Design constraints:

# Robot:

**Line Following:**

The bot needs to be able to follow a line from a starting point to an end point.

The end point will be a “T” shape.

This will be achieved using three infrared sensors pointed at the ground.

function FollowLine() {

If (left sensor detects the line):

Right motor increases speed;

if (right sensor detects line):

Left motor increases speed;

if (right sensor detects line && left sensor detects line):

}

stop motors;

**Stopping in front of obstacles:**

The bot needs to be able to stop if there is an obstacle in its way.

This will be achieved using an ultrasonic sensor attached to the front of the bot.

if (ultrasound sensor detects object):

while (object distance < safe distance):

stop motors;

start motors;

**Sending and receiving data to/from the server:**

The bot needs to be able to communicate with a cloud server via Wi-Fi.

The bot needs to hold schedule information for when it should do it’s “delivery” and “return”

The bot needs to send live updates to the server while on “delivery”, “waiting”, and “returning”

On a Sunday:

Check the schedule is the same;

set an event for doing delivery: ( wait for x hrs, return);