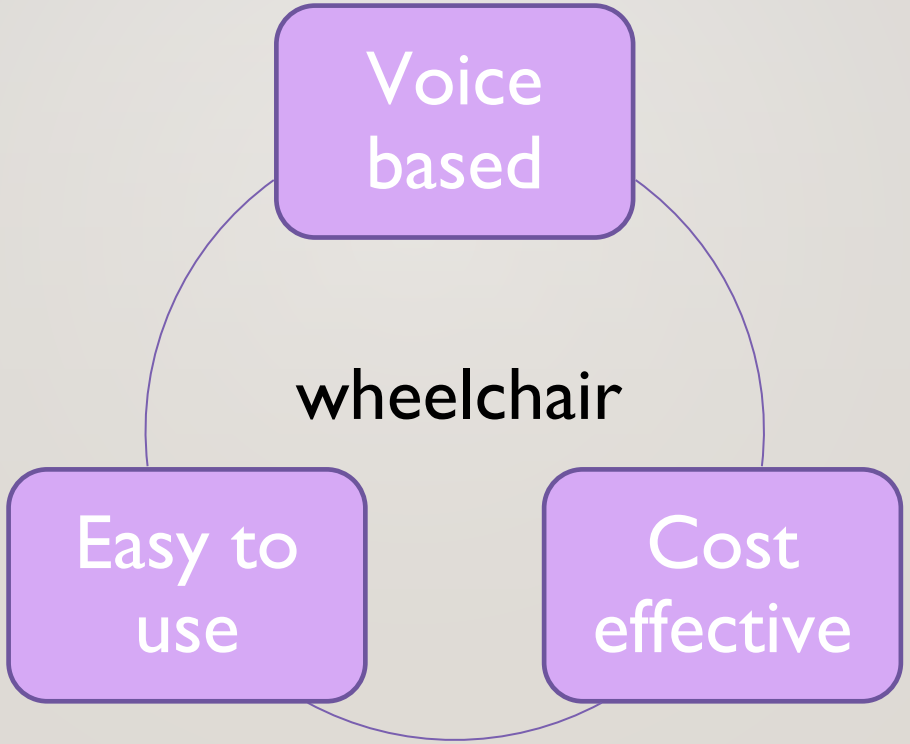
SMART WHEEL CHAIR

ABSTRACT:

- Smart wheel chair aims at
  - Helping completely paralysed people
  - Using voice as user friendly interface
  - Ensuring independent life to user
  - Cost effective alternate

OBJECTIVE



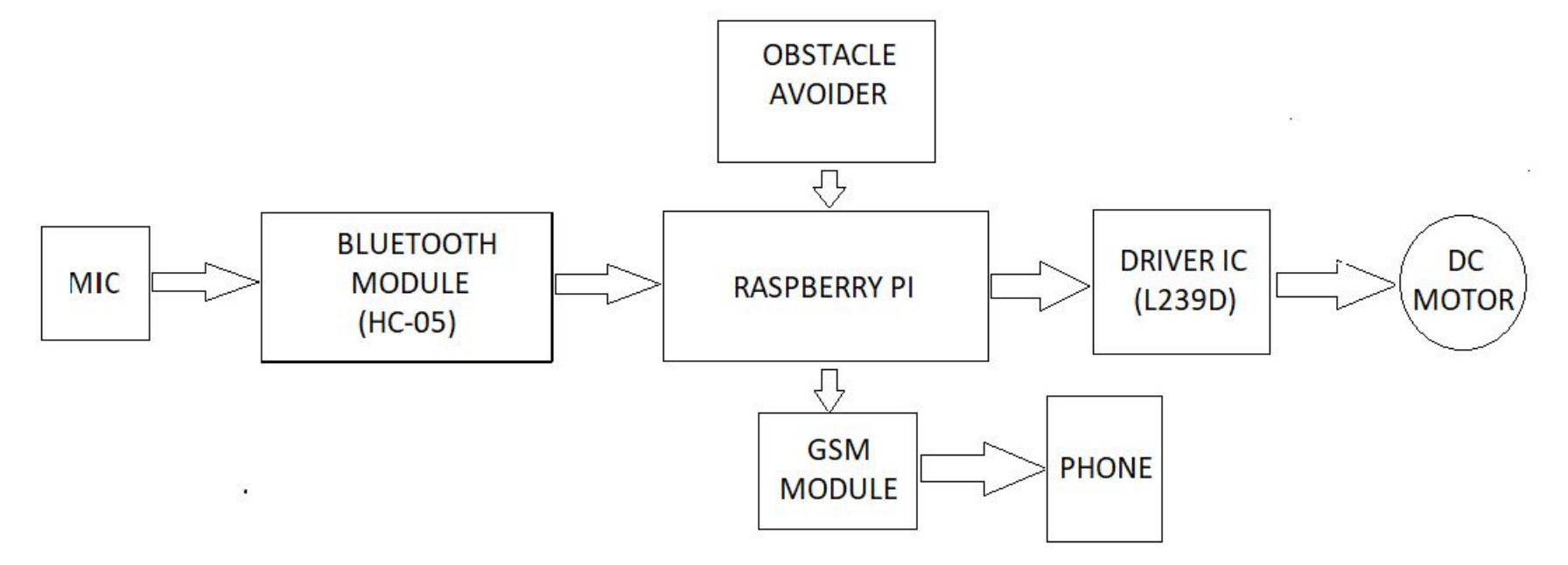
COMPONENTS USED:

- Raspberry pi3
- Battery
- Ultrasonic sensor(HC-SR04)
- DC motor driver(L239D)
- DC motor

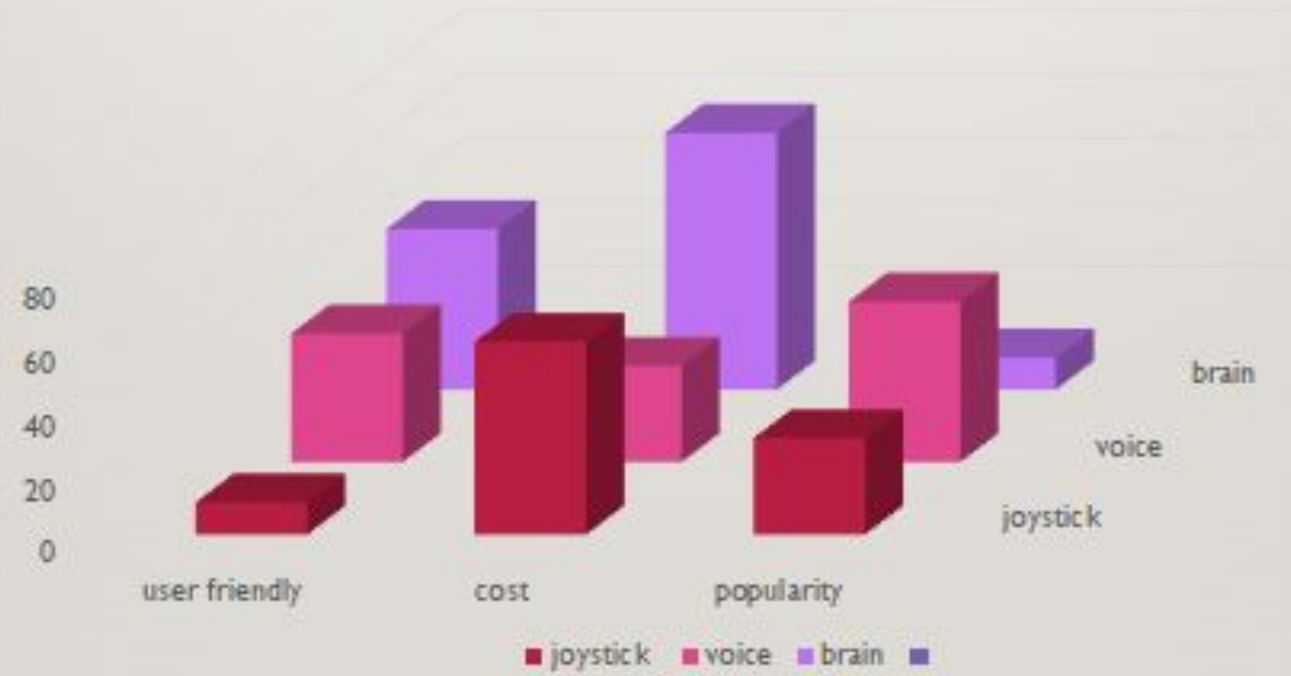
PROPOSED METHODOLOGY:

- Commands like left ,right , back ,front and stop are said by user.
- The commands are send to bluetooth module and processed by raspberry pi3
- It controls the wheels based on commands
- Ultrasonic sensor is used to avoid obstacle on the way
- The location of the user is continuously tracked and supports during emergency

BLOCK DIAGRAM:



COMPARISON


80
60
40
20
0
user friendly
cost
popularity
brain
voice
joystick
joystick
voice
brain

ADVANTAGES:

- Single command usage instead of repeated commands like go to kitchen
- Sounds instead of commands can be used for vocal cord affected users
- cost effective compared to other methods
- Live location tracking
- Highly helpful for completely paralysed people

REFERENCES

- Smita U upase, A. K. joshi, voice operated wheelchair for physically challenged people International Journal of Advances in Science Engineering and Technology,Vol-4, Iss-3, Spl. Issue-1 Aug.-2016
- Tatigutla akhila1 , Badavath mohanrao, Wheel Chair Robot using Raspberry Pi vol.09,issue.09, august-2017, pages:1415-1419.