SMART RESTAURANT MANAGEMENT

Prepared By:

Rishabh Shah : 1620BEEC30037
Neel Patel : 1620BEEC30028
Jairaj Khatri : 1620BEEC30018
Niraj Raj : 1620BEEC30031

Prof. Nikhil H. Patel
Internal Guide

Group No: LDRP-EC-20

Kadi Sarva Vishwavidyalaya
LDRP Institute of Technology & Research, Gandhinagar
Electronics & Communication Engineering Department

May-2020

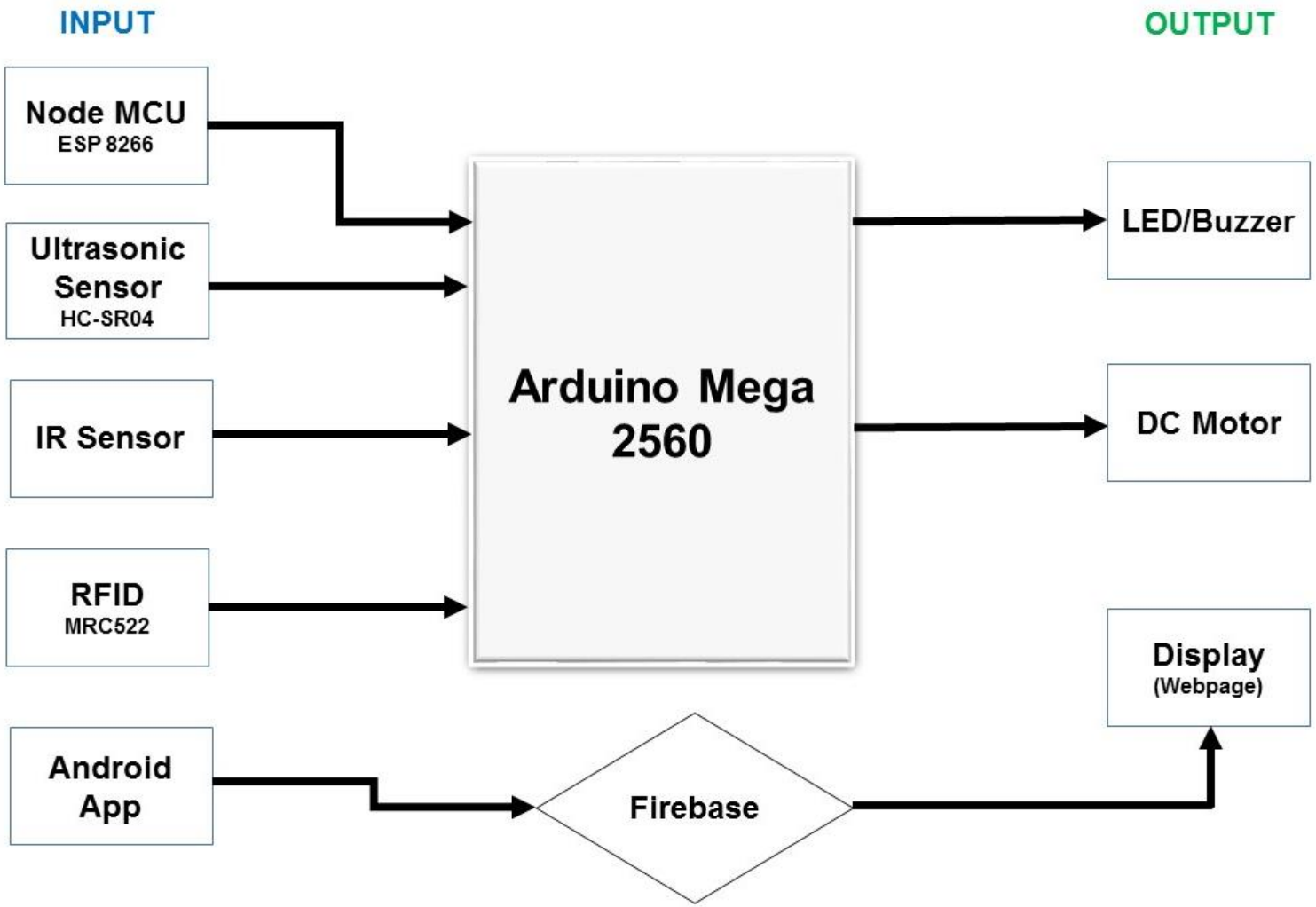
Presentation Outline

- Introduction
- Block diagram
