

State Transition table				
Current State	Transition Condition	Rules	/= new line	Next State
Patrol	Enemy base detected and no enemy tanks nearby	if (enemyBaseDetected && !enemyInSight) / nextState = Base Attack;		Base Attack
Patrol	Health or fuel drops below safe threshold(<35)	if (health && Fuel <35)/ nextState= Scavenge;		Scavenge
Patrol	Enemy within range and can't see you	if (enemyInSight && enemyDistance <= farRange) / nextState = Pursue;		Pursue
Patrol	Enemy within range and can see you (is coming closer)	if (enemyInSight && enemyDistance <= midRange) / nextState = Wait;		Wait
Pursue	Target reached and enemy is in sight	if(targetReached && enemyInSight) / nextState = Attack;		Attack
Pursue	Tank has low health and the enemy is not detected	if(lowHealth && enemyNotDetected)/nextState = Scavenge		Scavenge
Wait	Enemy enters close range while visible	if (enemyInSight && enemyDistance <=closeRange) / nextState = Attack;		Attack
Wait	Enemy visible but moving away	if (enemyInSight && enemyDistance > far) / nextState = Pursue;		Pursue
Wait	Enemy not visible after wait duration	if (!enemyInSight && waitTimer >= waitLimit) / nextState = Patrol;		Patrol
Wait	Ammo < 3 OR Fuel < 35	if (ammoLowCritical fuelLowCritical) / nextState = Scavenge;		Scavenge
Attack	All resources are low	if (resourcesLow) / next State = Retreat;		Retreat
Attack	Certain resources are low (Health + Fuel)	if (healthLow fuelLow) / nextState = Scavenge;		Scavenge
Attack	enemy no longer visible	if enemyDistanceFar and enemyNotDetected = Patrol		Patrol
Base Attack	Enemy tank appears within close range	if (enemyInSight && enemyDistance <= closeRange) / nextState = Attack;		Attack
Base Attack	Ammo drops below safe threshold	if (ammo<=3) / nextState = Scavenge;		Scavenge
Base Attack	Health low	if (health<35) / nextState = Retreat;		Retreat
Base Attack	Fired 3 shots and enemy tank not visible	if (shotsFired ≥ 3 && !enemyInSight) / nextState = Patrol;		Patrol
Base Attack	Base destroyed	if (enemyBaseDestroyed) / nextState = Patrol;		Patrol
Base Attack	Enemy tank firing nearby enemy base	if (enemyInSight && enemyFiring) / nextState = Retreat;		Retreat
Retreat	Tank has reached the safe zone and has low health	if (SafeZoneReached && lowHealth)/ nextState = Scavenge		Scavenge
Retreat	Tank has reached the safe zone and has low fuel	if (SafeZoneReached && lowFuel) / nextState = Scavenge		Scavenge
Retreat	Tank has reached safe zone and enemy not detected	if (safeZoneReached && enemyNotDetected / nextState = Patrol		Patrol
Scavenge	All resources are still low but enemy is in range and attacking	if (enemyDetected && resourcesLow) / nextState = Retreat;		Retreat
Scavenge	Fuel and ammo are fine, near enemy base but enemy is not around	if (fuelOK && ammoOK && enemyBaseDetected && !enemyInSight) / nextState = BaseAttack		Base Attack
Scavenge	Health and ammo are replenished and enemy comes into range	if (fuelGood && ammoGood && enemyInSight) / nextState = Wait;		Wait
Base Defend	Enemy is not in range and been at base for 15-20 seconds	if (!enemyInSight && currentState = BaseDefend <= 15) / nextState = Patrol;		Patrol

	Stats	
	enemyBaseDetected	stats.Add("enemyBaseDetected", false);
	enemyBaseDestroyed	stats.Add("enemyBaseDestroyed", false);
	enemyInSight	stats.Add("enemyInSight", false);
	enemyDetected	stats.Add("enemyDetected", false);
	lowHealth	stats.Add("lowHealth", false);
	lowFuel	stats.Add("lowFuel", false);
	lowAmmo	stats.Add("lowAmmo", false);
	criticalhealth	stats.Add("criticalHealth", false);
**** all same time?	criticalFuel	stats.Add("criticalFuel", false);
	criticalAmmo	stats.Add("criticalAmmo", false);
	gooHealth	stats.Add("enoughHealth", false);
	fuelOk	stats.Add("enoughFuel", false);
	ammoGood	stats.Add("enoughAmmo", false);
	shotsFired >+ 3	stats.Add("shotsFired", false);
	farRange	stats.Add("enemyDistanceClose", false);
	midRange	stats.Add("enemyDistanceMid", false);
	closeRange	stats.Add("enemyDistanceFar", false);
	waitLimitExceeded	stats.Add("waitTimerExceeded", false);
health ammo or fuel ammo	safeZoneReached	stats.Add("safeZoneReached", false);