AUTOMATED OIL CRADDLE

BATCH - 8

21L401 - R AKASH
20L147 - R SURESHKUMAR
20L151 - M N THARUN BALAJI
20L153 - S A S VISHNUPRIYA

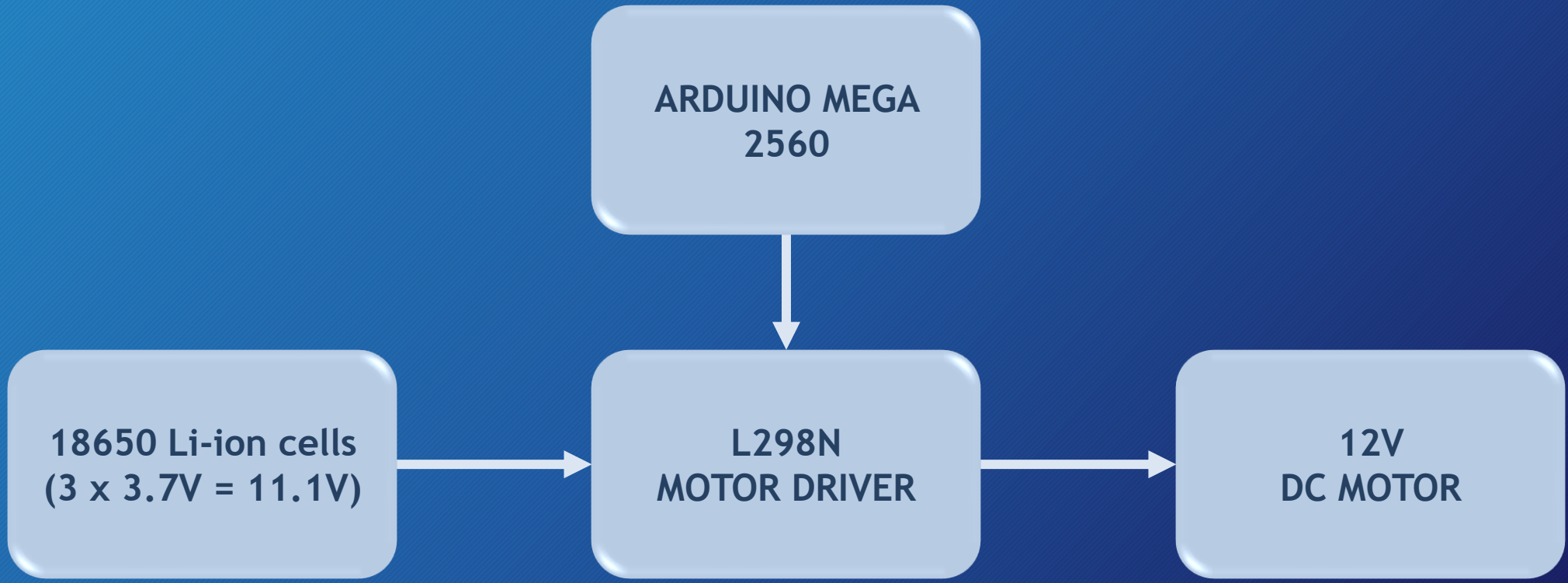
INTRODUCTION

- In Kerala Ayurvedic Treatment, there is a need to pour oil drop by drop in the patient's body for long time approximately 6 hours per day.
- As of now, this is done by humans in a routine basis. This really involves more human power in such hectic process and more cost involved.
- There is a requirement from Kerala Doctor, to make an automated machine which can pour oil in the patient's body drop by drop without any human involvement.
- From here, we started to work on this problem and brought an idea of using dc motor's bidirectional movement to make to and fro motion of oil pot.

