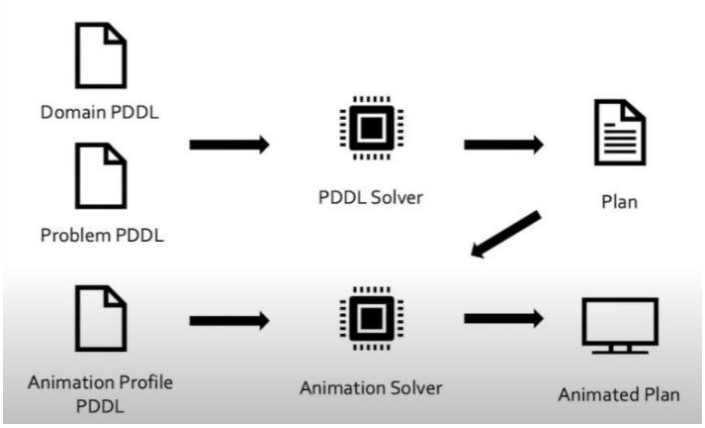
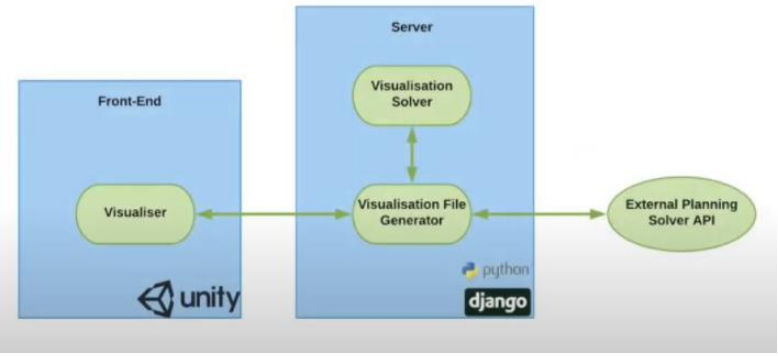
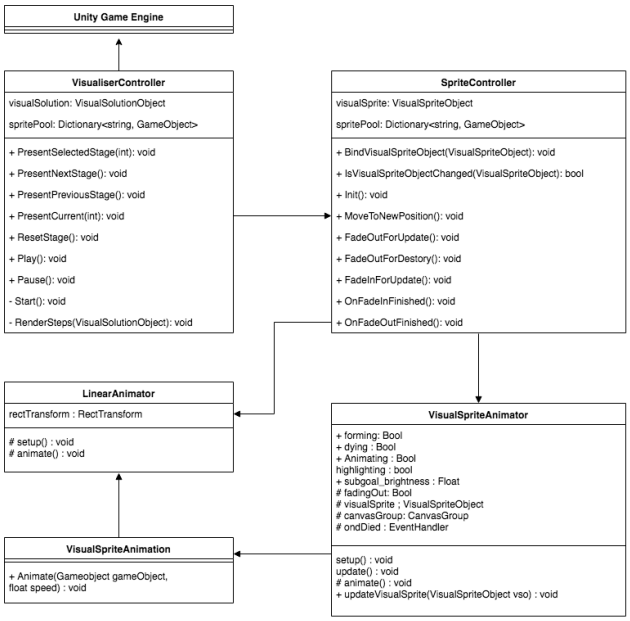
Architecture and Design

Architecture of planimation

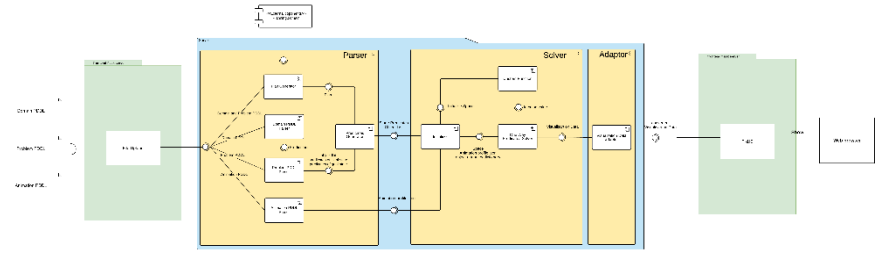




Architecture design for front end



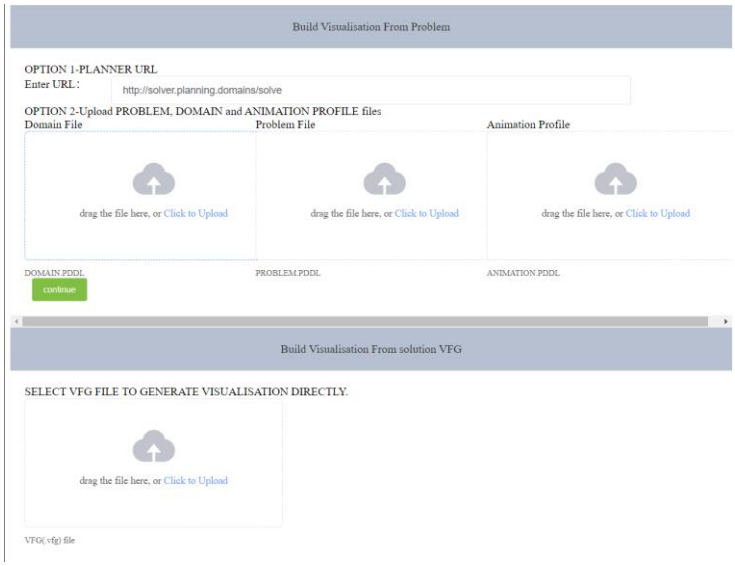
Impementationo Technoloogy



Development Engironment

Frontend

The frontend flask server is developed using HTML and JavaScript. The website links parser, solver, and adaptor. The parser can receive the data for domain PDDL, and problem PDDL, and animation PDDL. After the server receive the required files, the server can generate the stage predicates object list, and use solver to generate visualization data.



By dragging the file to the block or clicking “Click to upload” button, files can be uploaded to the server. Then by clicking continue button, the animation can be loaded.

Backend

For this project, no backend development is needed as the existing platform already developed. The animation can be generated using the output from API.

Support technology

Animation tools

PixiJS is used to generate the animation. PixiJS is fast for generating 2D rendering. PixiJS is open source with a large and supportive community. As it is a powerful technology with simple library, it can help to generate animation very fast.

References to learning resources

Design Notebook

The previous platform used Unity for frontend. However, unity is not fast enough for the visualization. To solve this problem, PixiJS which is a powerful tool that can generate the animation fast on website is used to replace unity.