SEMESTER -05

ENGINEERING CLINICS

PROJECT FALLSEM 2022-23
REVIEW - 02

SMART ROBOT CAR USING ARDUINO

Android based smart robot control car

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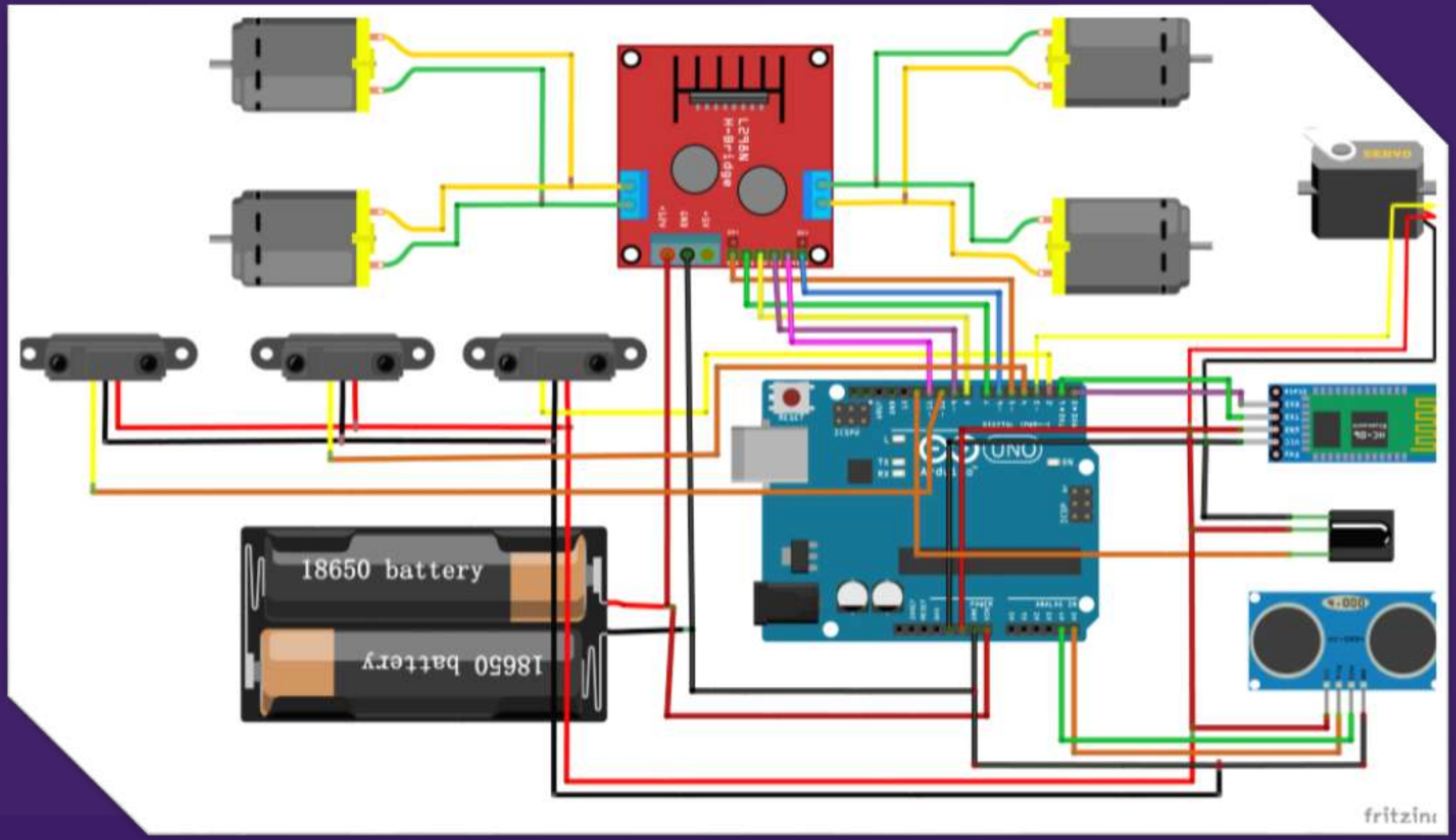
Agenda

