# Inception

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#### Background, Client goals and motivation

The clients are the researchers in planning models, and they want to create a visualization tool that is used for helping them or other users with the visualise sequential solutions of AI planning problems specified in the language PDDL. For now the process of the AI planning language PDDL is hard to interpret, and when a problem happens during executing the program, the users have to review the whole code several times to locate where the bug is. This product generates the animation to explain AI planning problems, and it has functions to illustrate the reason and behavior of each PDDL code using the animation steps.

#### Therefore, the client goals:

- 1. Helping the user to visualise the process of the execution of PDDL- like Al planning language, so that the debugging steps are easy to be performed.
- 2. With the animation of the execution steps, the users would have a better understanding of planning problems.
- 3. For non-technical audiences, they would be able to be aware of what is happening without having the knowledge for AI planning algorithms.

#### Requirements

Client has a several requirements which has to be finished which are

- 1. Integration of the plannimation module with a plugin. Because by integrating the plannimation through a plugin the users can install the plannimation through the online pddl editor or through the plugin menu.
- 2. Loading the plannimation module

By loading users are able to access the plannimation module by url or by installing the pddl module.through online pddl editor. So that users should be able to access and use the plannimation module.

- 3. Building the visualization from problem pddl file
- 4. Building the visualization from the solution vfg file.
- 5. Export the animation feature
- 6. Planning visualizer.

### Plan

| No. | Activities   | Time   |  |
|-----|--|--------|--|
|     | Evaluate project scope and risks   | 22 Aug |  |
|     | Develop software development plan  | 23 Aug |  |
|     | Discuss with client about<br>the focus of this project<br>and receive client feedback<br>for the development         |        |  |
|     | Determine what can be accomplished in the sprint and find items from the backlog that can achieve the proposed goals |        |  |
|     |  |        |  |
|     | Sprint 1   | 19 Sep |  |
|     | Sprint 2   |        |  |
| _   |  |        |  |
|     |  |        |  |

## **Development Environment**

| Tools      | Purpose  |  |
|------------|--|--|
| Confluence | Create, collaborate and organize files and documents for the project |  |
| Trello     | Task Management  |  |
| GitHub     | Source code management   |  |
| Slack      | Group communication  |  |
| Node.js    | Project Development  |  |

#### User story

| ID | User   | Story  | Story Point Estimate |
|----|--------|--|----------------------|
| 1  | Client | I want a VSCODE plugging for PDDL integration that can be installed through the PDDL editor. |                      |
|    |        | I want a tool to visualize the AI planning problems in PDDL.                                 |                      |
|    |        | I want to keep the current frontend functions.   |                      |
|    |        | I want to replace the current Unity code with PixiJS.  |                      |

7. users can install the plannimation through the online pddl editor or through the plugin menu.