NAVIGATION ROBOT USING RASP CONTROLLER APP

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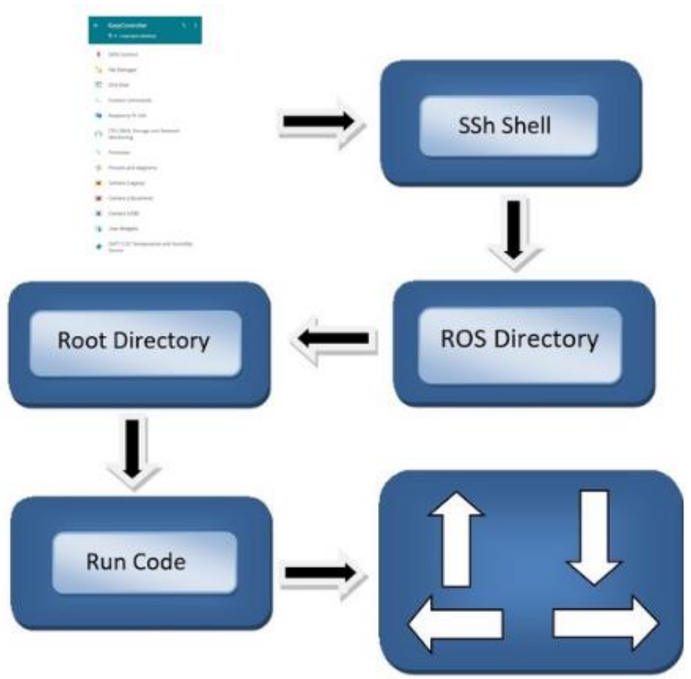
INTRODUCTION

- Robot is an autonomous machine capable of sensing its environment, carrying out computations to make decisions, and performing actions in the real world.
- Ros acronym for 'Robot Operating System' is an open-source, meta-operating system for a robot.
- The main intention behind building the ROS framework is to become a generic software framework for robots.
- Even though there was robotics research happening before ROS, most of the software was exclusive to their own robots. Their software may be open source, but it is very difficult to reuse.
- We did robot that can be controlled by a mobile , we have used some of the softwares like ubuntu , ros neotic for implementing.
- We will manage the robot using a phone, so in that the direction we enter in phone that will be executed in our robot.
- The components we have used are Raspberry Pi 4, Motors, Motors, 9v batteries, PowerBank, Soldering equipment, Android phone, Male, female wires.

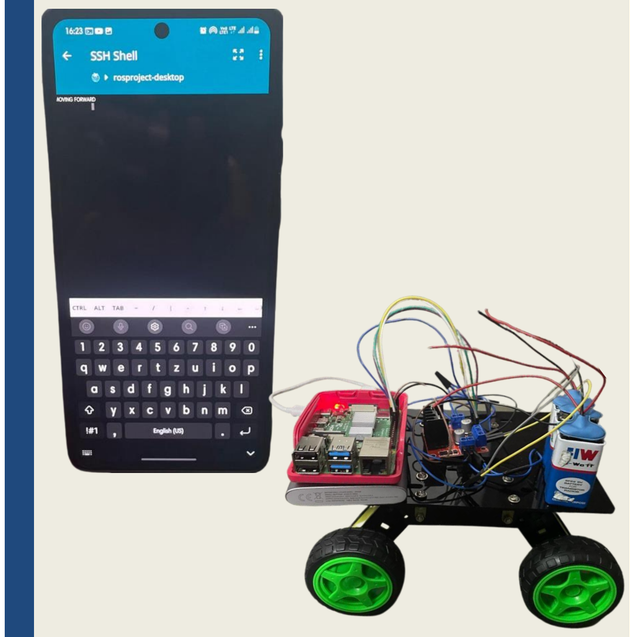
WORK FLOW



ALGORITHM

- Initialise GPIO pins of Raspberry to motor drive pins.
- Set output as LOW for all pins.
- Give frequency to enabling pins.
- Take user input as arrows.
- If up arrow:IN1,IN3->HIGH.
- If down arrow:IN2,IN4->HIGH.
- If left arrow:IN3->HIGH.
- If right arrow:IN1->HIGH.
- If q->break.

RESULTS



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