- **Problem Definition**
- **Circuit Diagram**
- **Overall Flow Diagram**
  - Bluetooth car flowchart module
  - Infrared obstacle avoidance flowchart module
  - Line tracking car flowchart module
  - Finder function software design flow chart
- **Target Achievement during 30-Sep-22 to 25-Dec-2022**
- **Robot Car IO Pin Connection Table**
- **Each parts of car**
- **TimeLine Chart**
- **References**

Problem Definition

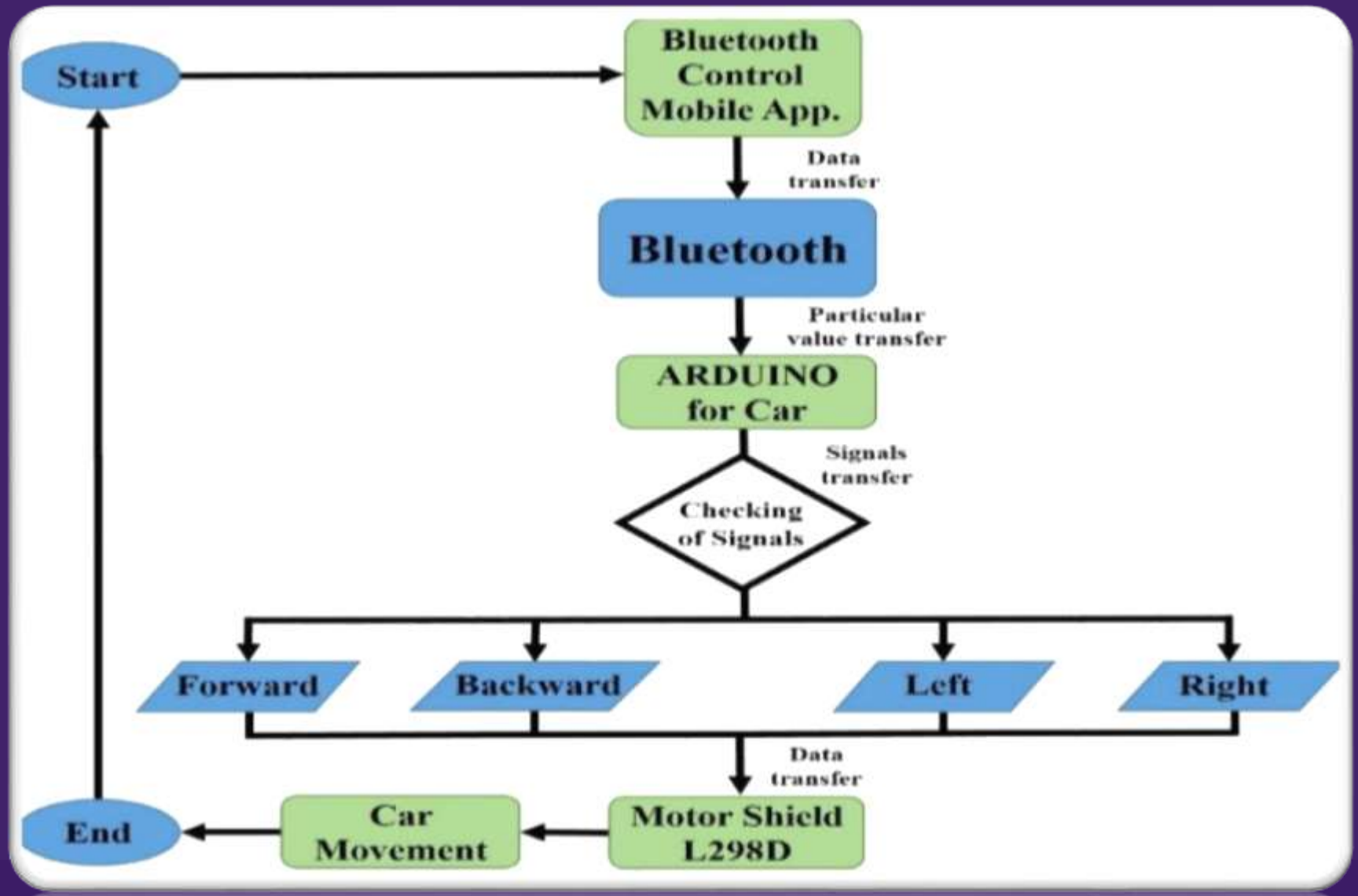
- This project is aims at developing Arduino based smart robotic control to provide a better solution to society.
- In this modern digital world, everyone is moving towards automation Robotics allows automation where machines perform a well-defined step safely and productively, in autonomous or partial autonomous manners.
- A number of robot car bases are available for just such a project. These inexpensive bases are generally made of acrylic and come complete with a set of small DC motors.

