

# Extract Method for Refactoring (Iteration 3)

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April 24, 2018

## 1 Original Method

- Arena.cc -> UpdateEntitiesTimestep() : Line 90

## 2 Methods Extracted

- Arena.cc -> UpdateHunger() : Line 104
  - Checks for starvation in any of the Robots and updates hunger for each Robot by checking if food has been captured.
- Arena.cc -> UpdateSensors() : Line 124
  - Updates both light sensors and food sensors for every Robot in the Arena.
- Arena.cc -> UpdateCollisions() : Line 139
  - Checks for collisions between between Robots or between mobile entities and walls.

## 3 Explanation of Improvement

By extracting the methods of UpdateHunger, UpdateSensors, and UpdateCollisions I have greatly reduced the size of the UpdateEntitiesTimestep method in Arena. This had become an all-in-one mess of auto-loops, however, with this change the method is now significantly more readable. Previously, UpdateEntitiesTimestep was one of the more convoluted methods within the project but now it may be one of the most informing.