

# **Assesment-1**

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**Project Title:** Vehicle Management System

## **Abstract:**

With the exponential increase in the number of vehicles over the past decade, A Vehicle Management system is required to help in the easy flow of vehicle parking. Our project will help in this process by using Ultrasonic sensors, LEDs and Arduino boards. These sensors will help us in differentiating the different types of vehicles and giving us the correct number of vehicles entering in and out of a particular plot. Our project will use Arduino boards to gather information and feed it to the system. The code will generate with the given information and help in the parking system.

In our project we have assumed two types of vehicles-Two wheeler and Four wheeler. Under four wheeler, we also have two types- Car and Truck. Using the LED light, green light gives the vehicle to go and red light gives the vehicle to stop. We will define the number of parking plots for both two and four wheeler.

## **Module:**

- Detection if Vehicle is present

- Confirming if the vehicle is present using green LED's
- Detection of which kind of vehicle is present
- Confirming which kind of vehicle is present using green LED's
- Using a counter to count the limit of the parking lot.
- If parking lot limit exceeds the critical limit we use a red LED to close the entry point
- The moment parking space has more space because some vehicle left we switch off the red light.

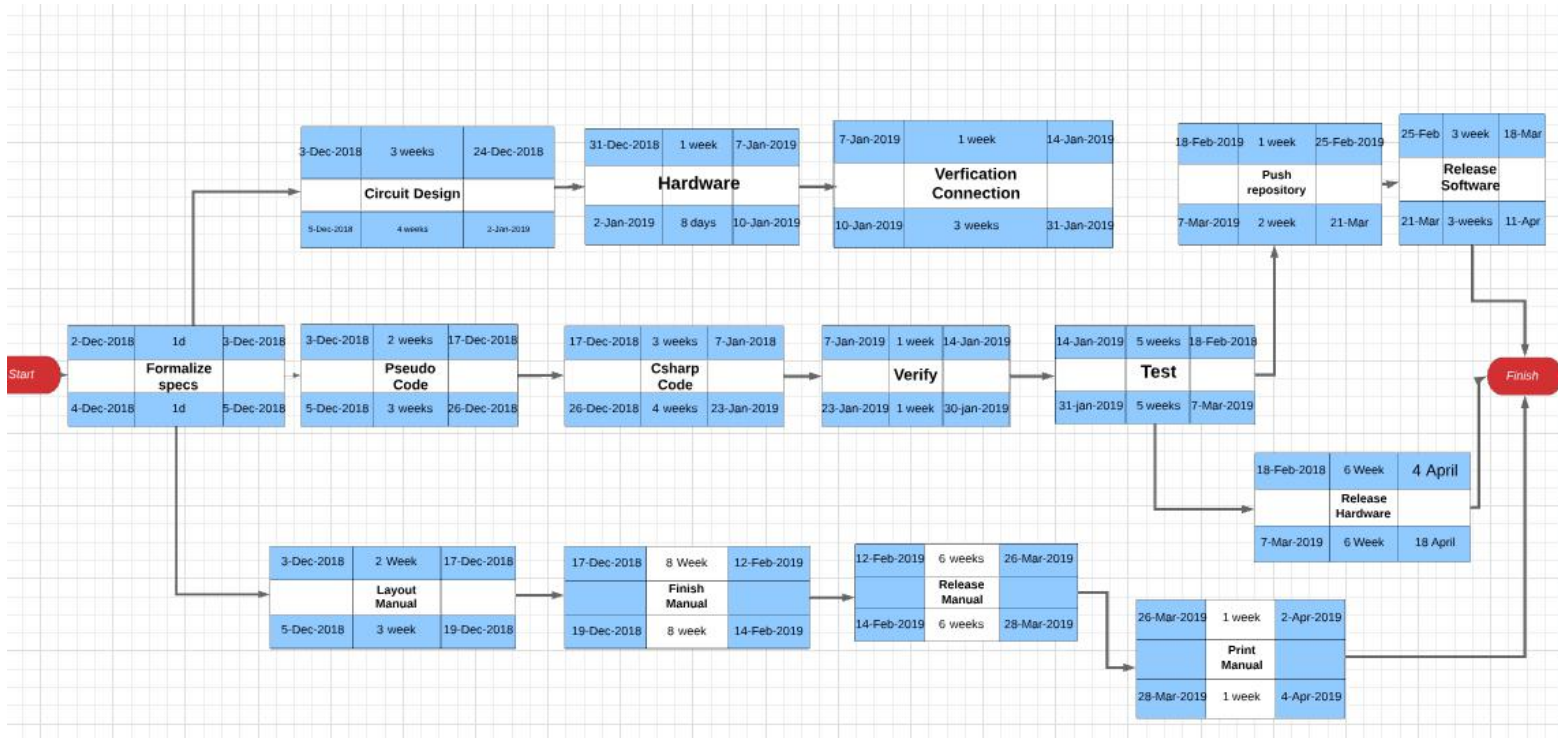
### **Hardware:**

- Arduino UNO
- Ultrasonic sensors
- LED's
- Male to male jumpers
- Male to female jumpers

### **Software:**

- Language used- C Sharp
- Arduino Code Editor

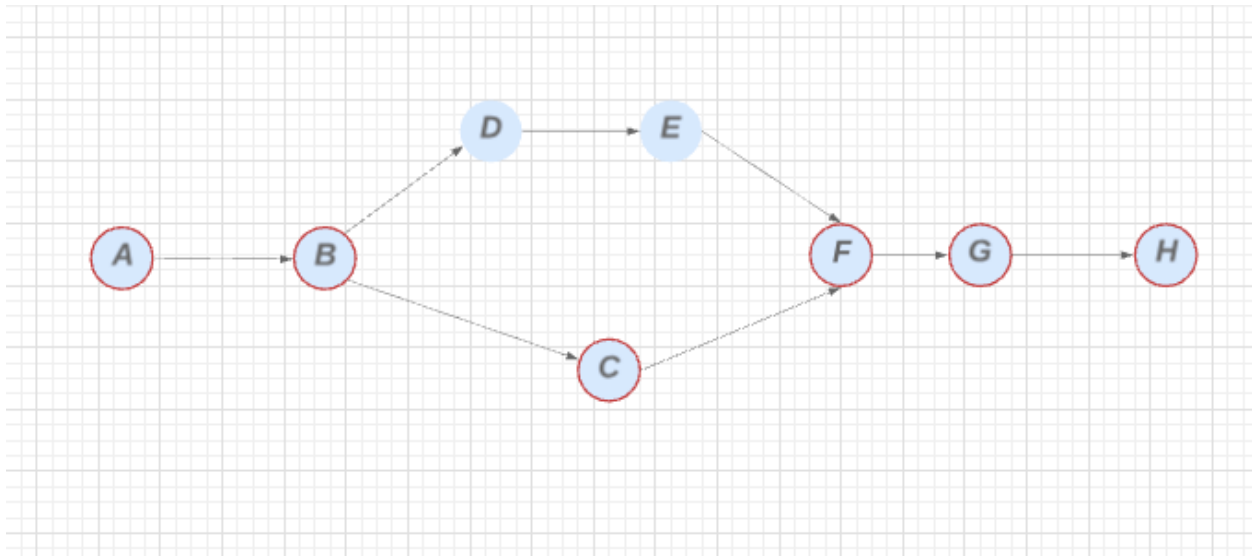
# PERT Chart



## PERT chart

Task Identifier	Task Description	Predecessor Task(s)	Optimistic Time (O)	Most Likely Time (M)	Pessimistic Time (P)	Expected Time (TE)
A	Establish project		1	1	1	1
B	Formalize Specs	A	1	1	1	1
C	Hardware Operation	B	5	6	7	6
D	Software Operation	B	1	2	3	2
E	Write Code	B	3	4	5	4
F	Integration	D,E	1	2	3	2
G	Testing	F	2	3	4	3
H	Completion of Manuals	G	1	1	1	1

## Network Diagram



## Gantt chart using excel software