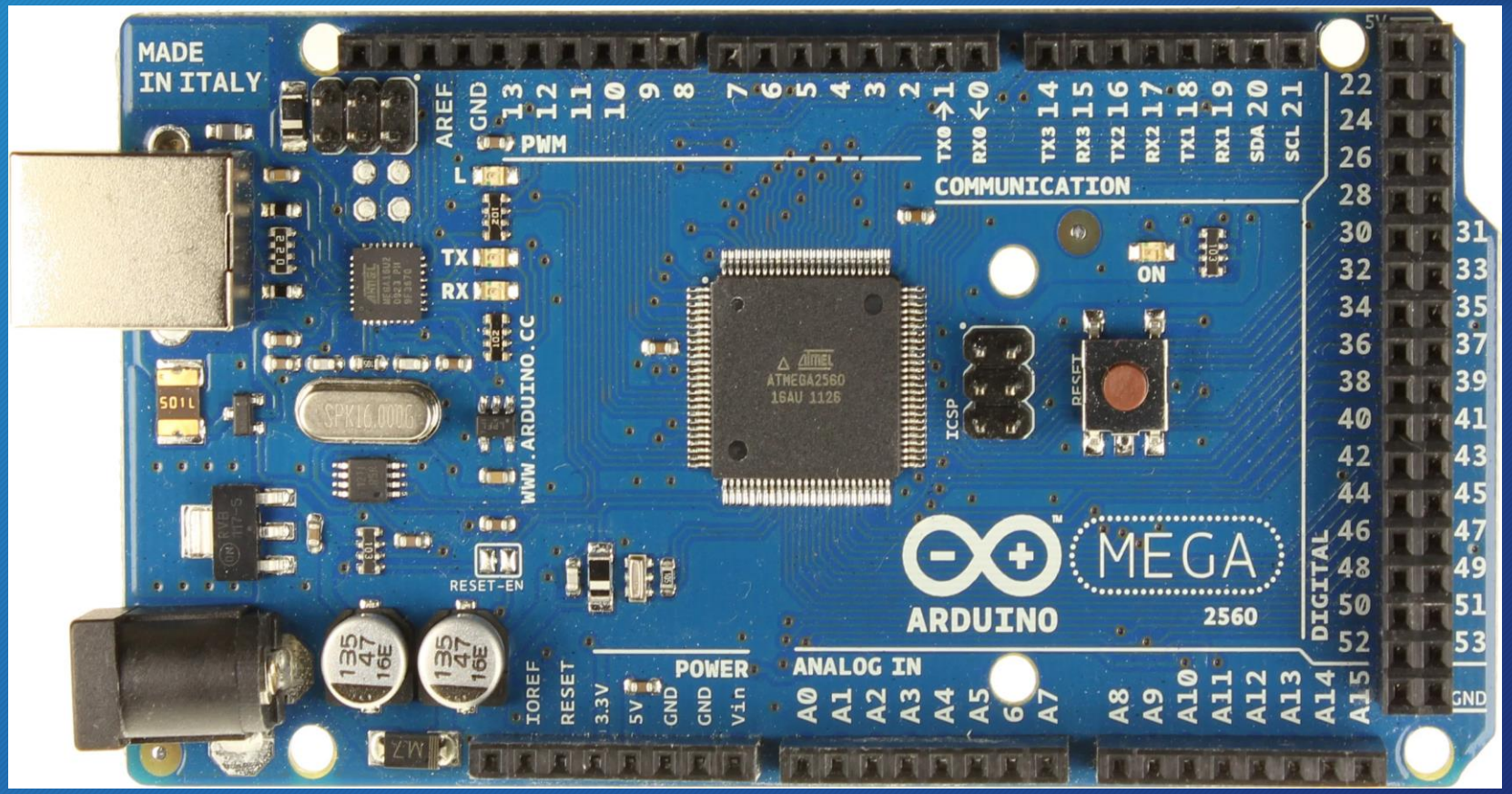
INTRODUCTION

- Swing Distance of 25mm to 525mm with the precision of 1cm is requirement given by doctor and to make it more feasible, it is planned to create android app which will provide more convenience and user friendliness for the user to set the Swing Distance, Swing Time and Swing Speed.
- According to the swing time set by the user, buzzer alarm will give alert.
- With the advancement of IoT, it is achieved easily