- Components Used
- Application Design
- AGV

INTRODUCTION

- What thought made us make this?
- What did we found?
- What were the Challenges?
- How did we make it!

BLOCK DIAGRAM



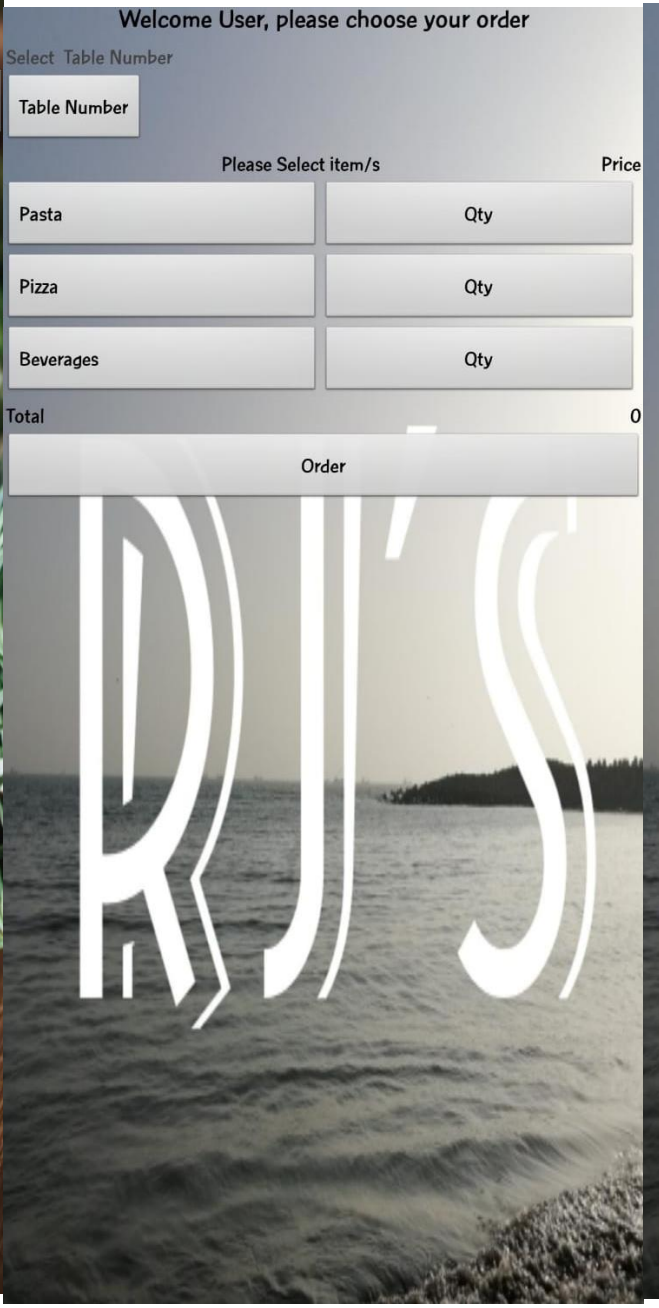
COMPONENTS USED

- Android Mobile Application of Restaurant
- Controller(Arduino Mega 2560)
- Wi-Fi module(ESP 8266)
- RF-ID Module(MRC-522)
- Ultrasonic Sensor(HC-SR04)
- DC Motors
- IR Sensor
- 12V Adapter
- 7805 IC

