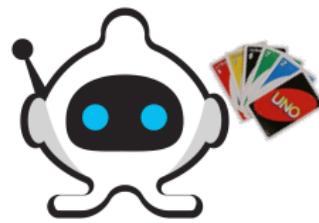


Presented by: Emiliano, Jordan, Ethan, Roberto, Andres,  
Aly, Colin

# Create-Gineers!



# UNOverse



# The Idea



- The app will be a desktop-based digital UNO game that allows players to enjoy a classic card game experience against AI bot opponents
- The goal is to recreate the fun and challenge of UNO into a simple, intuitive digital format that's accessible for everyone
- Users Needs & Motivation
  - Quick and accessible fun
  - Easy setup
  - Fair to play through automated rules

# Scope & Consumer

- Designed for:
  - Children
  - Young adults
  - Grown adults
  - Families
  - Casual gamers
  - Students
- Scope (included)
  - Implement an UNO game with turns, card effects, and automatic rule enforcement
  - Support vs. Bot gameplay
  - Includes core components: Game manager, Rules Engine, Deck Manager, and UI.
  - Handle turn sequence, card drawing, validity checking, and game over detection.



# Activity Diagram

## Single Turn Process Overview

**Purpose:**  
Defines the flow for one player's turn in the card game.

### 1. Player Phase

Check Playable Cards

If none → Request Draw

Add drawn card to hand

If new card playable → proceed

Choose and Play Card

### 2. GameManager Phase

If Action Card → HandleActionCard()

