

## CHAPTER 1

# INTRODUCTION

### 1.1 PREAMBLE

"World report on disability" (2011) jointly presented by World Health Organization (WHO) and World Bank says that there are 70 million people are handicapped in the world. Unfortunately day by day the number of handicapped people is going on increasing due to road accidents as well as disease like paralysis. Among all the disabilities percentage of physically handicapped person is most. If a person is handicapped he is dependent on other person for his day to day work like transport, food, orientation etc. So a voice operated device control is developed which will operate automatically on the commands from the handicapped user for device control purpose. As an input device voice recognition HM 2007 is used, to recognize the speech signal. This module is used to convert the voice signal into corresponding binary code that is given to the MC controller, and the MC controller gives the output according to the voice input and that will be displayed on the LCD display and the same information will be transmitted via to control the Device.

This project describes the design of an innovative and low cost self-assistive technology that is used to facilitate the control of home appliances by using advanced voice commands of the disabled people. This proposed system will provide an alternative to the physically challenged people with quadriplegics who is permanently unable to move their limbs (but who is able to speak and hear) and home appliances using their voices to lead an independent, confident and enjoyable life. The performance of this MC controller based and voice integrated design is evaluated in terms of accuracy and velocity in various environments. The results show that it could be part of an assistive technology for the disabled persons without any third person's assistance.