## CORE:

- 1. Understand A\* Path Finding tutorial:
  - a. Youtube: https://www.youtube.com/watch?v=JtiK0D0eI4A
  - b. My code:
- 2. Change this code to support RTA\* by simply replacing the algorithm function's A\* code with to RTA\* code.
- 3. Set accordingly and make it work as before!!
- 4. Add moving obstacles functionality by:
  - a. Replacing add "static obstacle" code to "dynamic obstacle" code.
  - b. Setting things up so that a set of random tiles are assigned to each moving obstacle whenever a user adds a new obstacle. [user won't be able to assign tiles for obstacle, he can specify the location for it though as he clicks!]
  - c. Set boundary problems such that the moving obstacles don't hit or go in walls!
  - d. [let some static obstacle code reside to be used in BONUS reqs]
  - e. [user clicks to add obstacle functionality already implemented as part of BONUS part]
- 5. Make robot and obstacle animations and user input easier to understand and use!

## **BONUS:**

- 1. [Easy user interaction] simply add UI buttons or anything for making things easy to do for users, etc.
- 2. [Switch button for static/dynamic] first, the user should be able to place both types of obstacles(static/dynamic) and can choose type by this switch button.
- 3. [Beautify things up] by just changing grid style, robot sprite, robot animation, obstacle sprite, boundaries, path representation, source/destination representations, etc.
- 4. [Implement an actual robot] with RTA\* [EASY] which can work with moving obstacles as well if placed!! [So, it is as easy as it was before for A\* algorithm]