Circuit Diagram



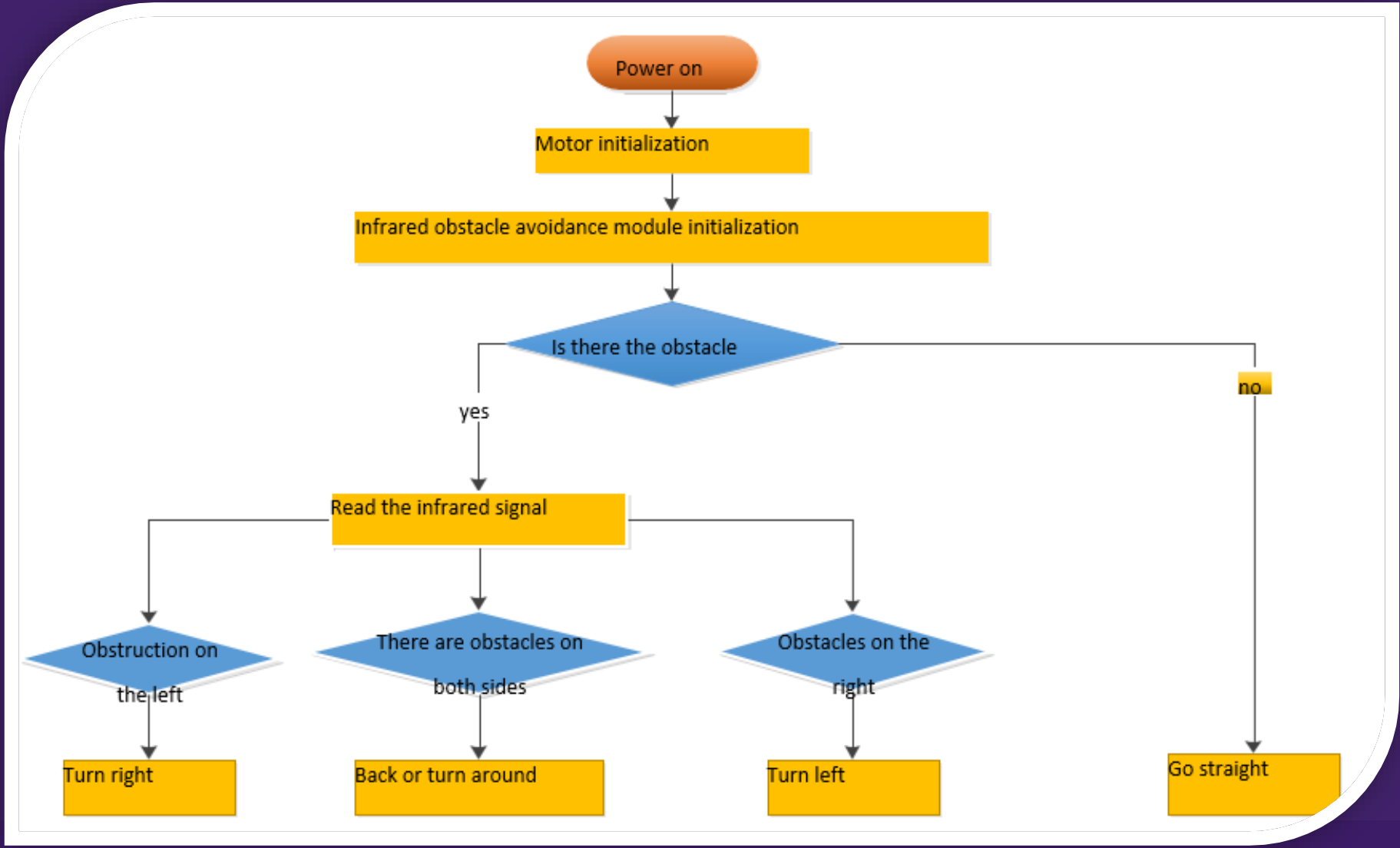
Overall Flow Diagram

- *Bluetooth car flowchart module*



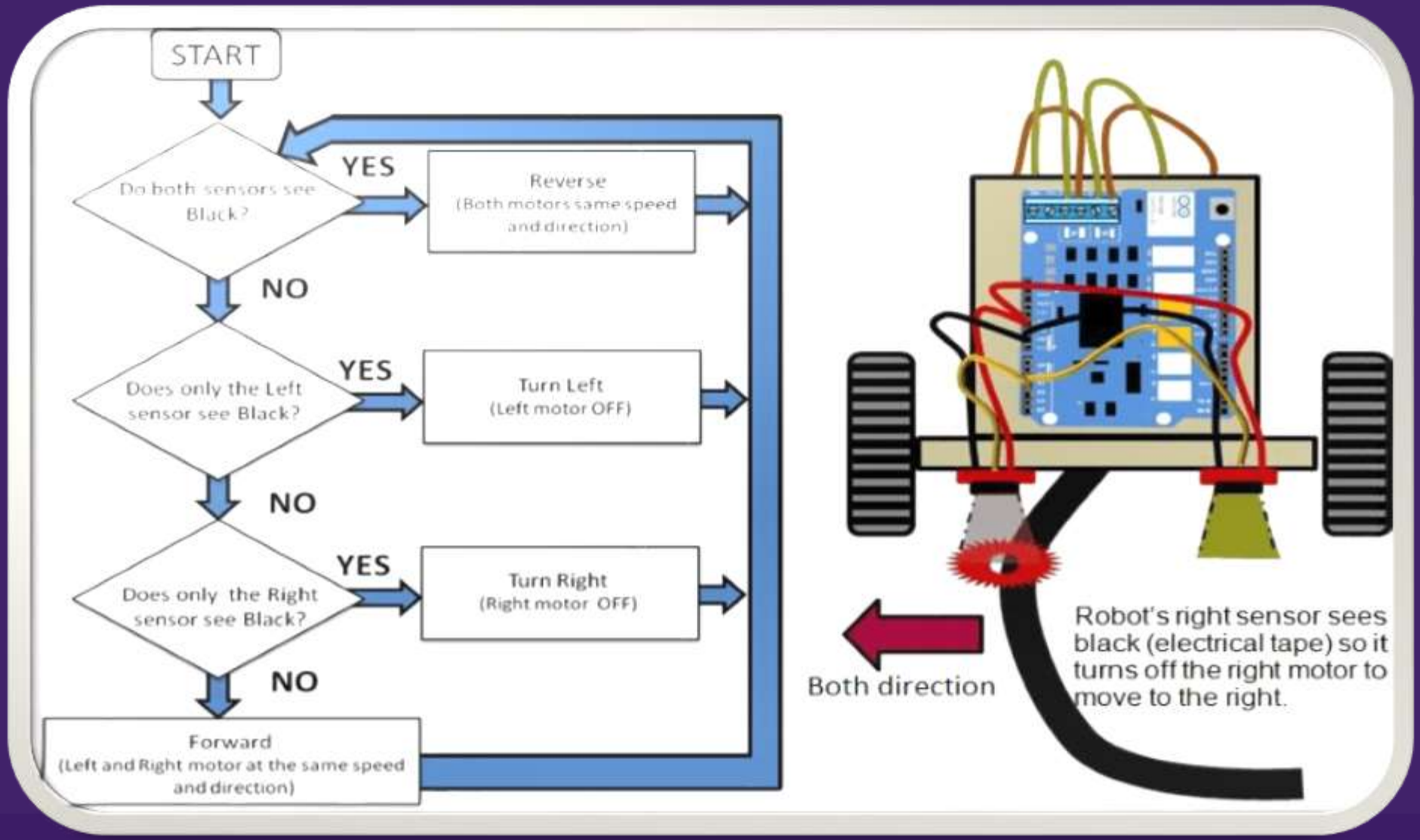
Overall Flow Diagram

- *Infrared obstacle avoidance flowchart module*



