

SDM COLLEGE OF ENGINEERING AND TECHNOLOGY,



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Department of Electronics and Communication Engineering

A report on the project entitled

**“HEAD MOVEMENT CONTROLLED WHEELCHAIR
/ THE VEHICLE FOR LIMBLESS PEOPLE”**

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ABSTRACT

India is a developing nation. In the medical field, India still needs to be advanced mainly in medical devices and its research. Our project is part of making a contribution to the medical field especially for an average Indian citizen. Many people are suffering from paralysis, spinal cord injuries or through inborn deficiencies and lots of people are physically challenged. Many mobility devices are been invented, having motor powered but all these devices are costly and control is through joy stick or by some other complicated method of controlling. What we are proposing is change in controlling mechanism of the motorized wheelchair, We are trying to bring a head controlled wheelchair so that many people get advantage of not using their restricted arm motion and make use of their head for moving their wheel chair which is motor powered. Also we are making a cost effective chair that would be affordable for an average Indian citizen. This power wheelchair / vehicle mostly suitable for those who are not able to move their hands and legs, The control of wheel chair movement is done by the head movement. Our project stands to have some special features like

- i) Wheelchair movement based on head tilts.*
- ii) Motorized platform on which the wheelchair is placed.*
- iii) Auto sensing of the physically challenged person on the vehicle.*
- iv) Emergency stop & easy restart facilities on vehicle.*
- v) Emergency alerting system.*
- vi) Wireless head movement sensing system.*
- vii) This project can also be very well utilized by the people suffering from physiological / physical disabilities like QUADRIPLEGIA diseases, locomotive disorders, paralyzed, physically challenged by birth, etc..*