Goal Orientated Action Planning Artificial Intelligence

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Aims and Objectives

The aim of this project is to create a goal orientated action planning artificial intelligence(AI) agent. This agent should be able to asses its current state against its goal state. Our AI agent should then begin to generate an action plan, that it will execute in order to achieve the desired state.

- Design and Create a Survival Game
- Create an Artificial Intelligence Agent capable of making an action plan
- Have the Artificial Intelligence Agent carry out the plan

To demonstrate this we set ourselves the objective of designing and creating a survival game in which the main character is our AI agent. This world should be a desolate environment with multiple biomes and various resources all scattered about it, all of which is randomly generated to ensure our AI agent has a new challenge every time. With this world we envisioned in mind our next objective was to create a list of relevant actions for our AI to carry out. These actions should have pre and post conditions such that our AI could create multi action plans in order to complete a task such as satisfying its need for hunger. To be able to generate these plans we would need to create a planer algorithm, for this we would use similar logic to the STIPS implementation around which the majority of our research was based. Finally our last objective is that we need to be our able to visualize our AI agent planning and carrying out these plans. To show this we would use the SFML library to graphically represent the aforementioned environment, along with a user interface to show the AI agents "thought process".

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Project Management

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Appendix A

Appendix I