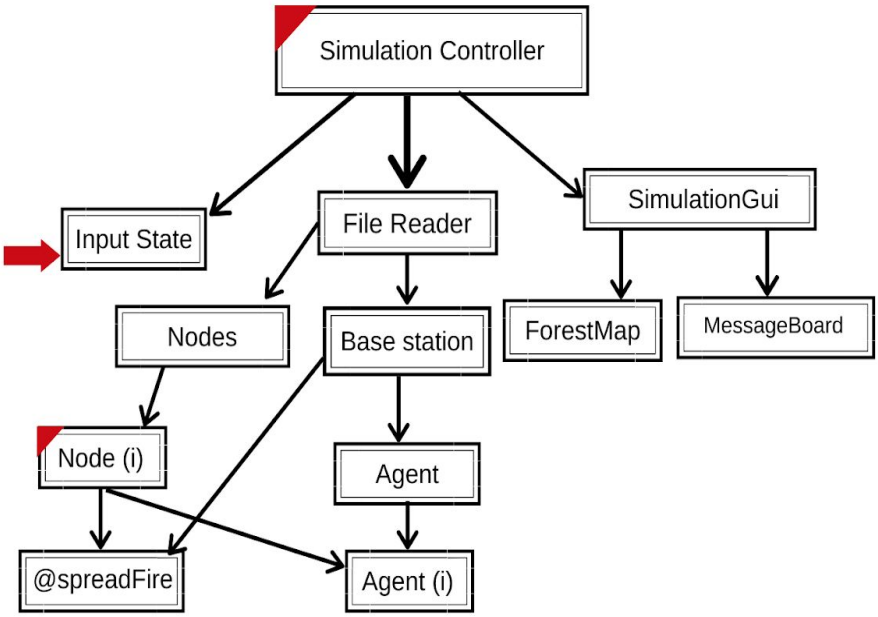

Explanation

The simulation starts by Controller creating the File Reader object. The File Reader object reads the input txt file and then creates the Nodes, and assigns the neighbors of the nodes. The controller does a lot more, but we will come to that later.

The Node objects have their individual threads. The threads are used to pass messages to neighbor nodes. All the incoming messages are kept in a Blocking Queue and only one message is passed at a time. The nodes keeps on passing messages and running the thread until the node is on fire.Initially there is only one agent that starts moving randomly from Base Station.

The Base station is an extension of Node with special property of processing the messages. The Agents have their own Id and can spawn a new Agent with a new Id.
The Controller use a thread to randomly move the agent from base station to other nodes until it reaches a node that is near fire. Once the agent is on that node, the agent spawns new agents to the neighbors. The Controller uses another thread to spread fire simultaneously. The controller uses a blocking queue of Nodes that are near fire to put one near fire node on fire at a time.

The controller sends the current state of the game to the SimulationGui. The controller also sends the processed messages from the Base Station to the gui. SimulationGui sends the messages to MessagesBoard to create a visual representation of the messages and sends the node information to ForestMap to create a visual representation of the Forest nodes.