Possible effects: Skip Turn, Reverse, Draw Two, Choose Color

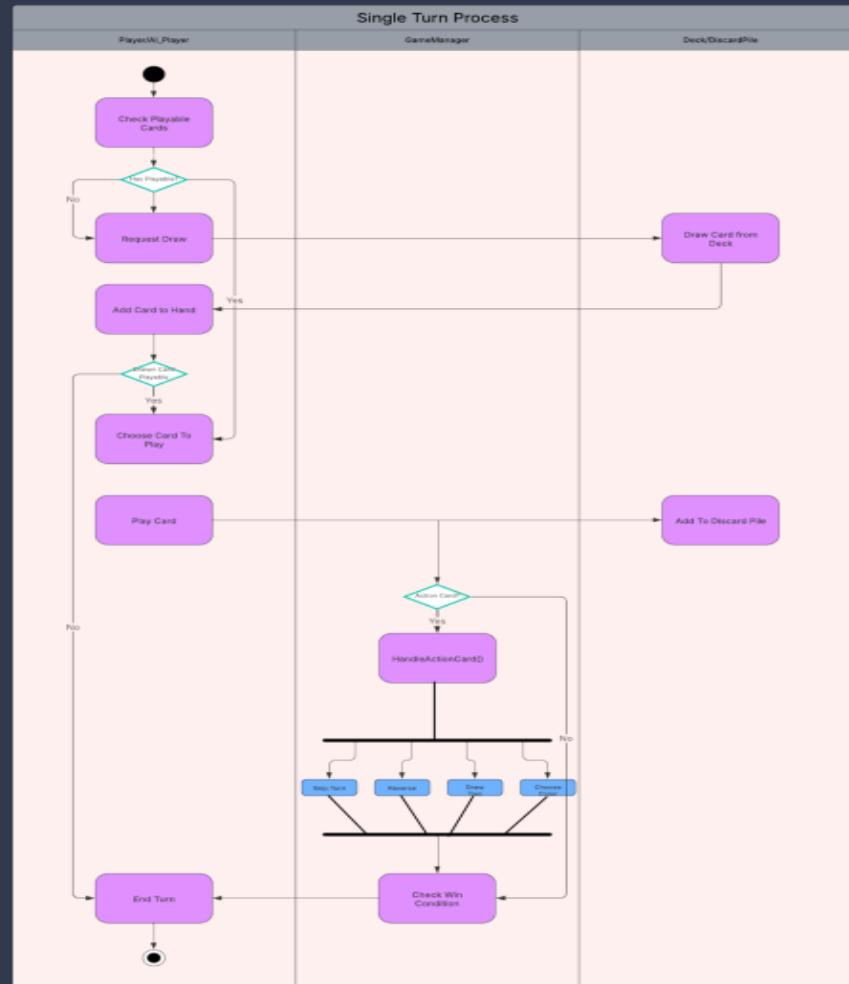
Check Win Condition

### 3. Deck/DiscardPile Phase

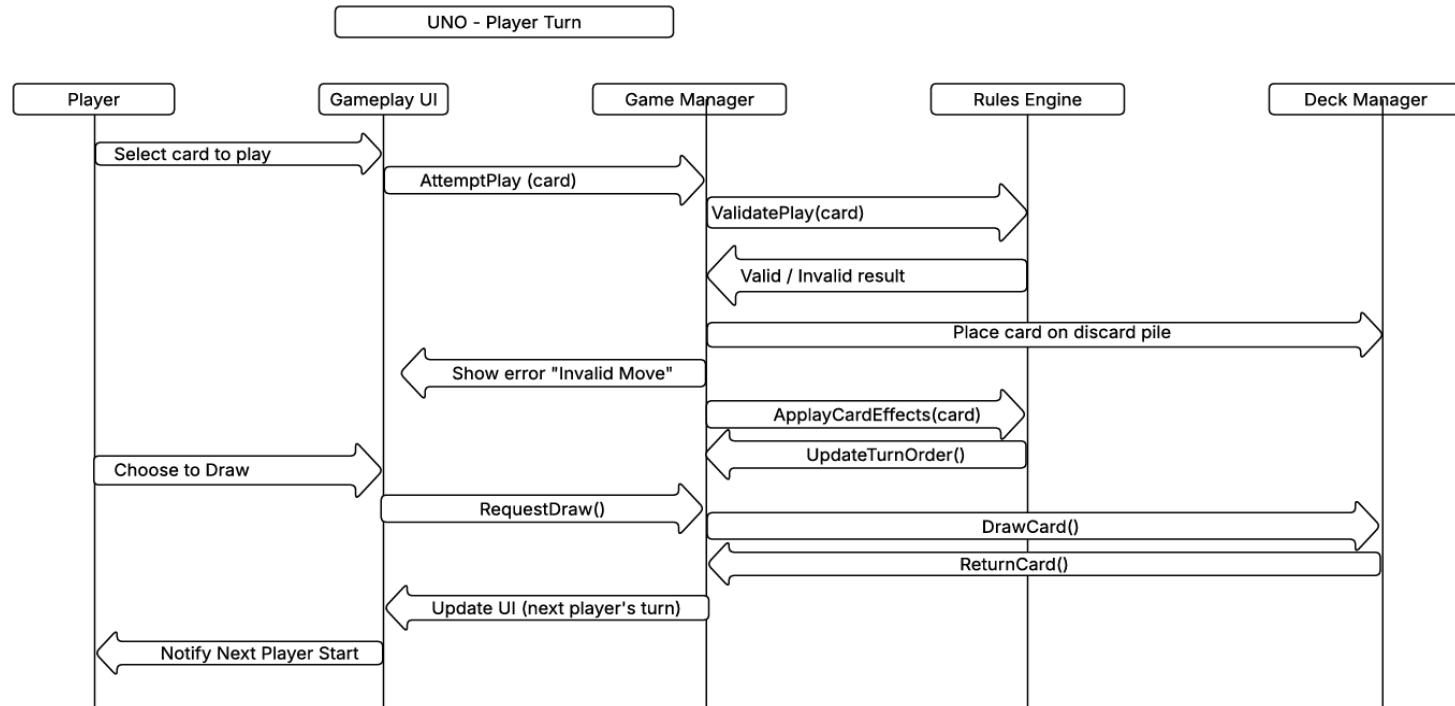
Draw Card from Deck

