**Decision-Making Algorithm Based On Utility Values**

**Tasks General Priorities:**

* Move to Heaven : 1
* Eat Food : 2
* Reproduction : 3
* Attack Enemies : 4
* Collaborate : 5

**Priority Modifier for Each Task:**

* **Move to Heaven :**
  + Energy ( + )
  + Distance to Closest Heaven Location ( - )
* **Eat Food :**
  + Energy ( - )
  + Distance to Closest Food Location ( - )
* **Reproduction :**
  + Energy Needed to Reproduce / Current Energy ( - )
  + Enemy Count / Allied Count ( + )
  + Distance to Closest Ally ( - )
* **Attack Enemies :**
  + Attack power > Enemy Defense ( + )
  + Distance to Closest Enemy ( - )
  + Enemy Count / Allied Count ( + )
* **Collaborate :** 
  + Nothing.

**Priority Score Formula:**

Assignment Score = ( 6 – General Priority + Priority Modifier ) / Distance