Spike: GOAP
Title: GOAP

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Goals / deliverables:

Create a GOAP simulation that demonstrates the effectiveness of the technique in considering long-term outcomes of actions (related to side-effects and/or time delays) and can plan and act intelligently. The simulation should include agents that interact with health and shield objects to maintain their status while performing other tasks.

Technologies, Tools, and Resources used:

List of information needed by someone trying to reproduce this work

- Python 3+
- Built in Python libraries.
- IDE or Code Editor (Visual Studio Code)

Tasks undertaken:

- Install Python: Download and Install Python 3+ via https://www.python.org/downloads/
- Set up a code editor or IDE: Download and install a python compatible ide or code editor such as Visual Studio Code, PyCharm
- Open and familiarize with the code by reading through, paying attention to the comments that had been made.
- Run the code: Execute the code and observing the output.

Planning Notes:

• Start with the existing game environment and agent classes that include health and shield mechanics
• Implement the GOAP system to control the high-level goals and actions of agents.
• Design goals and actions for the agents that involve interacting with health and shield objects.

Extensions:

• Add more goals and actions to the agents to make the simulation more complex and challenging.
• Different types of agents with varying abilities and strategies.
• Implement environmental obstacles and hazards that affect the agents' planning and decision-making process.
• Enhance the simulation by adding a dynamic world that changes over time, requiring agents to adapt their plans accordingly.