Finite State Machine – Transition Table – Tank Sinatra

Below is a transition table to show how states will change to different states on the basis that certain parameters are met:

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| Current State | Transition | Next State |
| SearchState\_TS\_FSM | In StateUpdate, it will check to see if the health is above or equal to 50, ammo is equal to or above 4 and fuel is equal to or above 30 and then call the search for enemy function.  If the values for getTank or getBase are greater than or equal to one, it will change to the Chase state. | ChaseState\_TS\_FSM |
| SearchState\_TS\_FSM | In StateUpdate, it will check to see if the health is above 50, ammo is equal to or above 4 and fuel is equal to or above 30 and then call the search for enemy function.  If the value for getConsumable is greater than or equal to one, it will change to the Ambush state. | AmbushState\_TS\_FSM |
| SearchState\_TS\_FSM | If the tank’s health is less than 50, ammo is less than 4 and the fuel is less than 30, it will enter the Retreat state. | RetreatState\_TS\_FSM |
| ChaseState\_TS\_FSM | In StateUpdate, if the tank’s health is still over or equal to 50, the ammo is greater than or equal to 4 and the fuel is greater than or equal to 30, it will run the ChaseEnemy function. It will then check to see if getTank or getBase are greater than or equal 1. If it is, it will then return the Attack state. | AttackState\_TS\_FSM |
| ChaseState\_TS\_FSM | If the health is less than 50, ammo less than 4 and fuel less than 30, it will enter the Retreat state. | RetreatState\_TS\_FSM |
| AmbushState\_TS\_FSM | In StateUpdate, within the Ambush state, it will check to see if the value of getConsumable is still above 0 and start a timer and then stop the tank from moving. It will then check to see if the enemy tank comes within vision whilst it has stopped and if it does, it will enter the Chase state. | ChaseState\_TS\_FSM |
| AmbushState\_TS\_FSM | If the value for getConsumable is less than 1, it will reset the value of t to zero and change to the Search state. | SearchState\_TS\_FSM |
| AttackState\_TS\_FSM | In StateUpdate, it will check to see if the health is below 50, ammo is below 4 and fuel is below 40 it will return the Retreat state. | RetreatState\_TS\_FSM |
| AttackState\_TS\_FSM | In the else section, the tank will fire on the enemy as intended in the Attack state. If the value for getTank or getBase is less than 1, it will then change to the Search state as it can no longer see one of the targets to attack and is removed from the dictionary by referencing them back to null. | SearchState\_TS\_FSM |
| AttackState\_TS\_FSM | In the else section, instead, if the value for getTank is greater than or equal to 1, it will return the Dodge state. | DodgeState\_TS\_FSM |
| DodgeState\_TS\_FSM | In StateUpdate, it will start a timer (t) and call the tankDodge function. If the value of t is greater than 2f, it will reset the value of t to zero and return the Attack state. | AttackState\_TS\_FSM |
| RetreatState\_TS\_FSM | If the value for getHealth is greater than or equal to 50, getFuel is greater than or equal to 30 and getAmmo is greater than or equal to 4, it will enter the Search state. | SearchState\_TS\_FSM |