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Project Overview and Background

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

Vision statement

Client:

The client for this project is Dr Nir Lipovetzky he is a senior professor at the University of Melbourne. He has interests across in AI research

planning and is also involved in the project development of lightweight automated planning tool kits.

Users:

The Users for this project are:

Researcher in planning models

Students learning planning

Industry partners (show solutions)

What does planimation allow the users to do:

1). Planimation allows the users to check the error in their PDDL code.

2). For every problem of a specific domain, planimation creates general animation.

3). Planimation also allows users to also encode new animation.

What are the specific goals of the project?

Help to debugging PDDL

A better understanding of planning problems

Showing solutions to non-technical audiences

The reasons behind replacing unity with Pixjis

Hard to maintain - unity is less known and unity is more complex

Heavy engine to load in a web

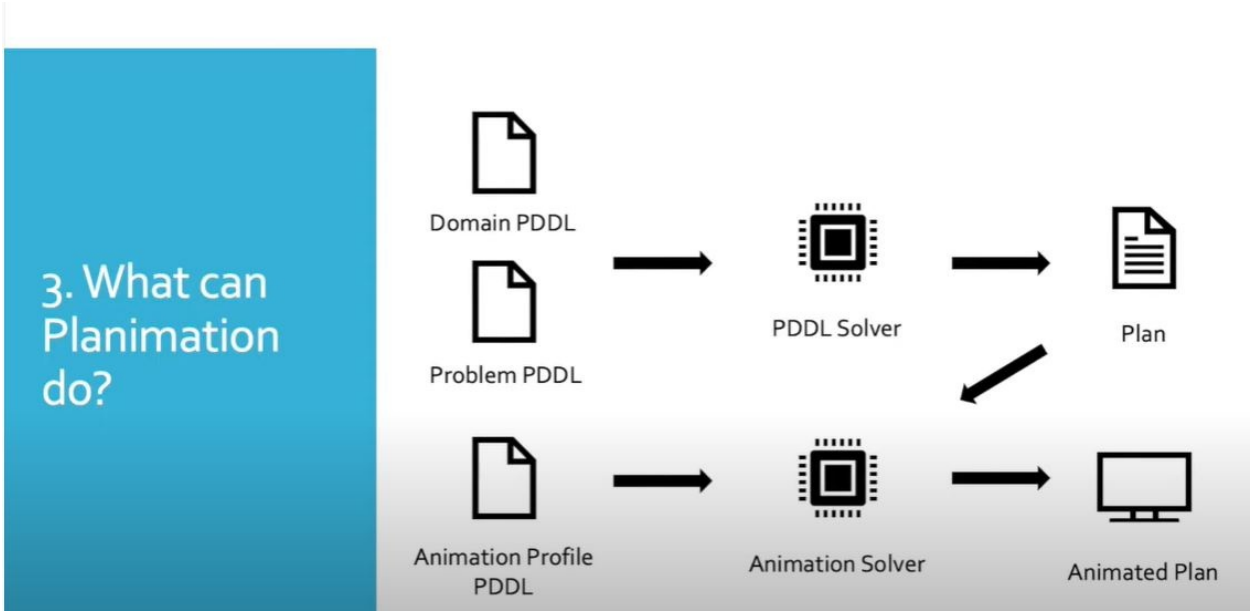


Figure1:overview of planimation

Business value(non financial & financial benefits):

This project is of considerable business value for the client Dr Nir Lipovetzky because as a client wants to maintain its current features and integrate with new development tools and plugins so that client is able to extend the features and maintain the online editor accordingly. The students are able to gain experience working on real-time project and development experience which could be useful for future career opportunities.

Client Requirements on 1st Meeting

Client Requirements:
VSCODE plugging for PDDL integration with the plugging.
Scope keep the functionality of current frontend
Import VFG format (visualization files)
Expecting implement PNG export
Maintain two visualization access (see documentation)
Deployment requirements: Docker containers, able to deploy in local server (to test)

Goal Model:

MOTIVATIONAL MODEL:

WHO	DO	BE	FEEL
Client	Maintain software	Equitable	Challenged
Users	Utilize the software		Good
Team	Redesign the front end	Enriched	Enriching
Supervisor	Review the whole process	Scalable	Engaged
Lecture	Explain the theoretical and practical process	Flexible	Empowered
Future Developing Team	Enhance the design		Interesting