Add Played Card to Discard Pile

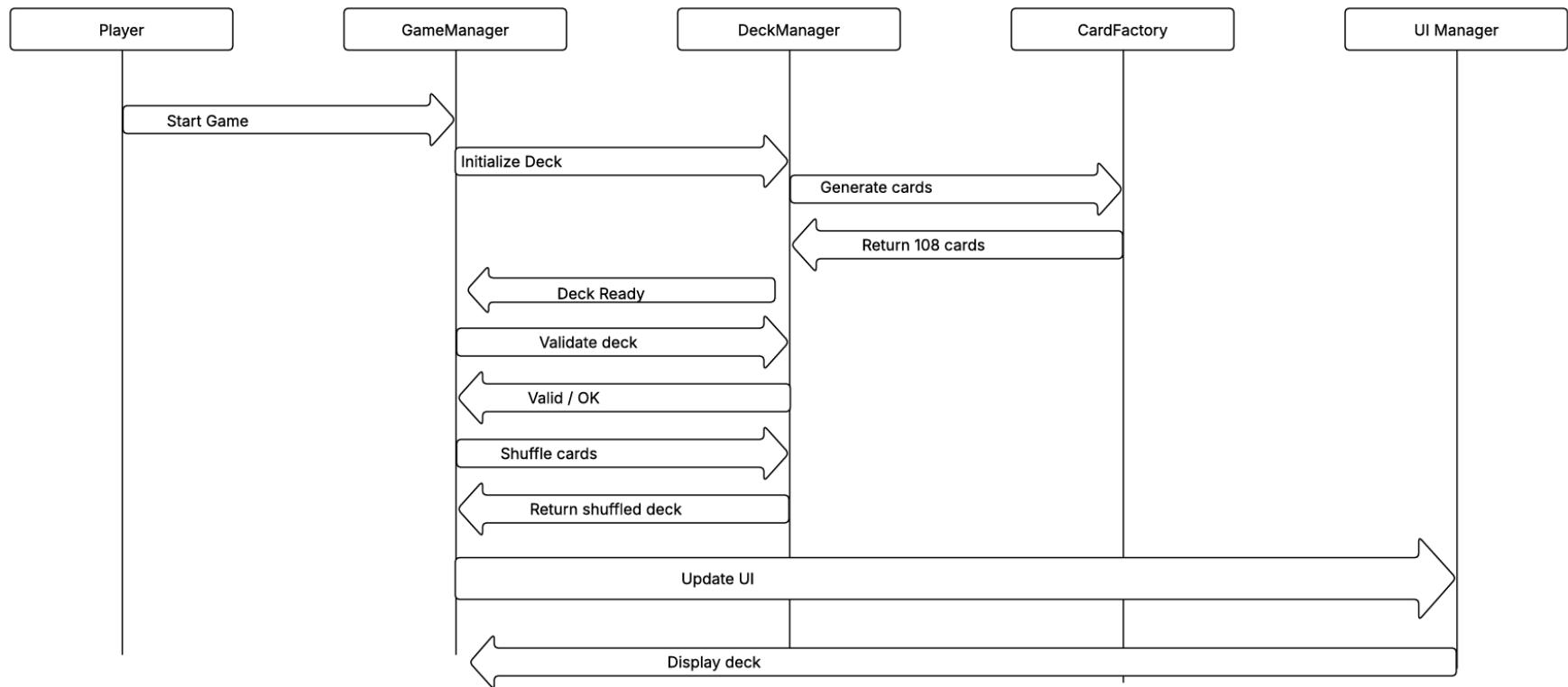
End Turn → Next Player



# Sequence Diagram 1: Player Turn



# Sequence Diagram 2: Deck Initialization



# Use-Case

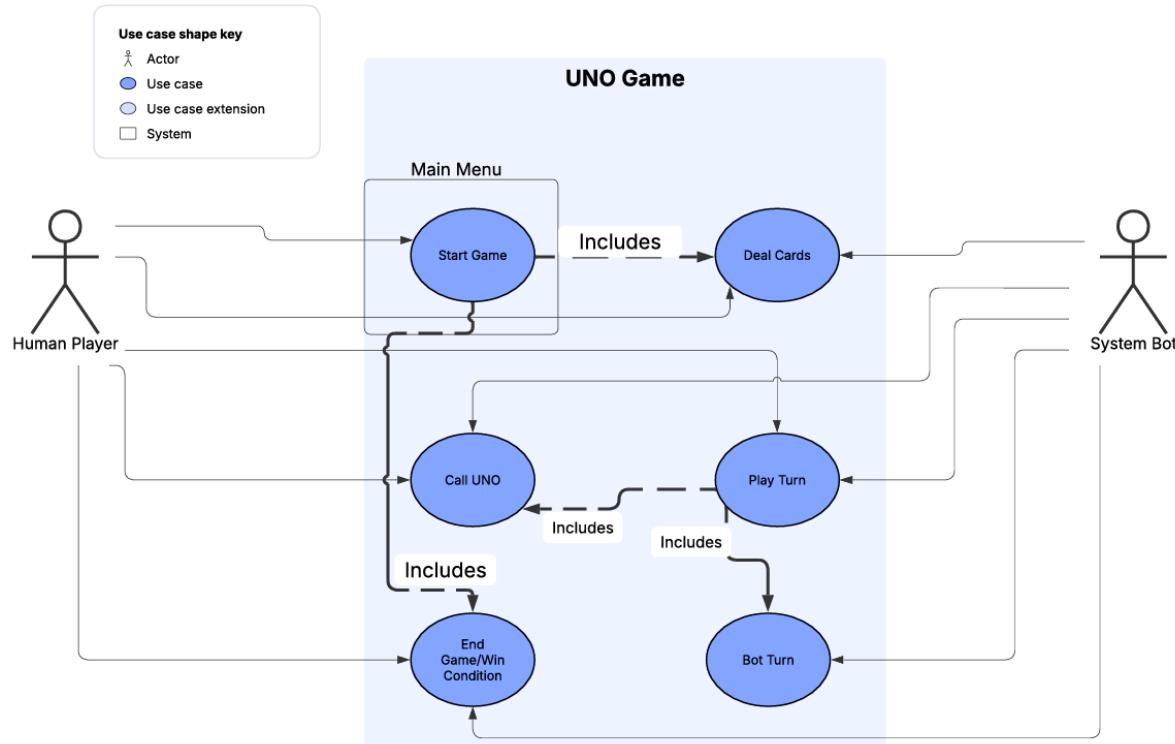
Here we show how different actors interact with the program

Human Player directly interacts with

- Starting the game
- Calling Uno
- Dealing Cards
- Ending/Winning the game
- Taking their turn

