**PSEUDOCODE – “GUARD DOG” AI**

**INIT**  
{  
 initialize the monster object  
 add the monster to the game world  
 go into the waiting state  
}

**WAITING**  
{  
 for every n frame(s) of the game  
 {  
 if the monster has less than 1 hit point  
 {  
 go to the DEAD state (remove the monster object from the game)   
 }  
 check all cells within the field of view of the spawn point in sequence  
 if a PC is detected in one of these cells  
 {  
 if the PC is not already in the list of target PCs, add it to the list  
 }  
 Loop through the list of target PCs  
 {  
 if the PC is outside the field of view, remove it from the list  
 }  
 If at least one PC is in the monster’s target list  
 {   
 go into the MOVE state (to move to the target PC location)  
 }   
 if there are no PCs in the monster’s target list  
 {  
 go into the MOVE state (to move back to the spawn point)  
 }  
 }  
}

**MOVE**  
{  
 for every n frame(s) of the game  
 {  
 if the monster has less than 1 hit point  
 {  
 go to the DEAD state (remove the monster object from the game)  
 }  
 update the locations of the first PC on the list of target PCs  
 if the PC is dead  
 {  
 return to the WAITING state  
 }  
 determine if the PC is in the monster’s attack range  
 if the PC is not in the monster’s attack range  
 {  
 move towards the PC  
 }  
 else, go into the ATTACK state  
 }  
}

**ATTACK**  
{  
 for every n frame(s) of the game  
 {  
 if the monster has less than 1 hit point  
 {  
 go to the DEAD state (remove the monster object from the game)  
 }  
 if the target PC is dead or is outside the field of view   
 {  
 go to the WAITING state (to scan for new targets)  
 }  
 if the target PC is in the monster’s attack range  
 {  
 attack the target  
 }  
 else  
 {  
 go to the MOVE state (to move into attack range)  
 }  
 }  
}

**DEAD**   
{  
 remove the monster from the game world  
 de-allocate memory  
}