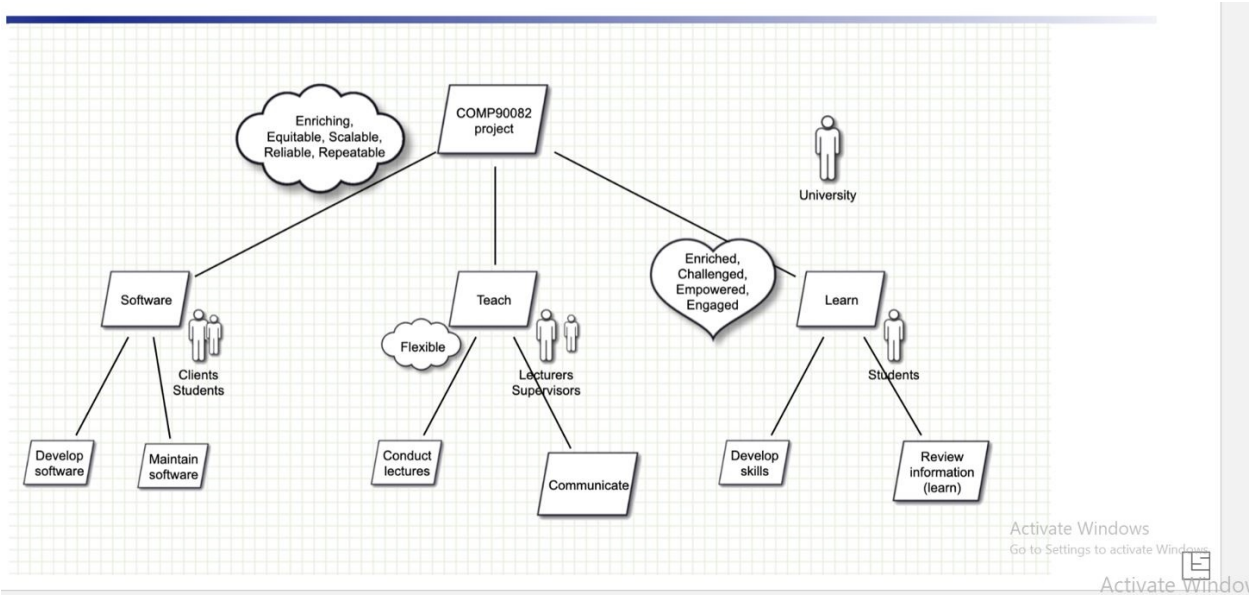


Figure 1: Motivational Model

User Persona:

Industry partner	kelly works in a logistic and travel industry. kelly's main focus is now using artificial intelligence how it can provide assistance to customers to book accommodation and hire vehicles online without any customer service representative. she wants to showcase how ai planning algorithms can solve the issue to her company ceo.	kelly want to show how ai planning algorithm can solve a problem who has no knowledge about any software or tool basically to a non technical audience.	kelly doesn't have any coding skills and she is just learning basic skills of how to use software tools
Researcher	Mike is a researcher and his main focus area is artificial intelligence planning and designing problems and he has	Mike wants to publish his own research paper in Ai problems.	when mike uses pddl editor and solver for planning domain problems and the code he wants to test

	developed a code for animation profile	mike wants to test his code and design using pddl editor and solver	and design it doesn't show any error when implementation is correct even though there are modelling problems
Student	Rose is a bachelor student studying information technology as she wants to develop her AI(artificial intelligence skills) as she has a special interest in persuing masters in machine learning	learn how to use pddl editor develop coding skills which can be useful for her further studies check whether the implementation are correct.	when rose uses pddl editor and solver for planning domain problems it doesn't show any error when implementation is correct even though there are modelling problems

PROJECT: College graduate job seeker persona PERSONA: Kelly

NAME

Kelly

MARKET SIZE

9 %

TYPE

Idealist

Goals

kelly want to show how ai planning algorithm can solve a problem who has no knowledge about any software or tool basically to a non technical audience.

Background

kelly works in a logistic and travel industry. kelly's main focus is now using artificial intelligence how it can provide assistance to customers to book accommodation and hire vehicles online without any customer service representative. she wants to showcase how ai planning algorithms can solve the issue to her company ceo.

