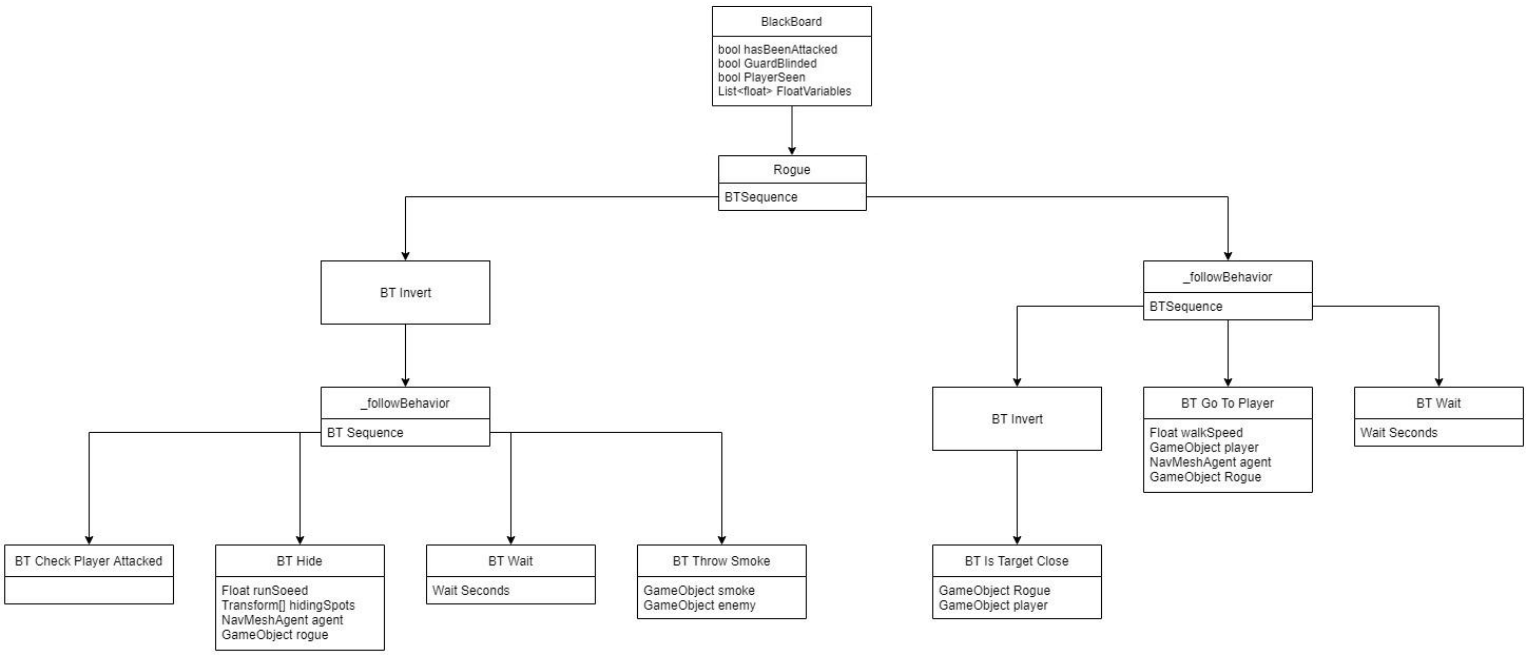
In my Game Development 3 I wanted to use 2 AI systems. These will be described below.