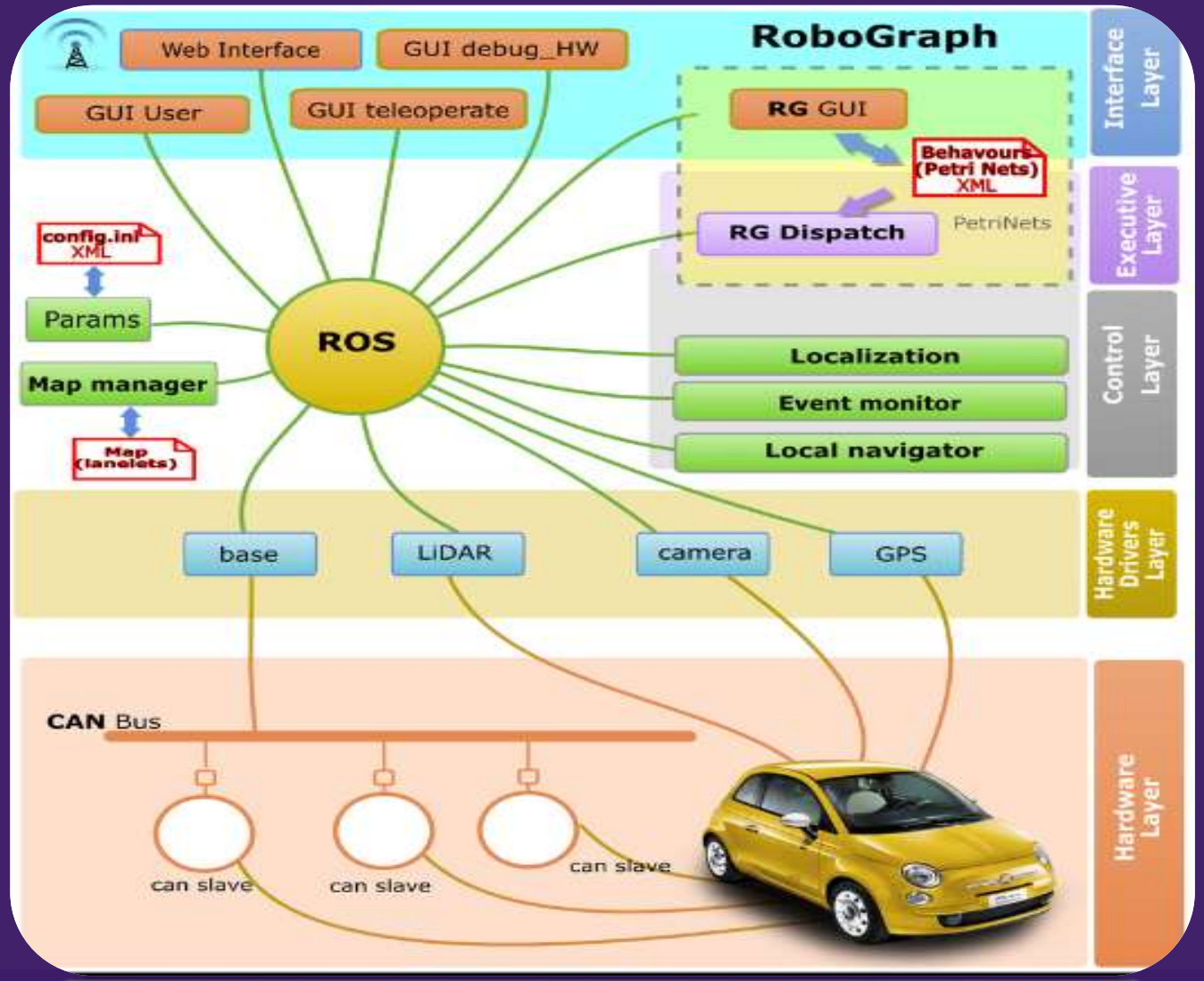
Overall Flow Diagram

- *Line tracking car flowchart module*



Overall Flow Diagram

- *Finder function software design flow chart*



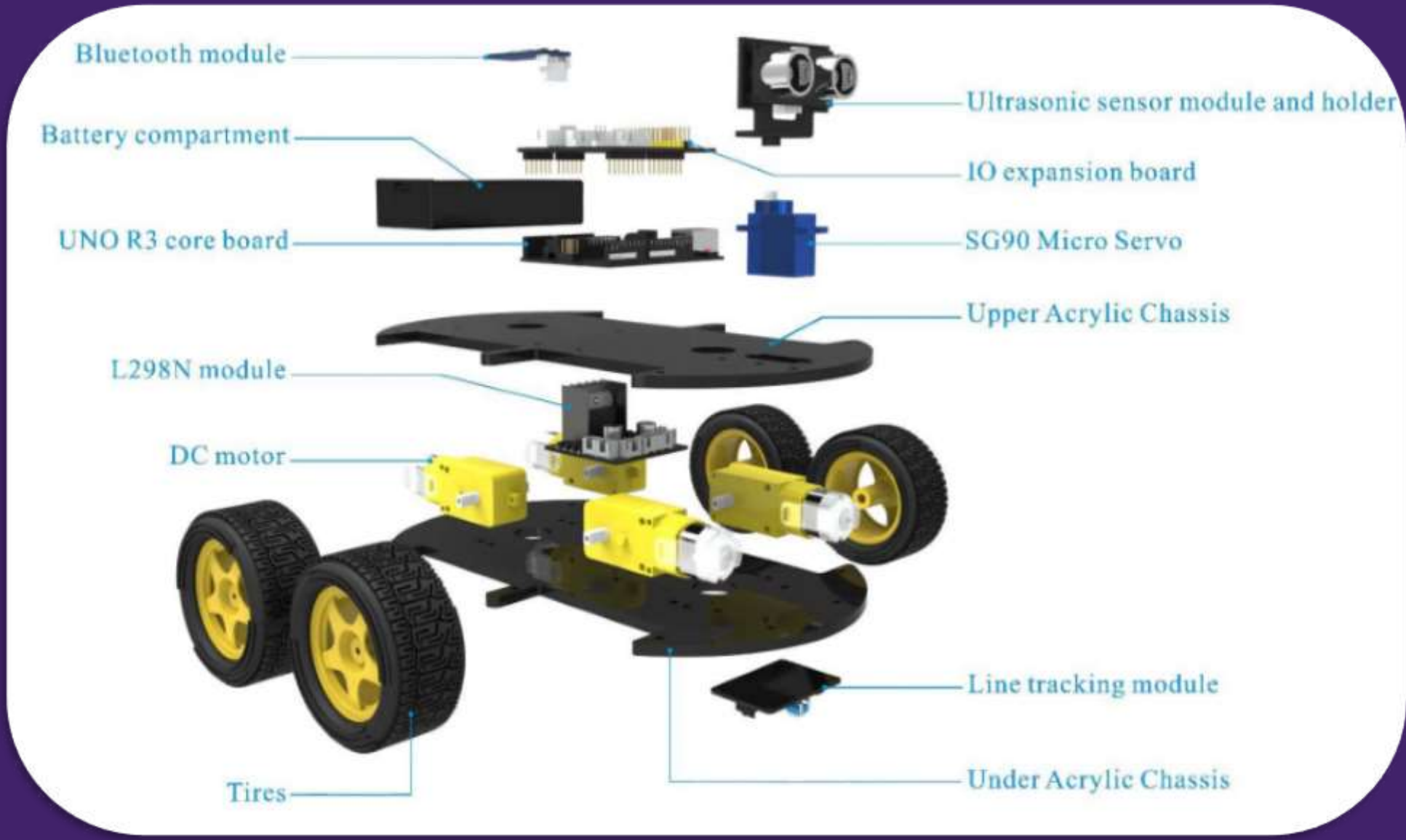
Target Achievement during 30-Sep-22 to 25-Dec-2022

- Up to Review 1 – Requirement Identification , Designing the System, Schematic diagram of overall connection
- Up to Review 2 - Module Implementation
  - Project Design – Completed
  - Circuit Diagram - Completed
  - Overall Flow Diagram-Completed
  - Testing – Yet to Completed
- Up to Review 3 – Completed Execution With Demo
  - Participating in Expo to demonstrate the prototypes

