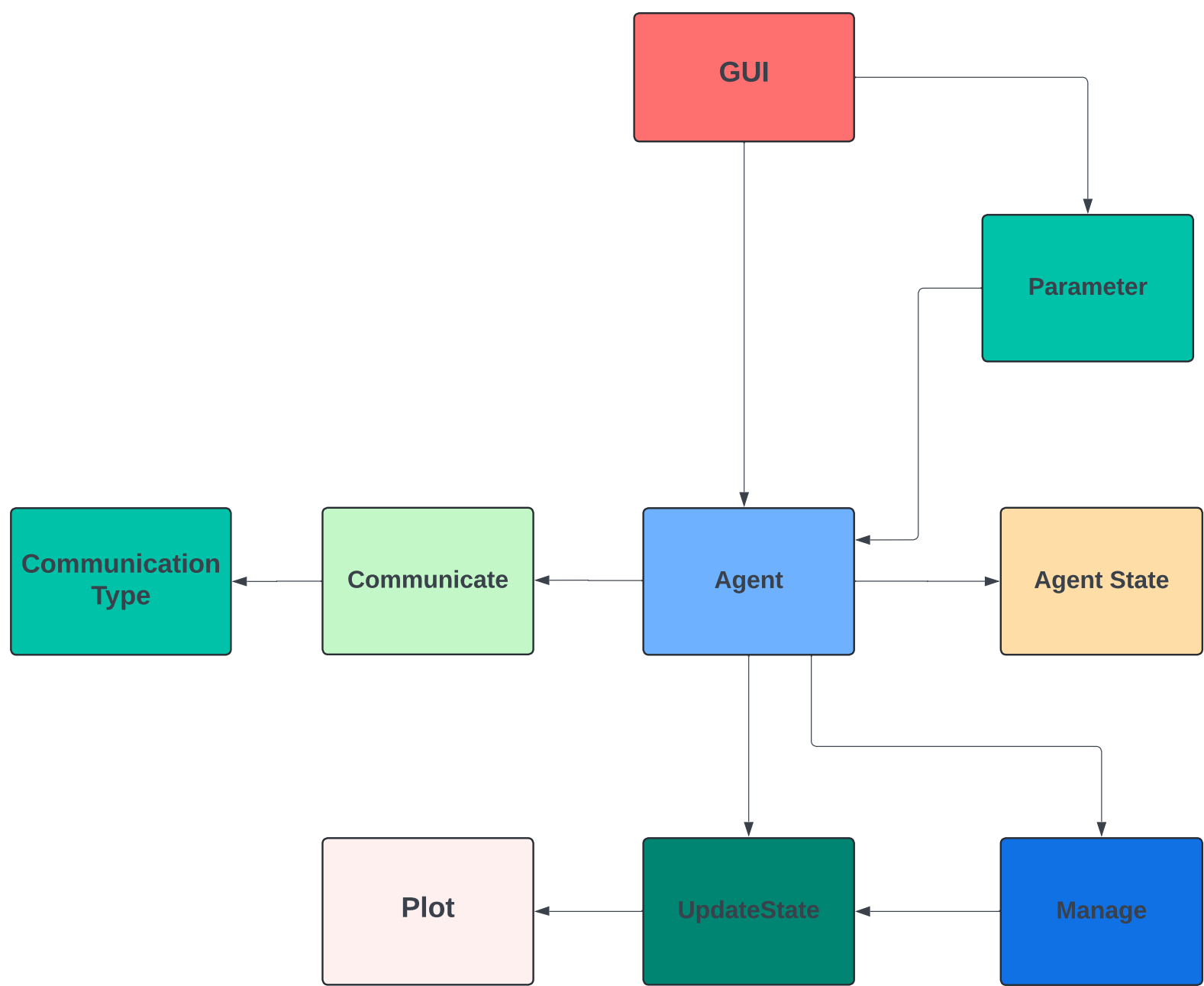


# Disease Simulation Object Design



**GUI:** This is the main object that is responsible for the start of the program and it display the user interface. It calls the Agent object and parameter object.

**Parameter:** This object is called from the GUI object. It is responsible to set all the data from the config file such as the dimensions, sickness time and others. This data will be used by the agent object.

**Agent:** This class is responsible to handle all the agents. It is responsible to run the agents inside the simulation area. It is also responsible to set the health condition of the agents, transfer the disease from one agent to another agent. It also get the location of the agent.

**Agent State:** This objects is responsible to represent the current state of each agents.

**Communicate:** This objects helps the agent to communicate between each other and to transfer the message.

**Communication Type:** It represents the type of communication between the agents such as if they are moving or they stop which happens after they die or immunate.

**Manage:** This class manages the disease spreading among the agents. It is responsible to start the simulation, and to stop it. It also sets the type of format such as grid, randomgrid and random.

**Plot:** This class creates a simulation plot that displays the graph of the agents over the time. It is used by the updateState class to update the user interface.

**Update State:** This class updates the whole entire GUI every time when the state of the agents changes, such as from incubating to sick and from sick to either dead or immune.