Behavior Tree

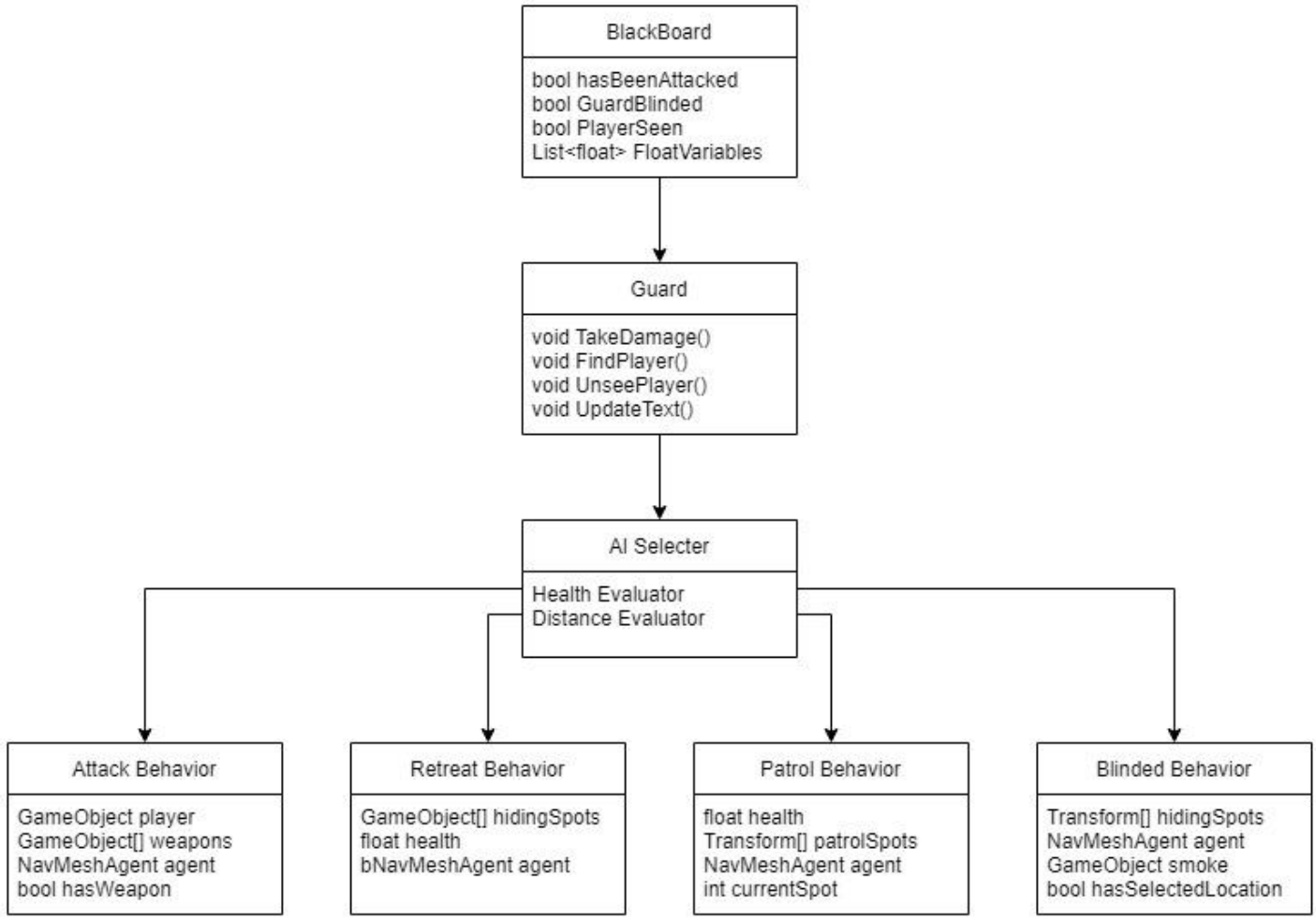
For my ally I have used the behavior tree. This is because the ally is relatively simple in behavior. This should not need a very complex tree.
This also was the first system I started out with. Very fast I got a basic system working for the nodes, but it took longer to implement all features and to make them working properly. The hardest thing was to correct the order. When starting the tree always would go to the 'move to player' sequence, before checking if the player actually was hit.
I fixed this by first checking if the player was hit, and if he was not hit to check if the ally needed to go towards the player. This also could have been solved by keeping track of the node which is running, but this change already fixed my issue. If I would expand on this system, I would probably keep track of which node is being ran.
If I had more time, I definitely would have combined BTGoToPlayer and BTHide, since both steer the ally to a point. By using an array or list I could loop through the positions, and if the player position was used the loop would only happen once.



1 Ally Behavior Tree

Utility System

For the guard I used the Utility System. This was because I thought this system would feel more natural, since there were no hardcoded behaviors, like in the behavior tree. The setup again was relatively easy. I did have many issues with changing graphs, because the graphs did not always save when editing them in Valentijn's tool. Once the basic behaviors (patrol, attack, retreat) worked and were tweaked a little I wanted to add a new behavior, which is the blinded behavior. When the guard is blinded by smoke, he will to go a random hiding position to clear his vision. In this behavior he cannot see the player or do any other action. This is with a hardcoded if statement in the AI selector. This is to give the player time to escape.



2 Guard Utility System

Video showcase:

https://youtu.be/53D8BtTgahI

GitHub:

https://github.com/smitdylan2001/HKU_GDV2/tree/main/AI-Assignment

PMI

Plus	Min	Interesting
Got to learn how to make AI	The Utility System still is a bit buggy and sometimes will hang on retreat behavior for some reason.	Making the backend for the AI was really easy! I expected this to be more complex
Had the time to work with 2 different systems	The graphs in the Utility System and the data for the characters sometimes did reset	I would like to see more examples with sudocode (maybe from YouTubers, like CodeBullet etc.?)
I properly worked in a project of someone else, this usually is hard for me.		
Behavior System was really easy to implement!		
The slides were helpful and the lessons were interesting.		