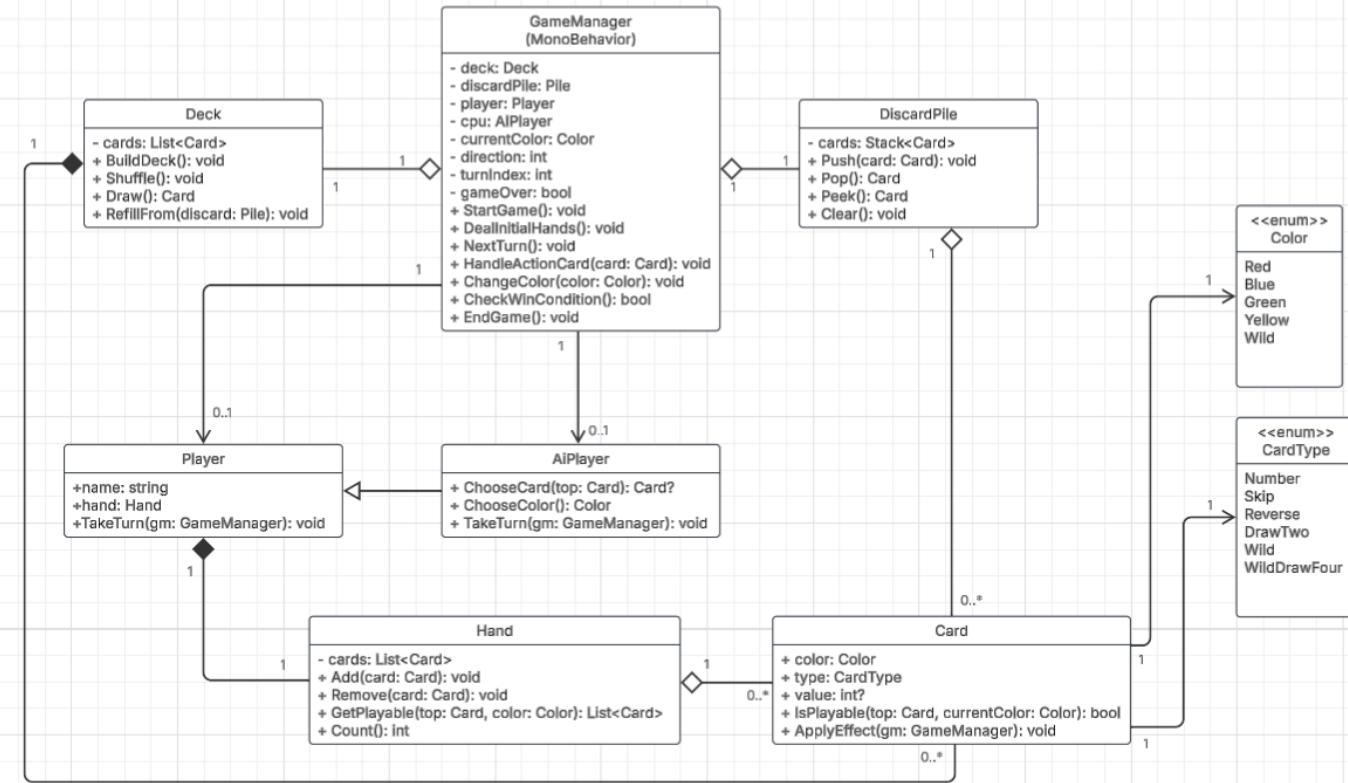
System Bot directly interacts with

- Calling Uno
- Dealing Cards
- Ending/Winning the game
- Taking their turn
- Automatically determines card to play



# Class

- Shows the structure of our UNO game and how classes connect
- GameManager controls game flow, turns, and win conditions
- Player (human) and Bot handle card actions and decision.
- Card defines color, number, and type
- Deck manages drawing and shuffling cards
- DiscardPile collects played cards
- Clear relationships = easier coding, testing, and debugging



