Today technology is developing in the same direction in line with rapidly increasing human needs. The work done to meet these needs makes life easier every day, and these studies are concentrated in robotic arm studies. Robot arm works with an outside user or by performing predetermined commands. Nowadays, the most developed field of robot arms in every field is the industry and medicine sector. Designed and realized in the project, the robot arm has the ability to move in 4 axis direction with 4 servomotors. Thanks to the holder, you can take the desired material from one place and carry it to another place, and also mix it with the material it receives.

LITERATURE SURVEY

Various researches have been made by different researches for developing this project. However, they serve a different application and have different technologies implemented. Some of those papers are mentioned below stating their technology and application.

Jorge Kazacos Winter [2] has developed android controlled robot automation. Main aim of his project was the transfer of information wirelessly between a Smartphone and the robot and developing the robot and its communication system underneath a low price and open source philosophy. He used 3D design technique to style the structure of the robot with the facilitation of parametrical modeling software. The style, when fed to the 3D printer can print the parts of the robot in a layered manner one by one and can then use these parts to assemble the robot simply. He has used arduino micro-controller and Wi-Fi technology in this robot.

M. Selvam [4] in his paper has design to develop a robotic system which has a wireless camera attached to the surveillance. Bluetooth was implemented in his project for providing connection between robot and smart phone. Wireless night vision camera was used for providing the robot surveillance. The video which is recorded by camera is then transmitted to TV unit through radio frequency signal. He used 8051 micro-controllers for the robotic unit.

Ranjith Kumar Goud and B. Santosh Kumar [3] have invented a pick and drop robot. They wanted it to be used for diffusing a bomb remotely with safety. For the robotic arm, they used a pair of motors and another pair as the wheels of the robot for controlling the movement. Connectivity is established using Bluetooth. The micro-controller used is LPC2148. They had also attached wireless camera for remote surveillance. They have worked on this project mainly for industrial and military applications. Arpit Sharma, Ritesh Verma, Saurabh Gupta, Sukhdeep Kaur Bhatia [9] has configured an android Smartphone which can control a robot via Bluetooth technology. The phone uses motion sensors and records the gestures sent via an android mobile phone. It also has an inbuilt accelerometer and Bluetooth module for controlling the movements of a robot.

OBJECTIVES

The important objectives that are associated in installing of robotic systems in industries are;

* Saving of manpower.
* Improved quality and efficiency.
* Save human’s life.
* Ability to work in any hostile environment

Industrial Environments we need a movable arm to pick and place tools. If a person involves, time will be wasted while moving for the tools. Robots can easily do the same as per the schedule or by the instruction received from the user

Micro-Controller

Servo 1

[Lower 0-180°]

Servo 2

[Arm 0-180°]

Servo 3

[Side Arm 1]

[Forward - Backward]

Servo 4

[Side Arm 2]

[Up - Down]

Block Diagram of Arm

IoT - Rover

Arm Controller

ARM

Pick and Drop

Block Diagram of project

The Rover is used to move around the working space. The arm is used to pick the component that are to be delivered within the working locations are picked and dropped.



