Requirements – second level

* Scanning
  + Being able to scan with a resolution of 8 segments on 360°
    - 8 sensors
    - Angle of up to 45° (to avoid overlap)
  + Outputting a map fragment
    - Using the same format as specified in map handling
  + Scanning range big enough for the robot to move into that direction
* Map Handling
  + Maps are a collection of squares, with possible walls in between
  + Being able to handle a given map (by the user)
  + Being able to compare scanned fragment with saved segment
  + Being able to update the map fragment wise
  + Keeping track of the current position
* Pathfinding
  + Being able to find the shortest path on a given map from a given A to a given B
  + Being able to calculate on the fly
* Movement
  + Needs to be able to move in 8 directions
  + Needs to be able to be precise (move into the middle of a square)