

Create a following system :

In a random place on the level, place exactly one actor (seeker), who will be detecting other actors (wanted) on the map. After the detection, the seeker informs wanteds about the fact that they have been detected, and prints onto the screen (in any form) the distance from the seeker in order from the closest to the farthest. Additionally, the seeker picks two found actors, the closest and the farthest, and informs them accordingly about the distance.

Features of the **seeker** mechanism :

- Whole mechanism must be closed inside an Actor Component, so that you can reuse it in any actor desirable.
- Seeker can only detect Actors, which have the appropriate Actor Component.
- Seeker can only detect Actors, which have the appropriate distance from him.
- Seeker can only detect Actors, which are in his line of sight (are not hidden behind a wall).

Features of the **wanted** mechanism :

- Whole mechanism must be closed inside an Actor Component, so that you can reuse it in any actor desirable.
- Actor Component attached to wanted is required for him to be detected.

Assumptions :

- Task should be done on the newest Unreal Engine 4 version.
- System must be written in the C++ programming language.
- If there is a need, BVS (Blueprint Visual Scripting) language can be used for small tasks.
- System must be based on the Unreal Engine 4 API.
- Development configuration build can be done from the project that system was created in.
- Information flow should be seen in the log.
- Assets appearance is not relevant.
- System optimised for around 250 actors.
- Detection must be performed continuously in real time.
- Task should be done within **48 hours** from the receivment.