Obstacle Avoidance [50 points]

Avoiding obstacles is one of the most common behaviors. The aim of this exercise is to implement an obstacle avoidance strategy for your swarm. For this exercise, you'll use the proximity sensor and the robot wheels. See Figure 1 for a screenshot of the experiment and for a diagram of the eight infrared sensors.
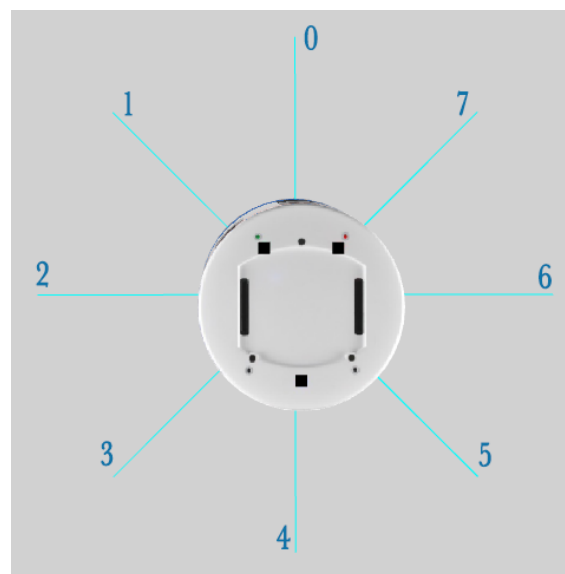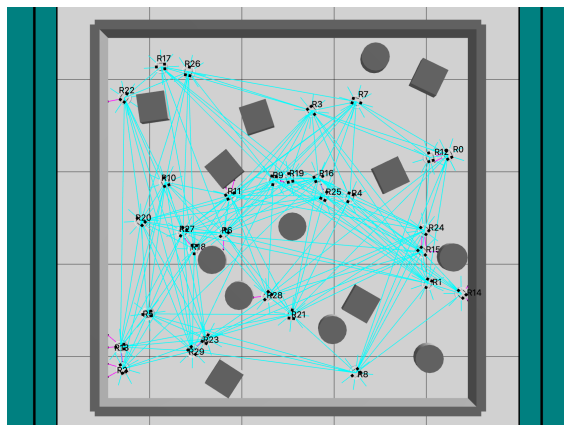

Figure 1: Proximity sensor labeling

Synchronization [50 points]

Implement the same algorithm you had in HW6, but this time using the range-and-bearing communication system and the LEDs. Add your code to the same file you used to code obstacle avoidance.

Execution Steps

```
1  $ tar xf RBE595CS525_HW8.tar.bz2
2  $ cd RBE595CS525_HW8
3  $ argos3 -c hw8.argos
```

This will open two windows: one is the ARGoS environment. the other is Buzz editor. In the Buzz editor, open the file with the buzz code (.bzz) and click Execute Script. After this, in the ARGoS window, press thePlay button.

Deliverables

The usual deliverable instructions: submit an archive called `LastnameFirstname.zip` with the following structure:

```
LastnameFirstname/
  hw8.bzz
  <any other file you wrote that is required to execute your script>
```

Buzz Resources

Helpful links:

1. Buzz wiki

2. Cheat sheet

3. ARGoS/Buzz integration

4. Khepera-specific commands