Demographic

Male 33 years

Melbourne

Married

Industry partner

Browsers

Technology

Frustation

kelly doesn't have any coding skills and she is just learning basic skills of how to use software tools

Quote

innovation is the ability to see the changes as an opportunity

Skills

visualization skills

0 25 50 75 100

pddl coding

0 25 50 75 100

java

0 25 50 75 100

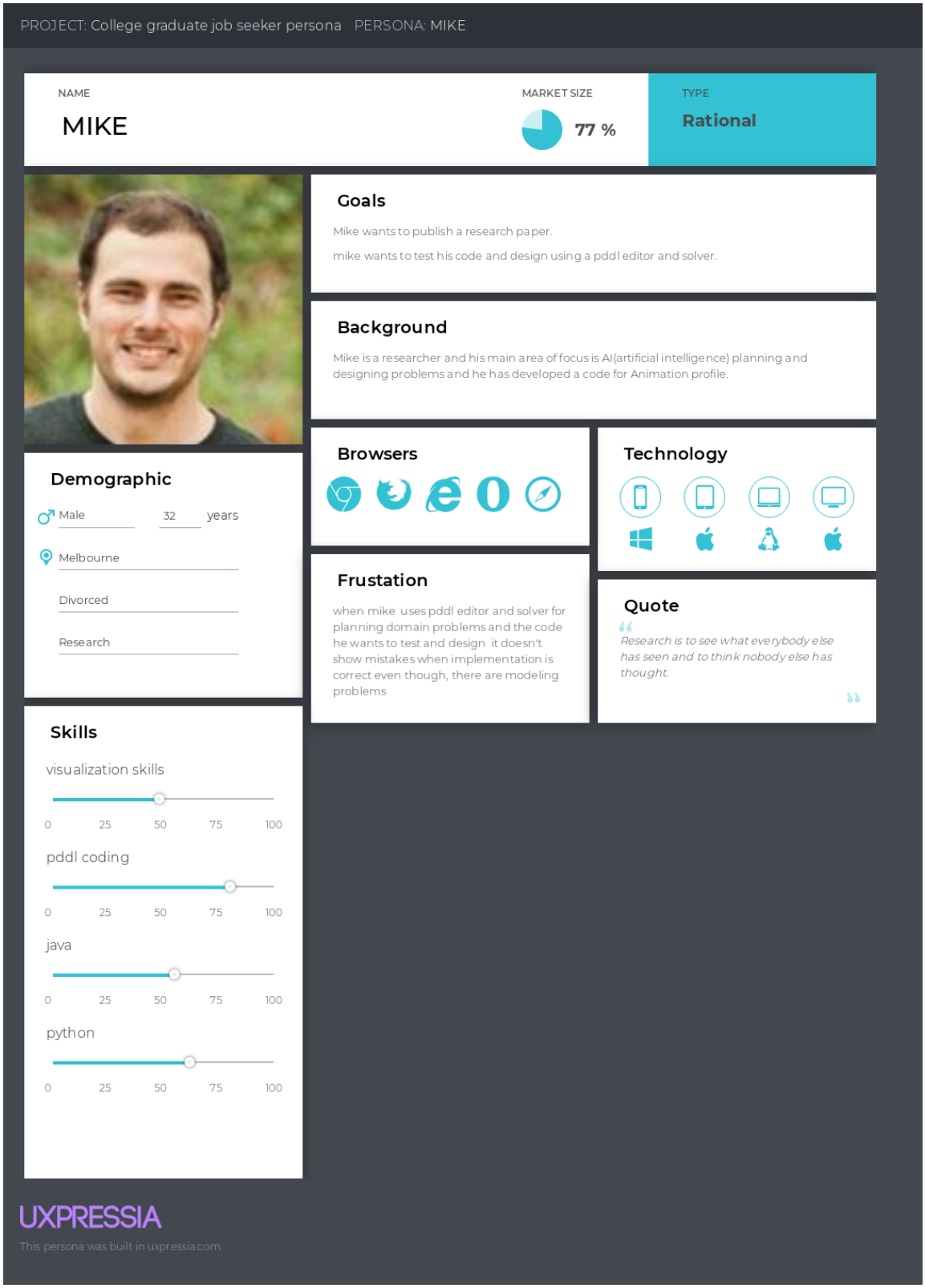
python

0 25 50 75 100

UXPRESSIA

This persona was built in uxpressia.com

USER PERSONA FOR INDUSTRY PARTNER



USER PERSONA FOR RESEARCHER

PROJECT: College graduate job seeker persona PERSONA: ROSE

NAME

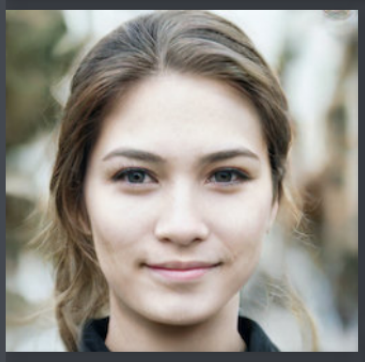
ROSE

MARKET SIZE

69 %

TYPE

Idealist



Goals

learn how to code using pddl(Planning Domain Definition Language) editor

develop coding skills so that It can be useful for her further studies

check whether the implementation is correct.

Background

Rose is a bachelors student studying information technology she wants to develop her AI skills and she has a special interest in artificial intelligence because wants to pursue masters in machine learning

Demographic

Female 22 years

Melbourne

Single

student

Browsers

Technology

Frustation

when Rose uses pddl editor and solver for planning domain problems it doesn't show mistakes when implementation is correct even though, there are modeling problems

