# DEVELOPMENT OF PICK AND PLACE ROBOT FOR INDUSTRIAL APPLICATIONS

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**ABSTRACT: This robot is designed to fill the bottles according to their size and once the bottle is filled robot will pick and place it by devices such as gripper etc. It is designed for the development of pick and place the things. It is basically connects the robot and base station with the help of wireless communication. Our main goal is to be able to control the robot without any wire connection.**

## I.  INTRODUCTION

This project require to establish both communication between robot and base station without using wire actually and GUI application. Base station requires the serial communication and needs to be hardwired with the radio controller.

6What is a robot? It is a mechanical devices which is used to perform difficult tasks. It is pre- programmed electronic device which is used for completing the tasks and for human supervision, in the way it is programmed. These can be defined as helping & enhancing the human work, such as manufacturing or hazard control.

A robot may look like an animal or a human machine. Robot's are used to the chores which is almost impossible for human. For ex :- Clean-up of nuclear waste. And can be used to do the tasks at a cheaper prices, for ex: Automobile Production. The last two decades shown us the example in the field of robotics. More applications are coming to light in this era, for ex: Battlefields and will be upgrading more and more in our day to day life.
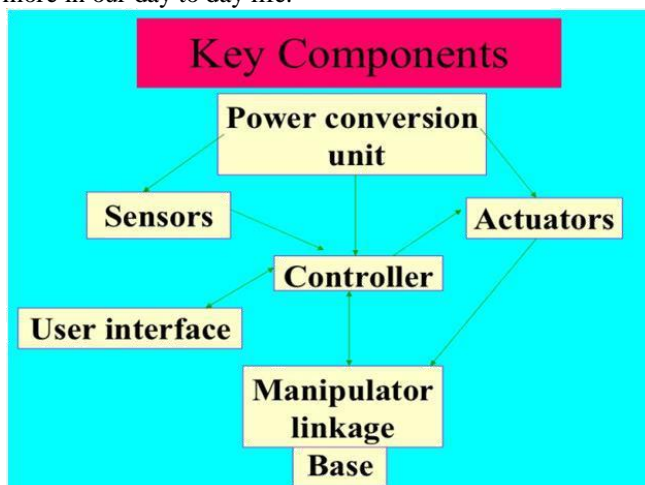


Some of the Key Features of Robotics are defined below :
- Power Conversion Unit: It converts the low power signal to high power Analog signals which can be used to drive actuators.
- Sensors: Sensors in robotics are treated as human sensory organs which are used to sense the surroundings for ex: climate.
- Actuators: It is used to convert electrical energy into physical motions.
- Controller: It is used to take one or more inputs to make the device function in a controlled manner.
- User Interface: It is used to interact between the user and machine. It allows the user to program the robot sequence to complete tasks easily.
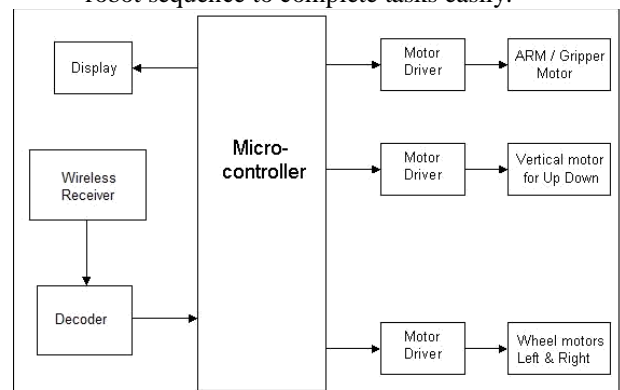


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## III.  NEED OF ROBOTICS
- It has the potential to transform lives and raise efficiency.
- It is used in manufacturing industries to make the work easier and efficient.
- It can be used at cheaper cost and be more efficient than humans.
- It can be used for the most easiest job as well as the complex which makes it very efficient.

## IV.  FUTURE OF ROBOTICS

It can be used to take the teaching at next level which can be more detailed and more thorough & it will also be helpful for the learners. It can store huge amount of data which can be accessed at any time without the need to go to library or somewhere else. In the coming future, it will also be able to understand the human emotions which will be very helpful in our day to day lives.

## V.  CONCLUSION

At the end, we can say it is used to make our lives easier and convenient. In this project as it is confirmed it can be used

wireless or can be pre-programmed as per the need of user, which also makes it very reliable.

## REFERENCES

[1] Wikipedia.
[2] Subrata Ghoshal "Embedded system and robotics" .
[3] S.R. Deb "Robotics Technology and Flexible Automation".