APPLICATION DESIGN

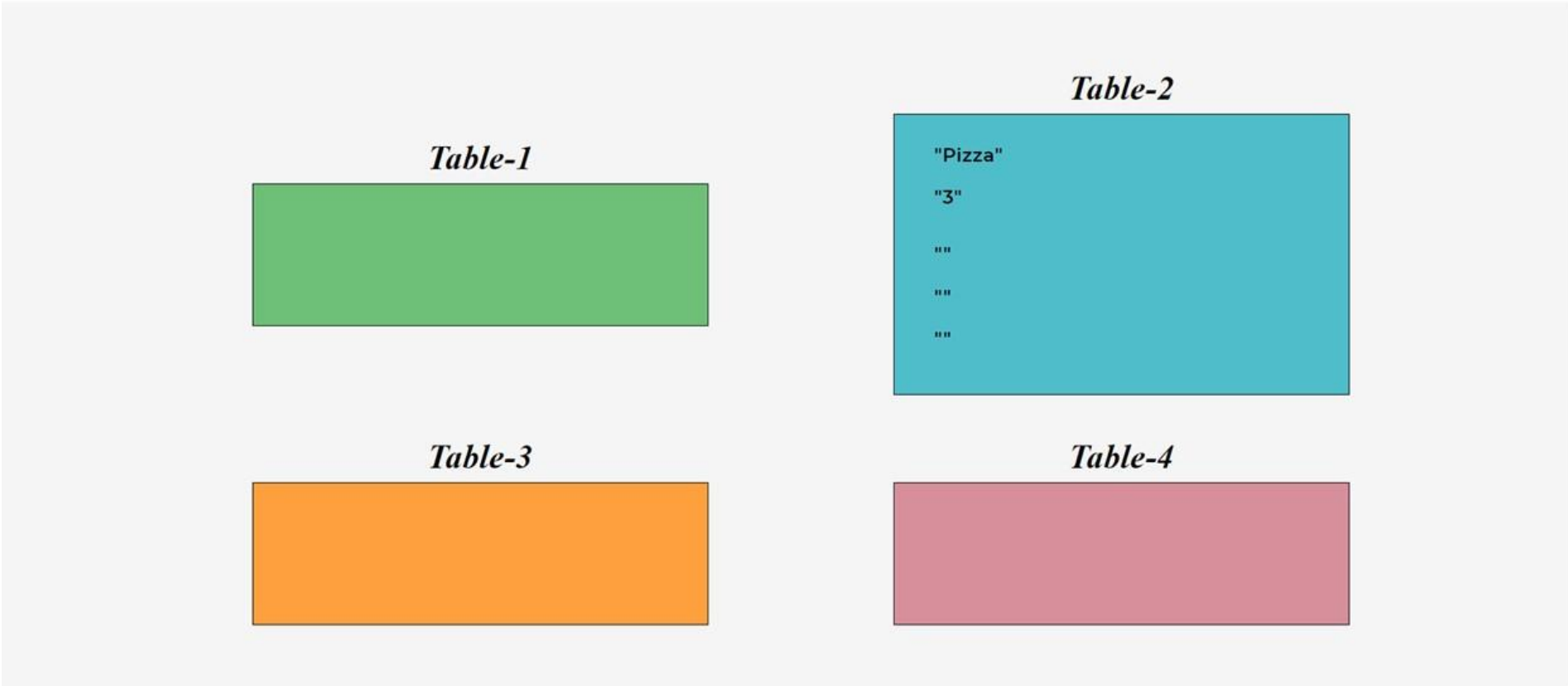
- Application is made on app development software called MIT app inventor
- We are using Java Script, CSS to make a Web Page.
- The Web Page is used to display orders which are taken from Android application.