Quote

education is most powerful weapon which we can use to change world

Skills

visualization skills

0 25 50 75 100

pddl coding

0 25 50 75 100

java

0 25 50 75 100

python

0 25 50 75 100

UXPRESSIA

This persona was built in uxpressia.com

USER PERSONA FOR STUDENT

Operational Documents

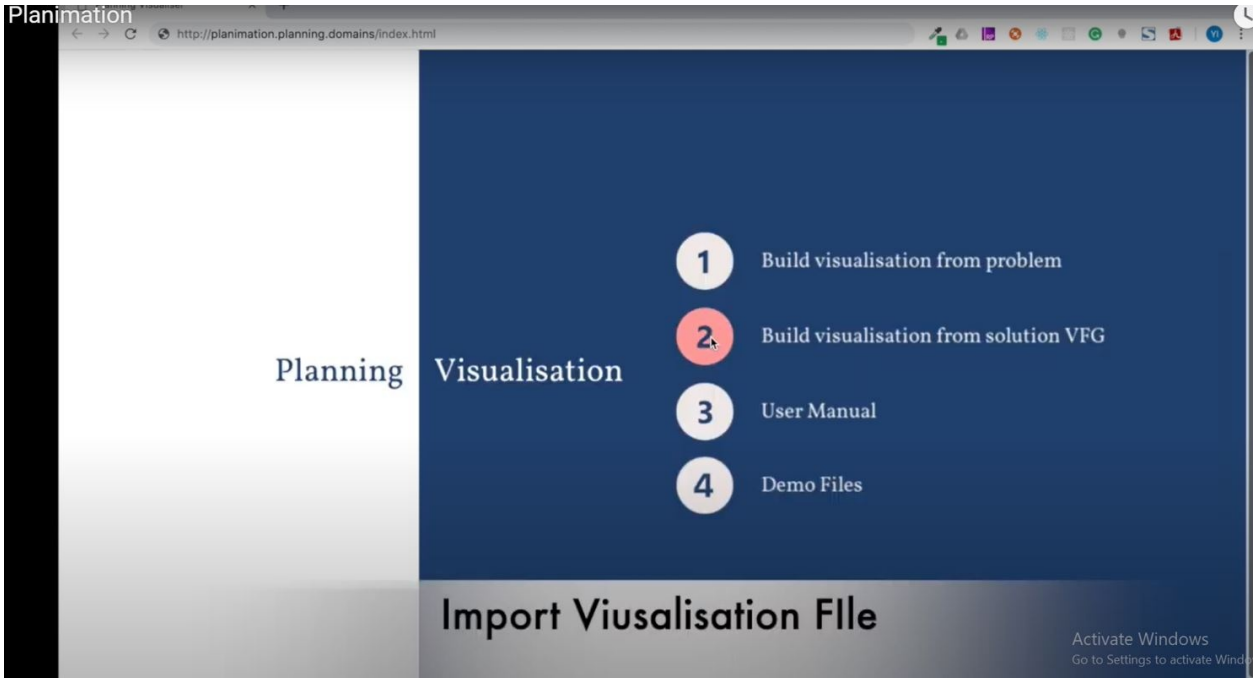


DIAGRAM 1: PLANNIMATION DEMO

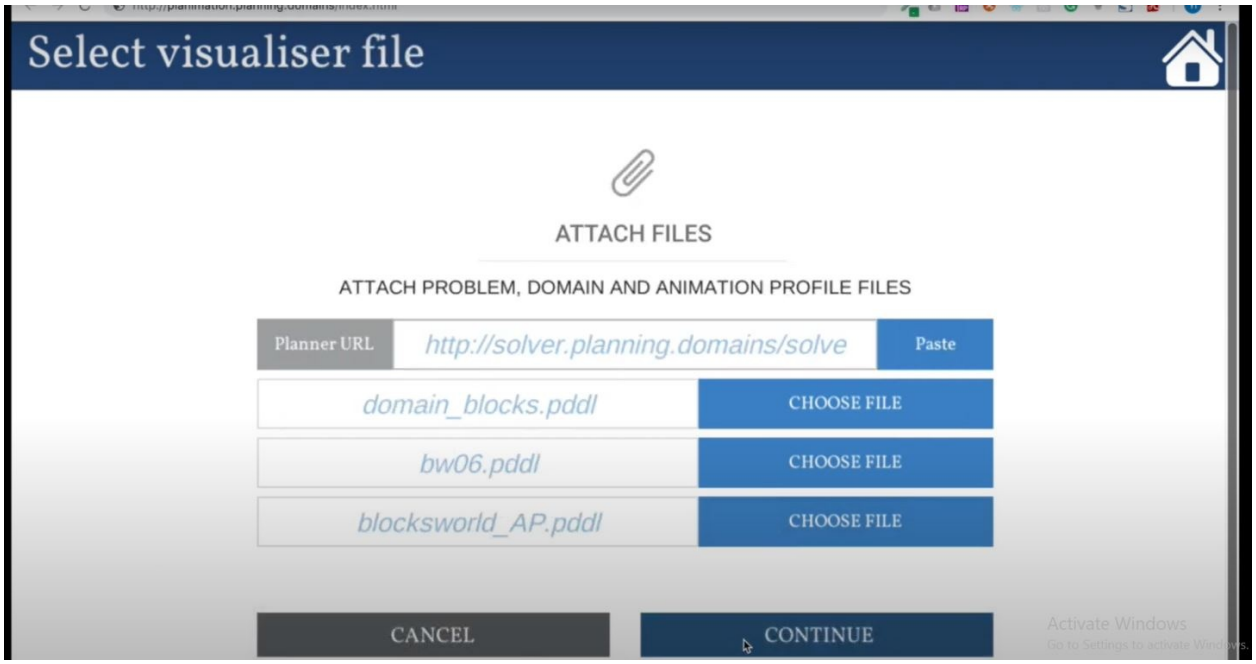
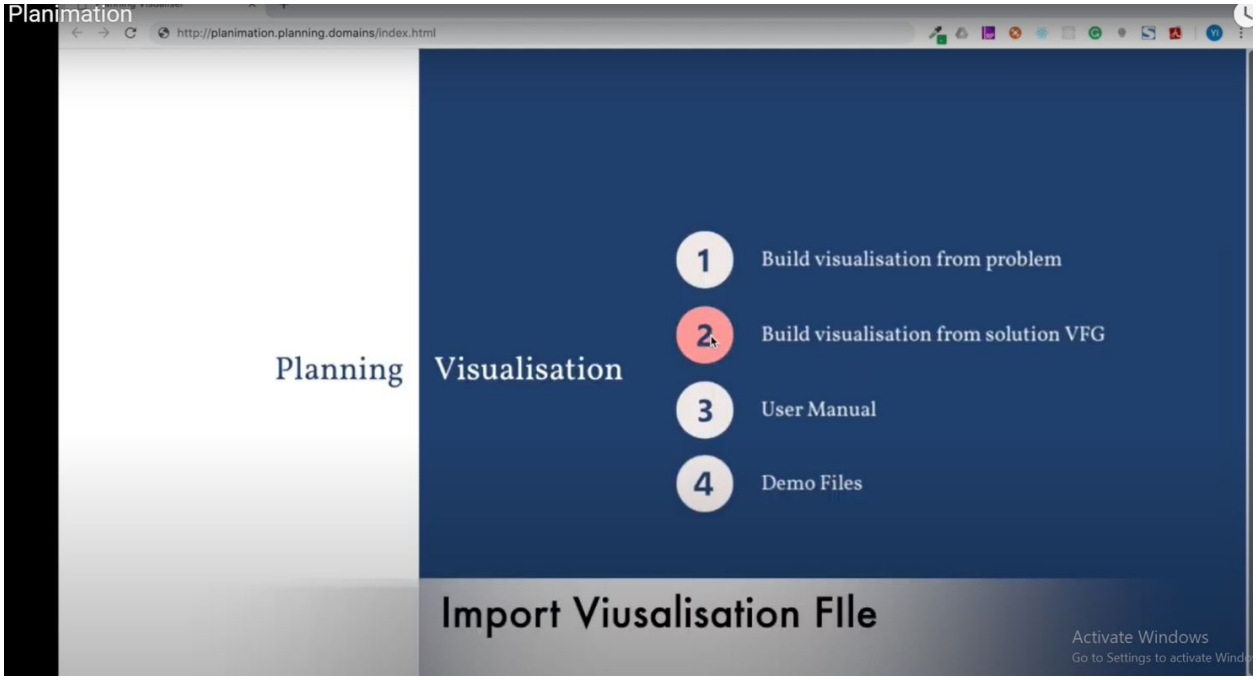