# SCRUM Artifacts

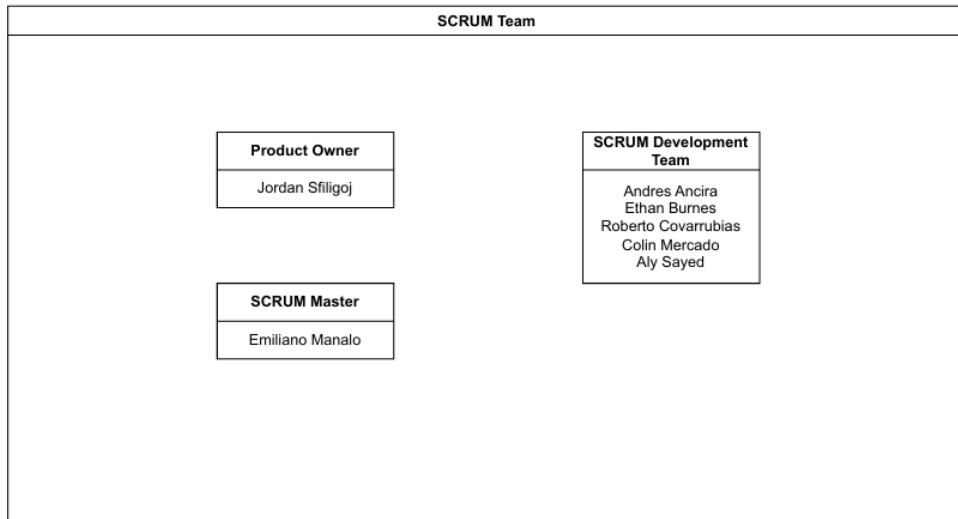


Figure 1: SCRUM Team Formation



# SCRUM Artifacts

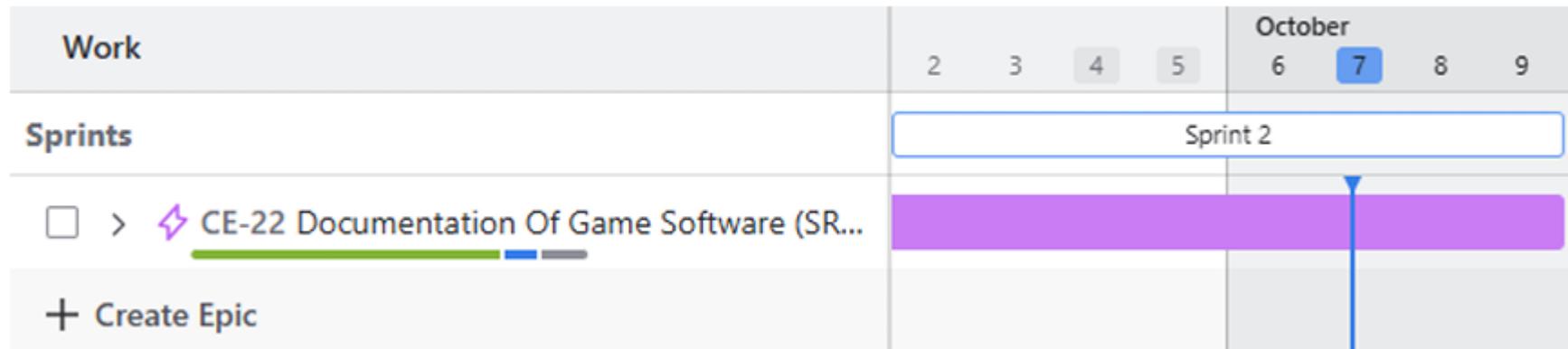
The screenshot shows a Jira interface with the following details:

- Project:** Create-Engineers
- View:** Backlog
- Items:** 21 work items listed in the backlog.
- Activity Diagram:** The first item, CE-52, is selected and expanded, showing its details. It is labeled "Activity Diagram".
- Details:** The right panel displays detailed information for the selected item:
  - Activity Diagram:** Description: "DOCUMENTATION OF ... TO DO..."
  - Confluence content:** "Product requirements" (with a "TRY TEMPLATE" button).
  - Details:** Fields include: Assignee (Unassigned), Labels (Add labels), Parent (CE-22 Documentation Of Game Software), Due date (Add due date), Team (Add team), Start date (Add date), and Sprint.

Index	Item ID	Description	Status
1	CE-52	Activity Diagram	TO DO
2	CE-51	Sequence Diagram Completed	TO DO
3	CE-50	Class Diagram Completed	TO DO
4	CE-49	Use Case Diagram Completed	TO DO
5	CE-48	Section 6 Of The SRS Document Completed	TO DO
6	CE-47	Section 5 Of The SRS Document Completed	TO DO
7	CE-2	Menu	TO DO
8	CE-4	Standard UNO Deck	TO DO
9	CE-5	UNO Game Logic	TO DO
10	CE-6	Sequential Bot	TO DO
11	CE-7	Player Name Saving	TO DO
12	CE-8	House-Rules With Menu	TO DO
13	CE-9	Difficulty Modes	TO DO
14	CE-10	Adding More Than One Bot	TO DO
15	CE-11	Bot Names	TO DO
16	CE-12	Local Multiplayer PVP Function	TO DO
17	CE-13	Card Customization	TO DO

Figure 3: Sprint 2 - Product Backlog

# SCRUM Artifacts



# SCRUM Artifacts

The image shows a digital Scrum board with three columns: TO DO, IN PROGRESS, and DONE.

- TO DO:** Contains 3 items.
  - Activity Diagram: Documentation of Game Software... (Status: In Progress, 1 item)
  - Sequence Diagram Completed: Documentation of Game Software... (Status: In Progress, 1 item)
  - Section 6 Of The SRS Document Completed: Documentation of Game Software... (Status: To Do, 1 item)
- IN PROGRESS:** Contains 2 items.
  - Use Case Diagram Completed: Documentation of Game Software... (Status: In Progress, 1 item, assigned to EM)
  - Class Diagram Completed: Documentation of Game Software... (Status: In Progress, 1 item, assigned to CM)
- DONE:** Contains 1 item.
  - Section 5 Of The SRS Document Completed: Documentation of Game Software... (Status: Done, 1 item, assigned to AA)

At the bottom left, there is a "+ Create" button.

# Questions?