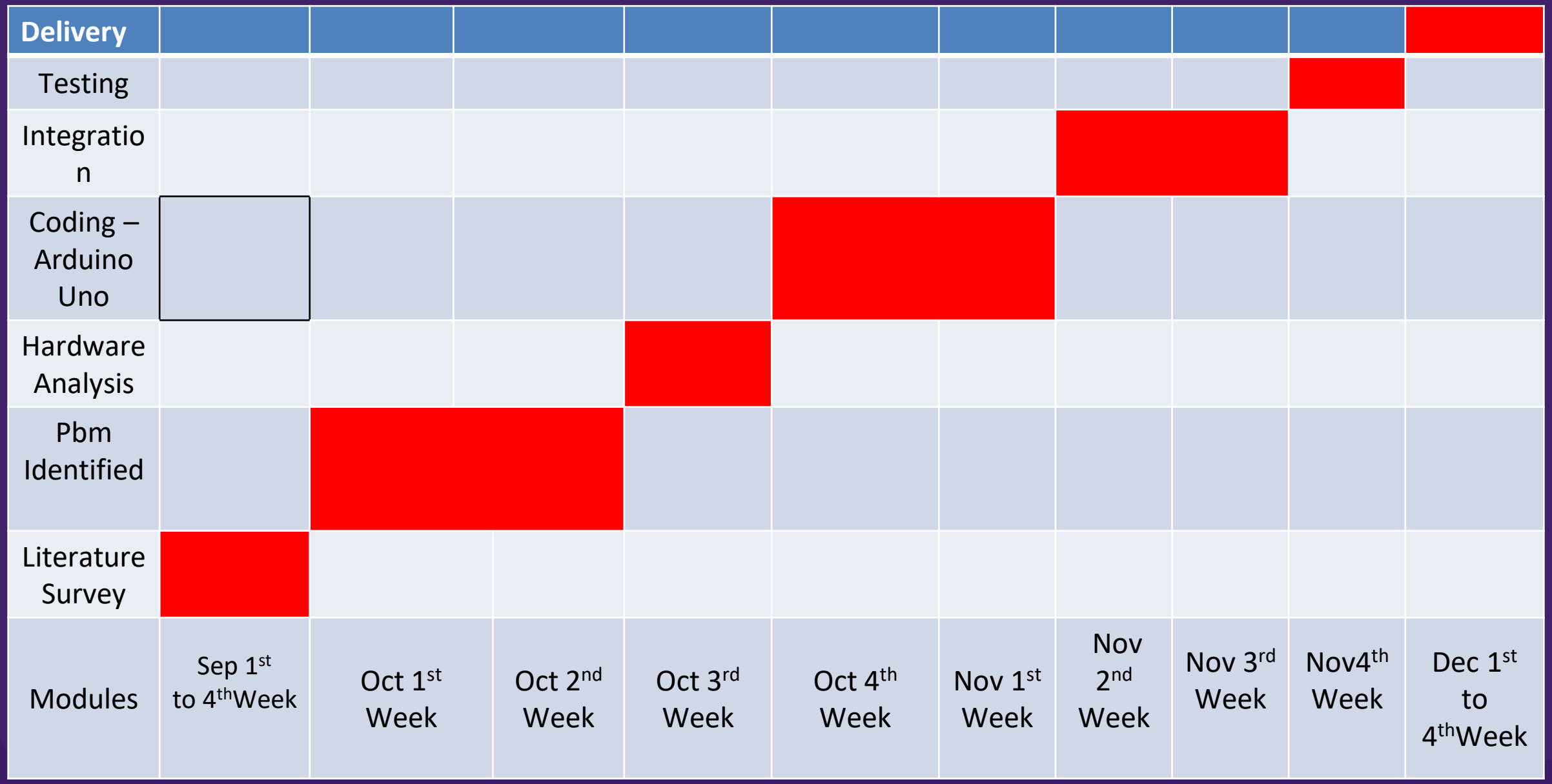
Robot Car IO Pin Connection Table

Robot Car IO Pin Connection Table				
Arduino IO Pin	Sensor Shield	Extension Module		
		Silk Screen	Module Name	Actuating Element
10	10	R	Line Tracking Module	
4	4	M		
2	2	L		
3	3	Orange Wire		SG90 Servo
5	5	ENB	L298N(Motor Driver Board)	Right Motor
7	7	N1		
8	8	N2		
9	9	N3		Left Motor
11	11	N4		
6	6	ENA		
12	12	12	Infrared Receicer Module	
A5	A5	Trlg	Ultrasonic Sensor Module	
A4	A4	Echo		
0	RX	TXD	Bluetooth Module	
1	TX	RXD		

Each parts of the car is as below



TimeLine Chart



REFERENCE

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THANK YOU