DIAGRAM 2: SHOWING HOW TO SELECT VISUALISER FILE


Planimation
http://planimation.planning.domains/index.html
Planning
Visualisation
1
Build visualisation from problem
2
Build visualisation from solution VFG
3
User Manual
4
Demo Files
Import Viusalisation FIle
Activate Windows


Planning Visualiser
Show Goal
Steps
0. Initial Stage
1. (unstack b f)
2. (put-down b)
3. (unstack f d)
4. (put-down f)
5. (unstack d c)
Step Info
No Step Information
Subgoal:
0/12
(on d f)
(on c d)
(on i c)
(on j b)
(on a m)
(on h e)
Activate Windows

User Stories

User Story Table:

ID	Story Description	priority
1	As a user, I can choose to upload a VGF format file for visualization purpose.	Must have
2	As a user, for using the web based application.I can able to find the user manual for helping to operate applications.	Should have
3	For learning how to operate the animation. As a user, I could find a demo video.	Should have
4	For generating the Animation option.As a user if i could upload Animation PDDL,Domain.	Must have
5	As a user if i could choose to pause or play the animation	Should have
6	As a user if i could able to move to the previous step	Must have
7	As a user if i want to play with the high speed	Must have
8	As a user if i want to play with low speed	Must have

Non Functional Requirements

Confluence:The team would be used for updating the design,user stories,use cases specifications and goals of the project.

Trello:During the development stage the team would be using Trello for assignments and distribution of tasks and Trello is linked to slack, github

Slack, gmail and wechat:The team would be using it for communication.

Zoom and google call: Online meetings tools for team members.

Time Duration of Project.

Inception Phase: The time duration for the inception phase is from July 26, 2021-22 August 2021.

1) During this phase, the team members are allotted to the project.
2) The first client was taken place.
3) it is the initial phase of the project.
4) so analyzing client requirements knowing the project in detail was done by the team.

SPRINT 1: The time Duration for the sprint 1 phase was from 22 August 2021- 19 September 2021.

1) During this phase the team will meet the client for a second time.
2) based on the requirements from the client the team would start analyzing user stories.
3) The development team starts working on the client requirements.
4) at the end of the sprint the team will hand over the sprint 1 product to the client.

SPRINT 2: The time Duration for the sprint 1 phase was from 19 September 2021- 24 October 2021.

1) During this phase the team will meet the client for the third time.

2) After the end of sprint 1 if any development features in a product is being left the team will try to accomplish them in sprint 2.

3) Based on requirements from the client the development team will start working on features.

4) After finishing the development of the final product, The product is handed over to the client.

DATES	
INCEPTION	**July 26, 2021- 22 August 2021**
SPRINT 1	**22 August 2021-19 September 2021**
SPRINT 2	**19 September 2021-24 October 2021**
PRODUCT HANDING TO CLIENT	**24 October 2021**

Table:showing project plan according to dates.