Welcome To RJ's cafe
Please Enter your mobile number
Mobile Number
Submit
RJ'S


Welcome User, please choose your order
Select Table Number
Table Number
Please Select item/s
Price
Pasta
Qty
Pizza
Qty
Beverages
Qty
Total
0
Order
RJ'S


Thank you for Ordering!
Please wait while your food is being prepared
RJ'S

Orders running

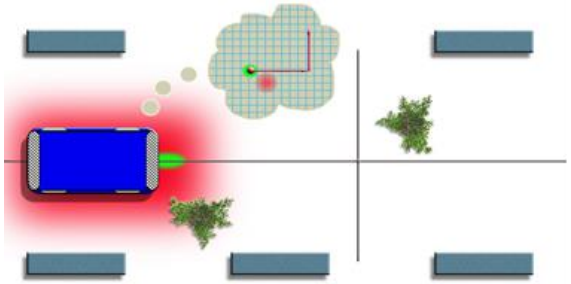


AGV

- The first AGV was brought to market in the 1950s, by Barrett Electronics of Northbrook, Illinois, and at the time it was simply a tow truck that followed a wire in the floor instead of a rail.
- We can use AGV as serving robot in hotel, material handling robot in warehouse and improve the health care system. At manufacturing area AGV are capable to transport all type of material related to manufacturing process.
- AGV (Automated Geared Vehicle) is one of the remarkable machine which helps in various tasks such as fork lifting objects, towing, product transportation etc., without the continuous monitoring of human.

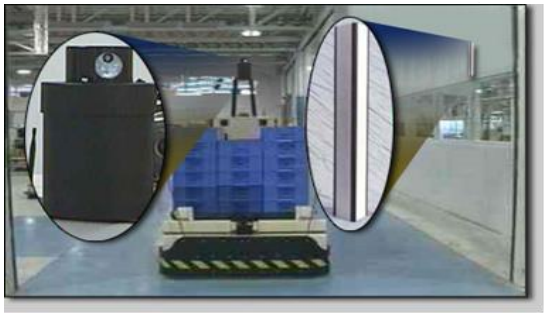
Types of Navigation

- Wired navigation:



- Guide tape navigation:

- Laser target navigation:

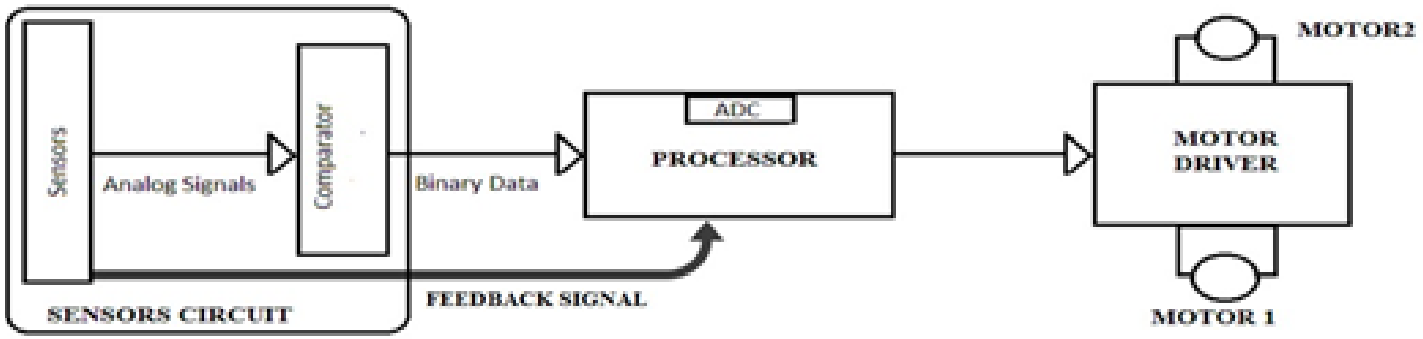


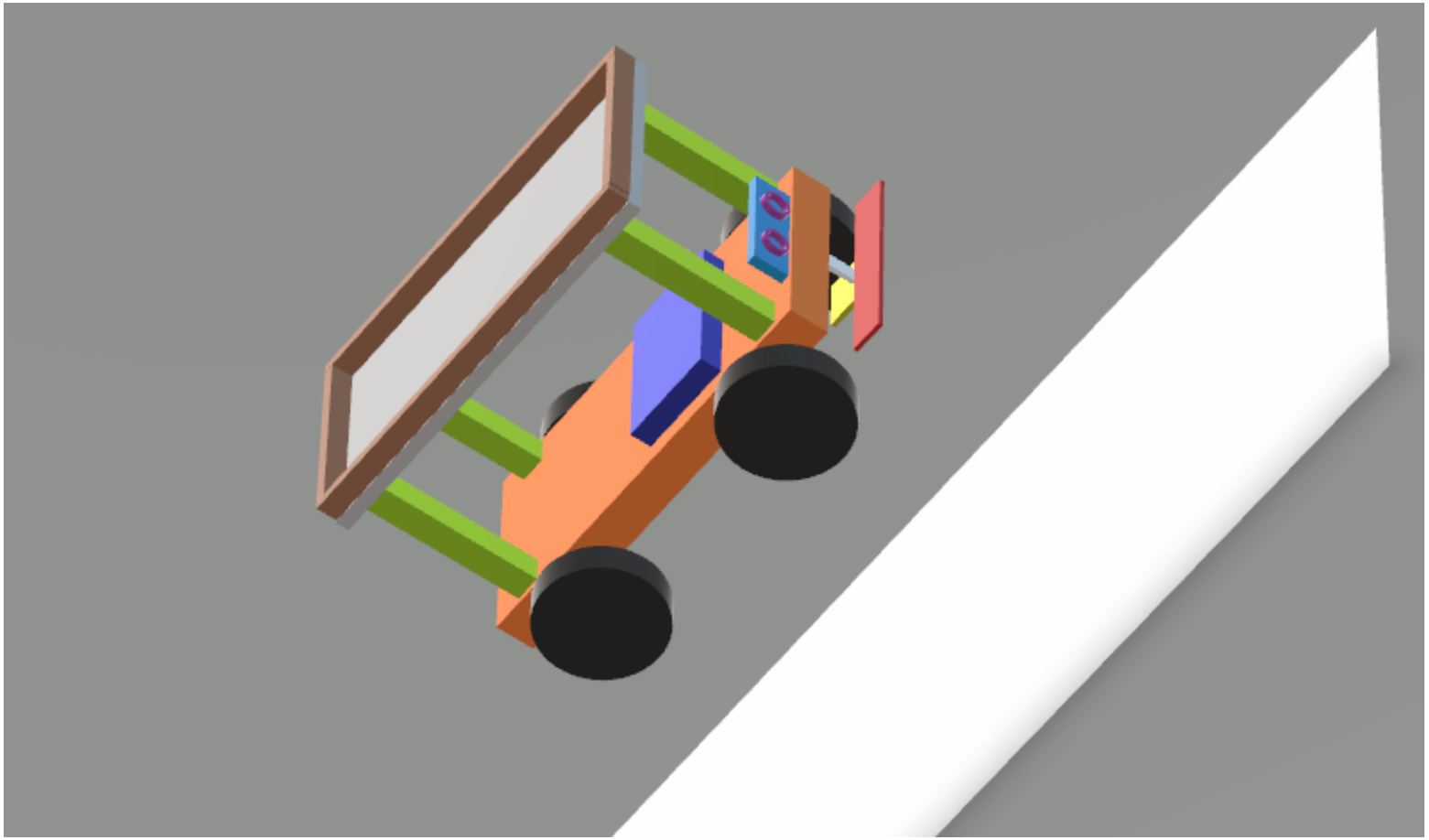
What is Line Follower AGV?

