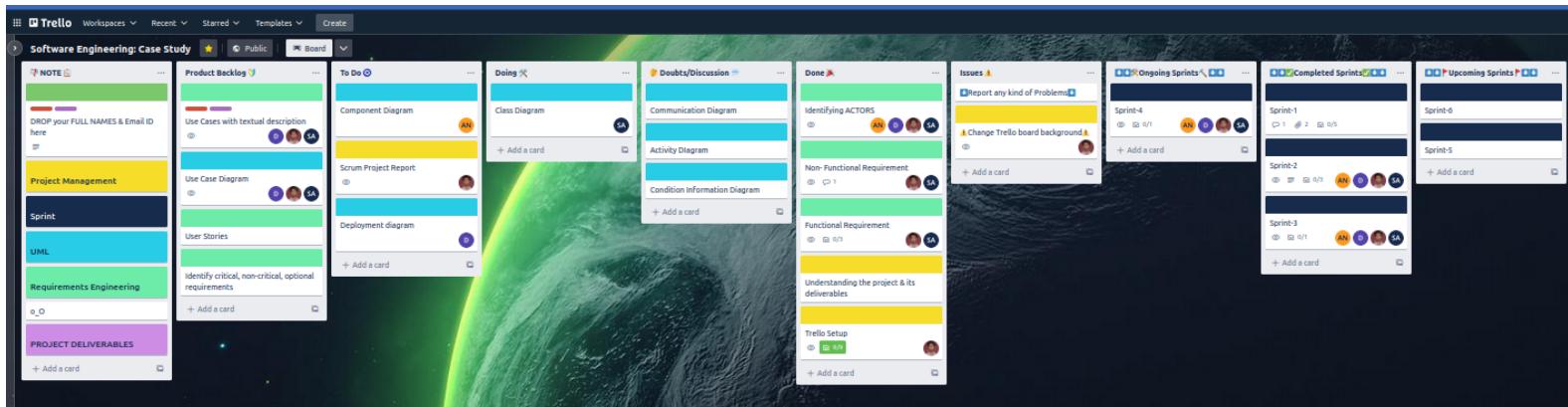
## Sprint-2:



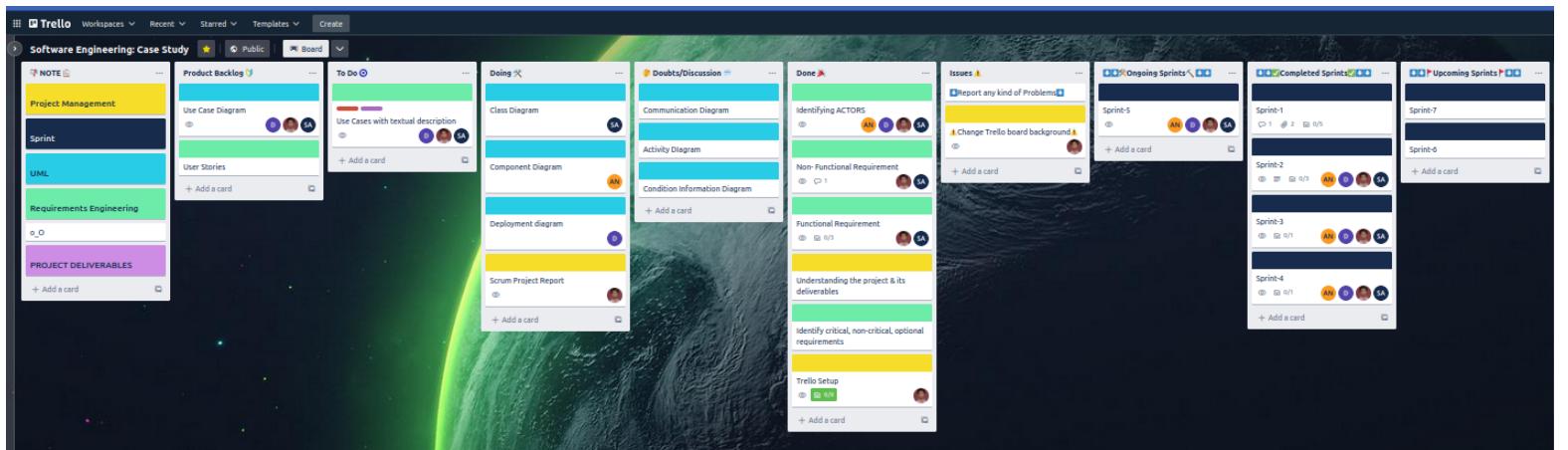
## Sprint-3:



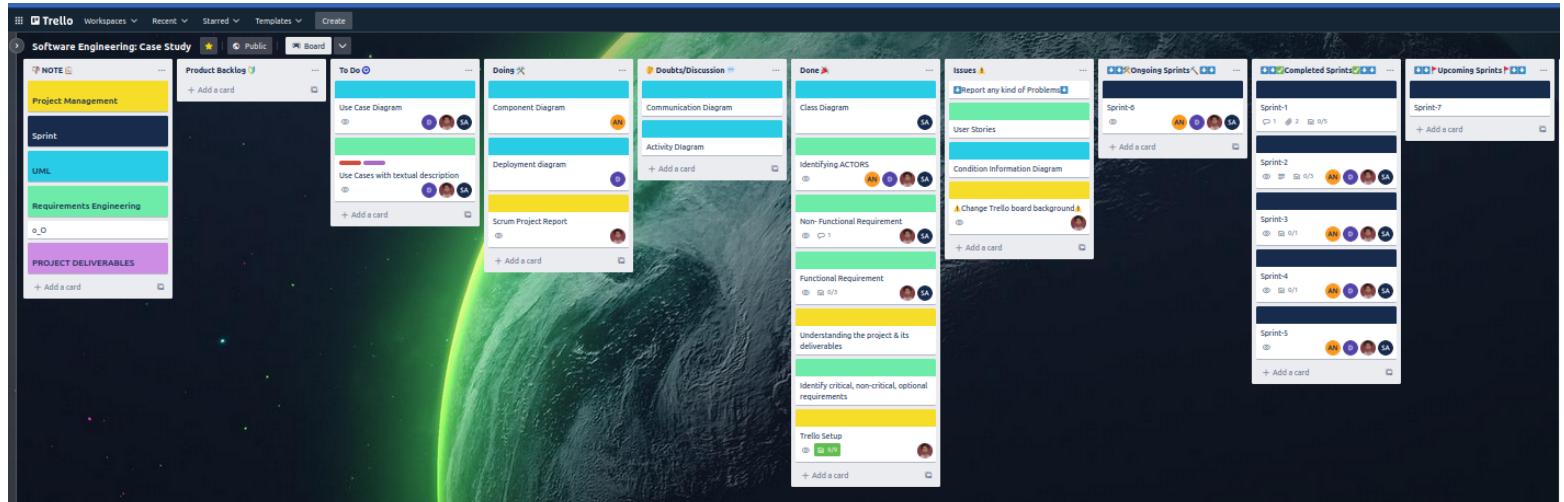
## Sprint-4:



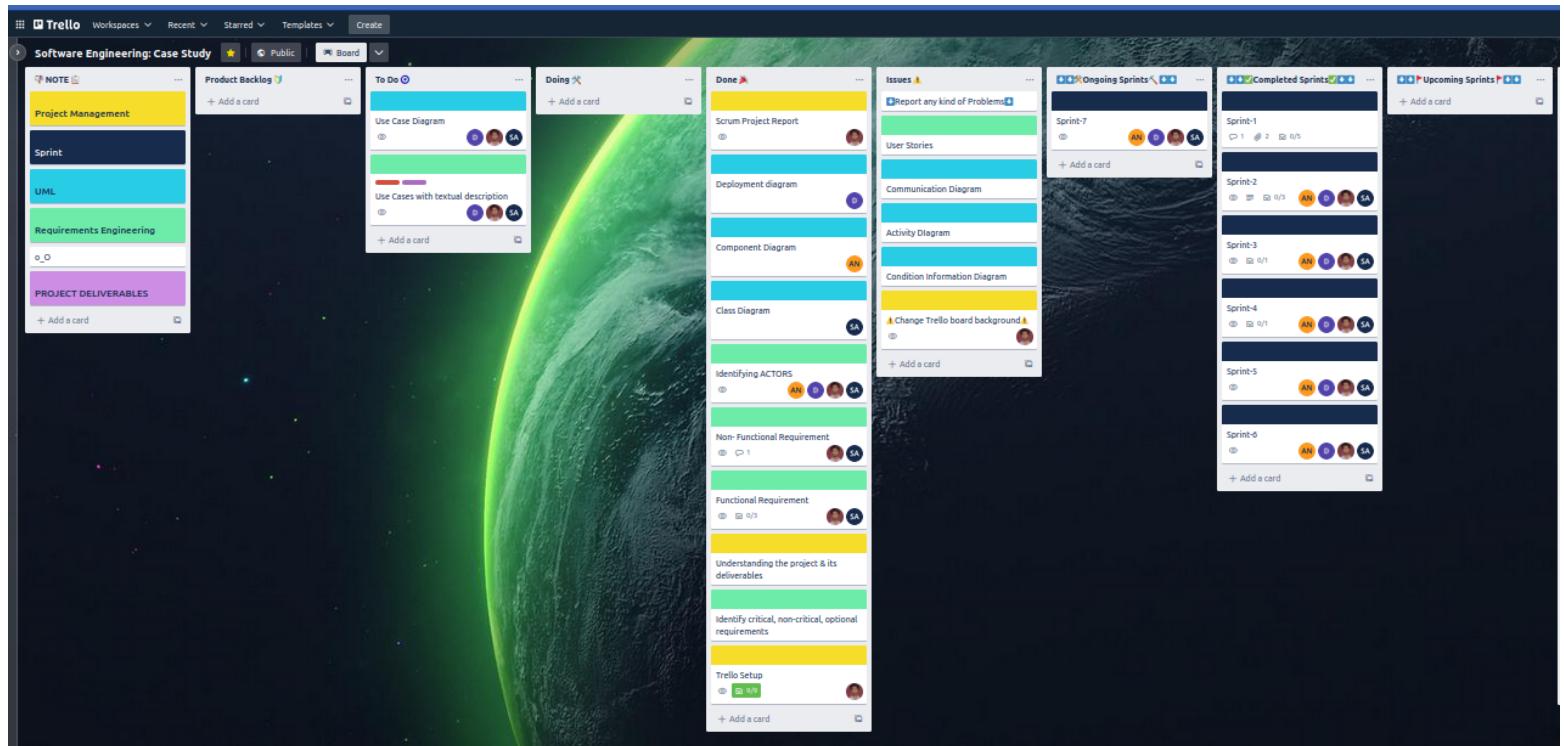
## Sprint-5:



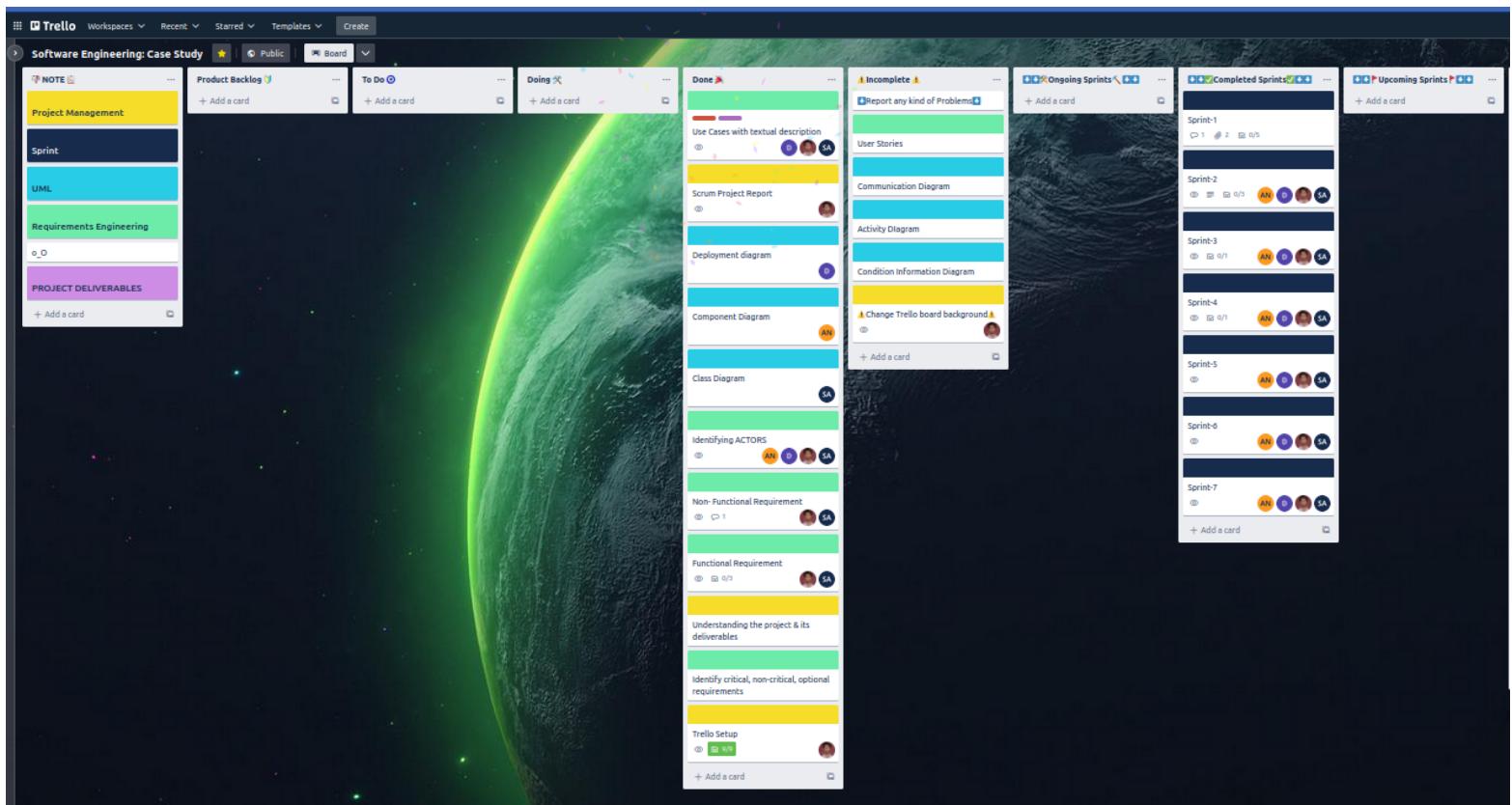
## Sprint-6:



## Sprint-7:



## End of Scrum:



## Sprint Retrospective [Final]:



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**Thank You! :)**

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