**Project J.O.R.A.S.**

1. TITLE-
   1. Joint operation rapid analysis system(J.O.R.A.S.) , a multi-purpose robot vehicle
2. DESCRIPTION-
   1. J.O.R.A.S. in short form is a robot vehicle so designed to primarily pick and place any goods which can be contaminated or which is subject to be spoilt if handled by humans. It consists of a vacuum suction pump coupled with a suction cup in which movement is given by two 180' servos which is used as robotic arm. Pick and place automation speeds up the process of picking up essential commodities and placing them at new locations.
   2. Here we have use the L298N motor driver to drive Johnson motor and the Vacuum Suction pump is driven by a transistor and relay circuit which is controlled by Arduino in the form of logic signals (0 and 1). Its remote consists of a 2 direction joystick, on/off switch for suction pump, 2 potentiometers for operating hand of the bot and a potentiometer for controlling speed of the bot/vehicle.
   3. It is a pick and place robot can be easily programmed and can be accessorized to provide multiple services such as -
      1. It can be provided with a camera which can controlled from a remote location and capture live video footages of a locality thereby helping police to keep track and prevent mass gathering.
      2. It can be used to take groceries and distribute to needy public from market thereby preventing community gathering in markets as well as risk of community spread.
      3. If armed with a microphone and speaker or a prerecorded message could be used to make official awareness announcements by government thereby preventing spread of misinformation.
      4. If armed with a pump and sprayer, the bot can be used to sanitize areas remotely to prevent spread of the virus among our precious frontline COVID-19 warriors.
      5. It can also be used to monitor for indisciplinary actions being caused by anti-social people in this fight against an invisible enemy.
3. Hardware and software requirements -
   1. HARDWARE REQUIRMENTS-
      * 1. Arduino Nano
        2. nRf24l01 module
        3. Potentiometer
        4. Joystick module
        5. Toggle switch
        6. 5 volt regulator
        7. Capacitor
        8. Arduino Uno
        9. 180 degree servo motor
        10. Relay
        11. 12 volt vacuum pump
        12. 12 volt 600 rpm Johnson motors
        13. L298N motor driver
        14. 3S orange li-po battery
        15. 7cm diameter wheel
        16. Switch
        17. 75mm diameter suction pump
   2. SOFTWARE REQUIRMENTS-
      1. Arduino IDE
4. PROCESS FLOW

J.O.R.A.S. Vehicle

CONDITION CHECK FOR EVERY SCENARIO FORWARDED BY FEEDBACK

INFORM AUTHORITIES FOR ANY ANTI-SOCIAL ACTION

FULFILL COMMODITY NEEDS

SURVEILLANCE

SANITIZATION

SPREADING AWARENESS

COVID-19 FREE INDIA

FEEDBACK

1. DATA FLOW DIAGRAM

J.O.R.A.S. Vehicle MEMORY

memory

LOCAL AUTHORITIES

STATE DATABASE

OPTIMIUM RESPONSE AS PRESET RULES

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