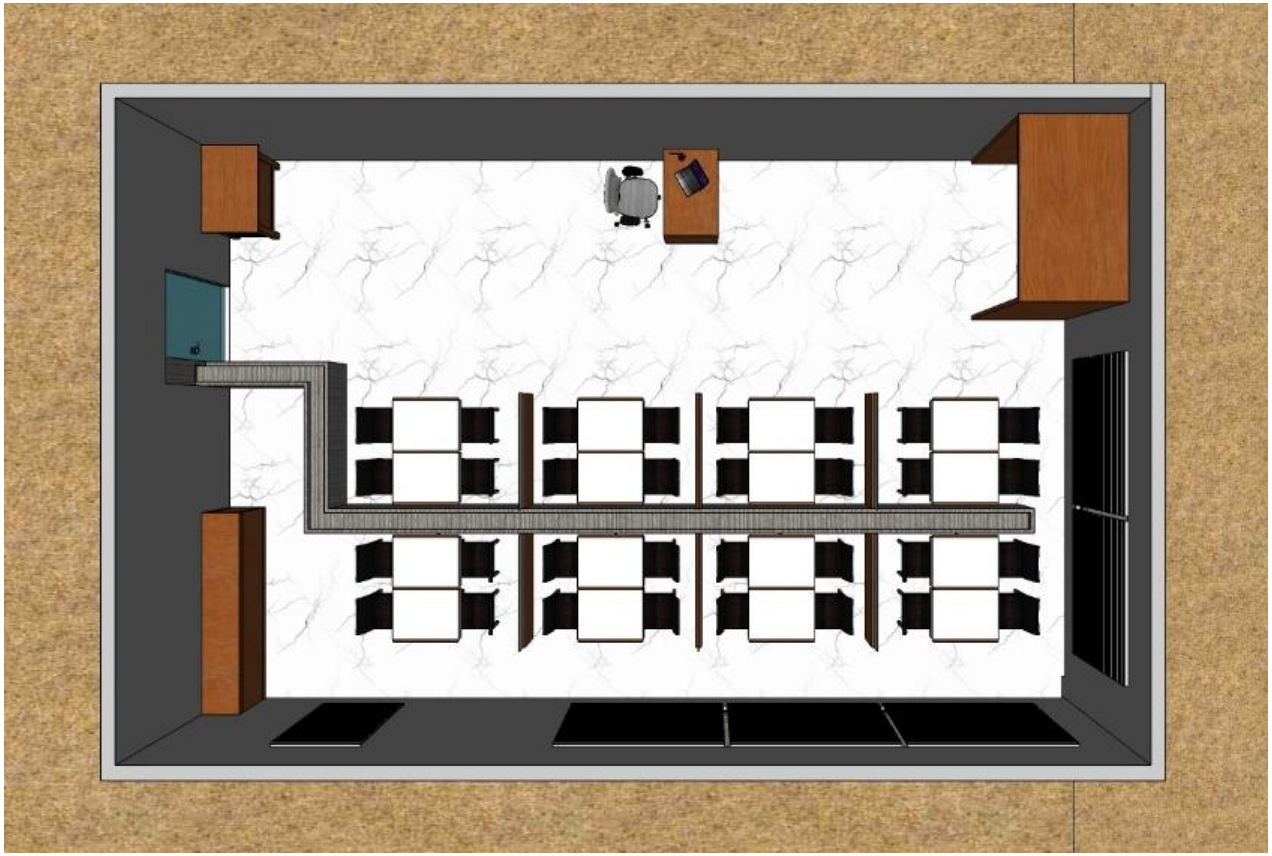
- An automated guided vehicle is a programmable mobile vehicle. The automated guided vehicle is used in industrial application to move material around a manufacturing facility.
- The central processing system of AGV is issue the steering command and speed command. For the pre-defined manufacturing environment, the line follower robot is good option for choice.
- A line follower robot is a robot which follows a pre-defined path controlled by a feedback mechanism. The path can be visible like a black line on a white surface (or vice versa) or it can be invisible like a magnetic field. Sensing a line and guiding the robot to stay on course, while constantly correcting.
- Some of the practical applications of a line follower are industrial applications were these robots can be used as automated equipment carriers in industries replacing traditional conveyer belts in automobile.

Components of Line Follower AGV

- 1) Sensor circuit
- 2) Processor
- 3) Driver
- 4) Actuators (Motors and wheels)
- 5) Vehicle







Any Questions?

Thank You…