BLOCK DIAGRAM



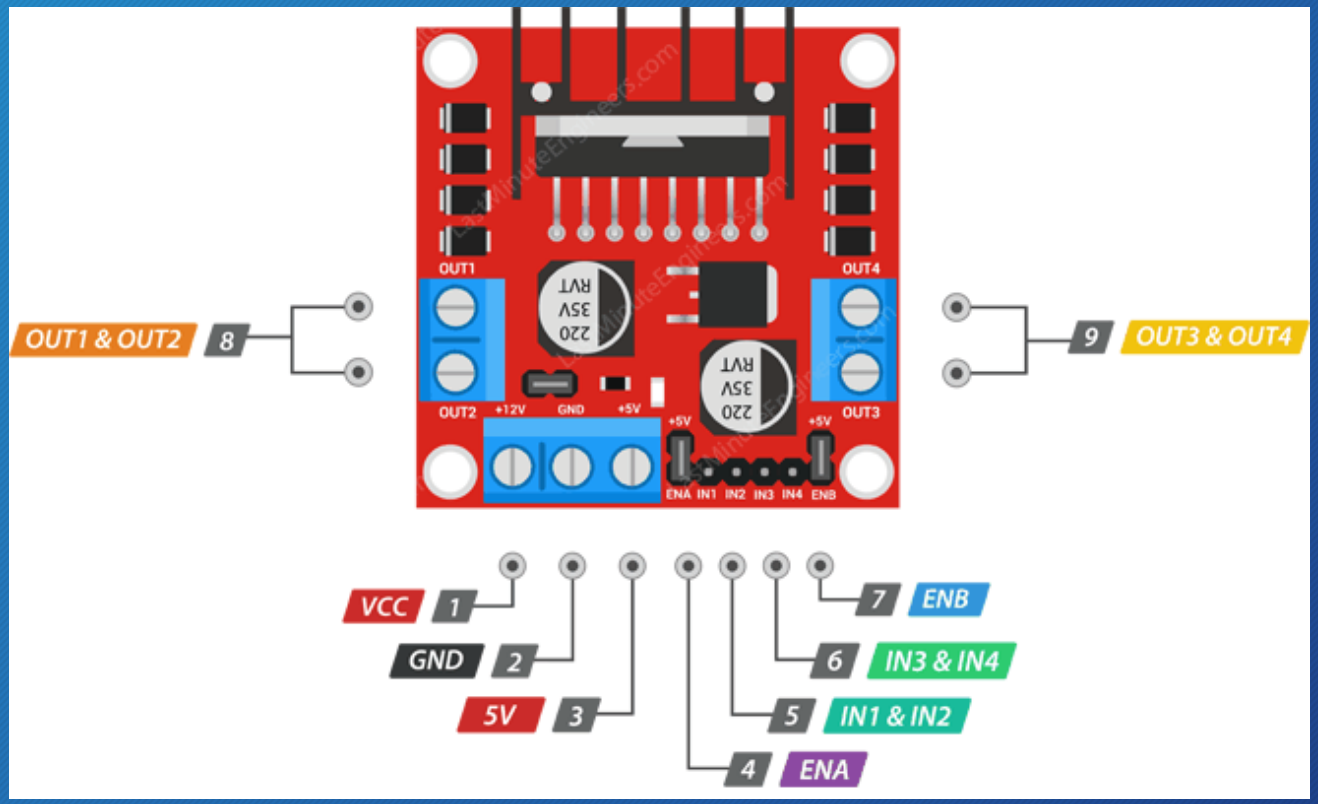
HARDWARE MODULES



ARDUINO MEGA 2560

- ATmega2560 µC
- Digital I/O Pins - 54
- Analog input pins - 16
- PWM pins - 15

HARDWARE MODULES

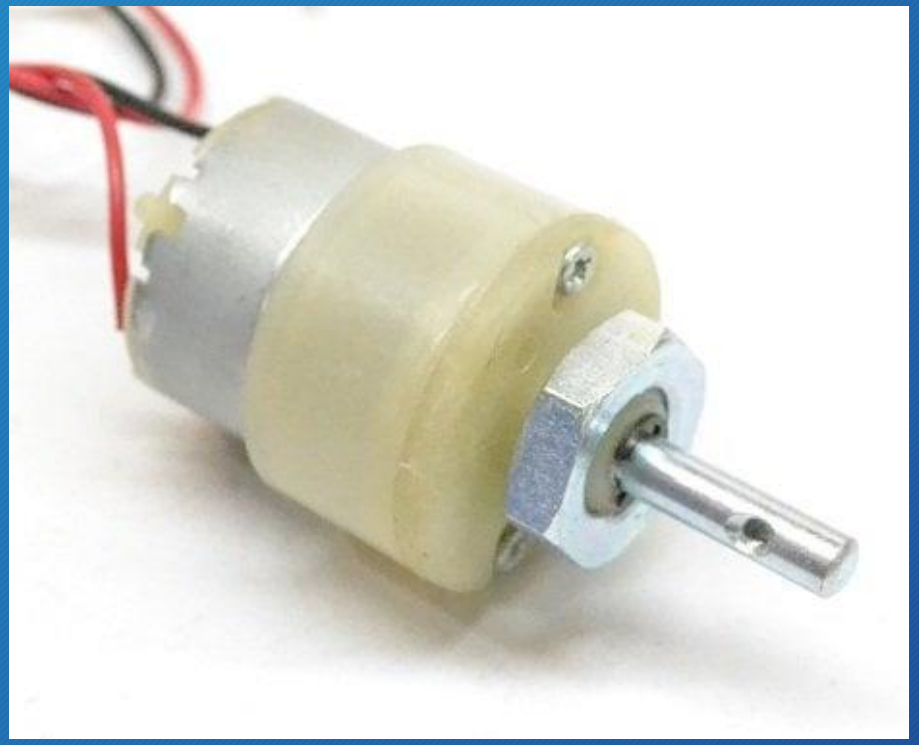


L298N MOTOR DRIVER

- PWM for speed control
- H-bridge for direction control

Input1	Input2	Spinning Direction
Low (0)	Low (0)	Motor OFF
High (1)	Low (0)	Forward
Low (0)	High (1)	Backward
High (1)	High (1)	Motor OFF

HARDWARE MODULES



12V DC MOTOR

Operating Voltage	12V
Rated speed	100 RPM
Rated Torque	2.9 kg-cm
Stall torque	11.4 kg-cm
Current	0.06A (no load), 0.3A (load)

HARDWARE MODULES

18650 3.7V Li-ion cells

Voltage	3.7V
Nominal capacity	2000mAh