* A clear written description of the design decisions made, approaches taken, challenges experienced, and possible improvements [3 marks]
* An experimental section that justifies and explains the performance of the approaches implemented [2 marks]

**Agent design:**

Our agent has four possible states, Guard, Defence, Offence and Flee. The state map in figure xx shows how the agent switches between the states. The behavior in each state is as follows:

**Guard:**

When in the Guard state, the agents seek the center position at the top half and bottom half at the board, respectively. The agents search constantly for an opponent to chase, either by observing it or detecting that food in home territory is eaten. If an opponent is killed, the guard enters the Offence state if it has the greatest distance the opponent that where not killed.

**Defence:**

When in the Defence state, the agent updates its defend position for each turn, and desires to get as close to this position as possible without leaving home territory.

*Challenges:*

Alternating defending team-member.

**Offence:**

Monte Carlo

Weighting of food, ghosts, capsule.

If distance to a ghost is to short or three items of food are eaten, Flee.

**Flee:**

When in the Flee state, the agent does a breadth first search for the shortest path to its home territory that does not contain a ghost. The search is redone for each turn.