Gatekeeper/NPC Pseudo-Code & Design

# General FSM of Gatekeeper states.

# 

# Gatekeeper/NPC Inheritance Hierarchy



Pseudo-Code

# Class Gatekeeper

AI\_Object

Structure GKstruct  
 Guard\_Range   
 Behaviour (Guard dog, Patroller etc…)  
 inCombat Boolean  
 Target Players  
 patrol\_nodes

cooldown timer

# Gatekeeper(…)

Initialize AI object, set type, set ranges,etc

# Function updateNPC

Check type, if patroller then call patrol() function

Call detecPlayers()  
 if inAttackRange()  
 enterCombat  
 else  
 leaveCombat   
 update the gatekeeper’s position

# Function detectPlayers

Use AI\_Object’s scan function to detect players. Pass the guard range  
 if player is detected in the guard range  
 Set the target player  
 Begin moving towards targeted player  
 else  
 Move back to/continue default guard position or patrol  
 Set the target player to null

# Function enterCombat()

Set inCombat to true  
Use the AI to attack target player

# Function leaveCombat

Set inCombat to false  
 set AI to stop attacking

# Function patrol() //Only used by patrollers

Call the AI’s A\* function to patrol. Pass the patrol radius

# Function inCombatRange(Attack\_range)

Compare target players position against the attack range

Return true if player position is in the combat range  
 else return false

# Class Boss Inherits from Gatekeeper

Special Ability  
 //Assuming special ability is its own object, should have attributes such as range/damage etc..

# Boss()

Set stats, set ranges to boss appropriate ones

# Function specialAbility()

Check the special ability range against the target player’s positon  
 if in range  
 perform special ability  
 begin cooldown

No need to override any functions..

# Class Miniboss

# Miniboss()

Set stats, set ranges to miniboss appropriate ones

# Class Minion

# Minion()

Set stats, set ranges etc to Minion appropriate ones.