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Design Document

The way I approach this iteration is that I created all the sensors and motion handlers in the requirements, and also implemented the the robot class and a superbot class that I will have inherit from robot. One design I'm thinking about changing is whether I want to have the robot inherit from the homebase currently or just have it inherit from arena mobile entity, since it has much different sensors than both the homebase and player. With the major changes from the first iteration along with the initializations which I implemented by creating a text file in the build/bin folder that you initialize everything in the area, and have the main read from that file.

The most difficult sensor to implement was the proximity sensor, which from what I seen was incorporated in lab 4 that we did previously this semester. The distress sensor is implemented by just having a int that changes from zero to one if the player collides with the robot. I have yet to implement its connection with the entity sensor that checks for what entity is around the distressed robot so they can turn off their proximity sensor so they can unfreeze that robot. Both the robot and superbot will both have proximity sensors but once the robot becomes a superbot it seems useful to turn off the proximity sensors when it collides with the homebase. There were no changes to the homebase as it still acts the same way, along with the player. Besides changing every class and function named robot to player throughout the iteration2 folder.

The sensors in connection with the arena is one design that I have yet to implement but I believe will bring everything together. Since the arena can see everything that is going on and knows what sensors are on and off. You just need to develop a check for distress just how check for collision is already implemented in arena. One thing I believe that will be different in my design is that instead of other entities knowing that a robot is distressed, only when a robot is in the distressed robot’s distress signal will it be notified that another robot is distressed and this will all be done by the arena but most of the information being given by the distressed robot. It will inform the other robot that a distressed robot is within your range and that you should turn off your proximity sensor. That is where the entity sensor comes in hand by giving out a value of the entity once it comes within the range of another entity, and depending on the entity and the situation act accordingly.