Universidade Fernando Pessoa

Hardware and Sensors

Shopping Client Counter

1. Create a project, which will enable you to monitor the clients inside in the shopping center. This system will be deployed at the shopping principal entrance. It is constituted by two kinds of sensors: sonar and infrared. These sensors are mounted in series allowing the system to identify if the users are entering or exiting the mall. The system will also control a motor to open the doors when the users are walking across the entrance. Periodically, you will print to the Arduino console the amount of clients inside the shopping center.

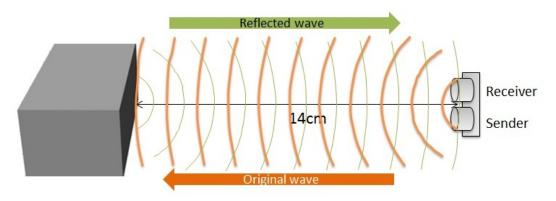


Figure 1 - Sonar sensor principle

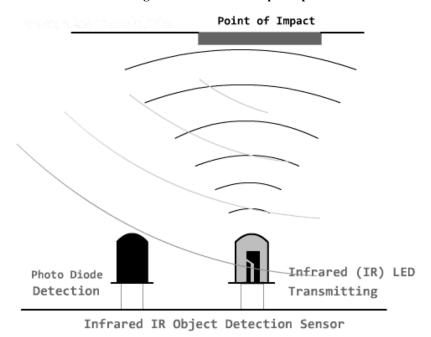


Figure 2 - Infrared sensor principle

2. Submit your code and designed circuit(s) using Fritzing¹ into the eLearning Hardware and Sensor dropbox.

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¹ http://fritzing.org/download