

Middle East Technical University

Electrical - Electronics Engineering Department

## EE494 - Engineering Design II

## Weekly Report

**Group Name:** λambda

**Date:** 17.04.2022 *(Week 8&9)*

**Design Coordinator:**

Associate Professor Dr. Elif Vural

**Members of Company :**

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1. **Done During Week 8**
2. The algorithm of the project has improved:
   1. Tag classification was implemented using multiple tags for the doorway case. A new function was implemented to see detailed information about all tags using UART.
   2. Tags are dynamically classified as door or zone. The algorithm checks for a certain condition depending on the distance to the tags and the change in the distance to the tags to determine if a tag is a doorway tag or a zone tag. For robustness purposes, the result of the algorithm is dependent on many previous states to not be affected by miscalculations or mismeasurements. This also allows the user to simply move the tag to a different place to use it in another classification.
3. **Planned for Week 9**
4. The tag classification algorithm will be improved and tested in several cases to further increase the robustness.
5. The integration of the subsystems will conclude and the results will be presented in the demonstration.