

# PROGRESS REPORT 6

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Subsystem: Coding

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Reporting Progress from: 18/01/2021 => 24/01/2021

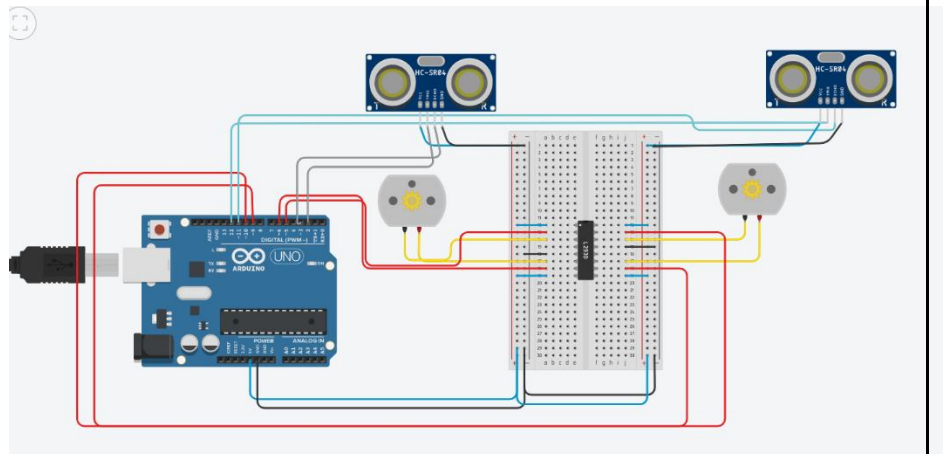
## Progress

### C++ & PROGRAMMING

- 1) Read up on Structures and its uses to simplify programs.
- 2) Used Structures along with Pointers and solved a few programming questions

### MEETINGS & RESEARCH

- 1) Wrote a CPP Program for the holonomic drive function and uploaded it on GitHub.
- 2) Simulated Two Motors in TinkerCAD and used the differential drive concept to make it do user defined commands such as- Forward, Backward, Left Turn, Right Turn, Left Rotation & Right Rotation.
- 3) Discussed about Line Sensor Arrays and its use to follow a black or white line.
- 4) Made a program for my bot which would avoid obstacles and move and rotate, waiting for the components and then will make it work.



A Screenshot of the working of Aligning Bot and Moving from TinkerCAD.

- 5) Simulated a task for moving a two wheeled bot using 2 UltraSonic Sensors which does the following things:
  - ❖ Move until it is at a distance of 20 cm from wall
  - ❖ Rotate the bot until it is aligned to the wall, which means that until both sensors show the same distance reading.
  - ❖ Use the above two functions to first align the bot and move till 20 cm of distance.

Simulated the above task in TinkerCAD and uploaded it on GitHub.

- 7) Reading up about which batteries to use for using motors and motor driver.