M3 Feature Document:

Each of the three Warriors will output different attack messages while attacking their opponent. Soldier and Archer will keep their default messages of “Clang!” and “Twang!” The new Warrior class, the Witch\_doctor class will output “Take poison!” while attacking. Warriors will always continue attacking their target until he or his opponent is no longer alive, or become beyond their respective attacking range and change their state to “**Not attacking**” accordingly. In addition, the behavior described as “counter-attack” hereon indicates that the attacker will be saved as target and changing the attacked Warrior’s state to “**attacking**”.

**Archer**:

While being under attack, Archer will always lose health according to the attacker’s strength. Then counter-attack according to the following scenarios.

When attacked by an **Archer**, if the both the Archer being attacked and his aggressor being alive, he will stay stationary and carry out counter-attack immediately.

If under attack from a **Soldier**, the Archer will first check if he is attacking other targets, and both he and his attacker are still alive. If so, Archer take advantage of his superior range and mobility against Soldier’s attack strength by moving to the farthest structure and carrying out counter-attack.

If the aggressor being a **Witch\_doctor**, the Archer will perform the same check as being attacked by a Soldier. If all checks are passed, he will run towards the closest structure and counter-attack the Witch\_doctor.

**Soldier**:

While attacked by an **Archer**, Soldier will lose health by the Archer’s attacking strength. Then, Soldier will first check if the both he and the attacking Archer are alive and he is not currently attacking other agents. If so, he will yell out “Watch out, Archer!” and counter-attack. However the Soldier will only causes harm to the Archer only if the latter is in range.

If a Soldier is under-attack by a **Soldier**, he would draw his Shield in protection of himself. However, Soldier may or may not be able to shield himself. If so, Soldier outputs “Tang! I shielded myself!” and will not lose health. Otherwise, he outputs “I failed to shield myself!” and suffered the full strength of the attack. Then, if he is not currently attacking other agents, and both he and the attacking Soldier are still alive, he will start counter-attack.

When under **Witch\_doctor’s** attack, he will lose health by the attack strength of Witch\_doctor. Then, the Soldier first check if both he and his attacker are still alive and he is not currently attacking other agents. If so, Soldier will move to the location of the attacking Witch\_doctor and counter-attack outputting “Watch me coming, Doctor!”

**Witch\_doctor**:

If Witch\_doctor is under attack, he will stop healing his patient if he does, and loses health by the strength of his attacker with exception of being attacked by another Witch\_doctor, as described below.

If being attacked by an **Archer**, the Witch\_doctor checks if both he and his attacker is still alive, and he is not attacking other agents. If so, he outputs “Archer, I’m coming for you!” and will move to the location of the attacking archer to counter-attack his opponent.

While attacked by a **Soldier**, the Witch\_doctor checks if both he and his aggressor are still alive, and if so simply runs towards the farthest structure and output “Soldier’s attacking me! I’m going to run away to” with the name of the structure. Once the Witch\_doctor is beyond the attacking range of the Soldier, he will be able to heal himself as described in his automatic behavior.

If the attacker is a **Witch\_doctor**, the Witch\_doctor will try to find a remedy to the poison of his aggressor. In the case he succeeds, he will output “I found the remedy! I healed myself!” without losing any health. If he is not attacking other agents and both he and his attacker are still alive, he will counter-attack using his own poison saying “Enjoy my poison, Doctor!” If he failed to use the right remedy, the Witch\_doctor under attack will die from the mixing poison with the wrong drug, outputting “I used the wrong medicine!”