**CHAPTER 8: RESULTS AND DISCUSSION**

**8.1 Result**

Thus, after tilting the hand device is various direction the movement of the wheelchair can be controlled according to it.

1. The wheelchair moves in forward direction when the hand gesture device is tilted forward
2. The wheelchair moves in backwards direction when the hand gesture device is tilted backwards.
3. The wheelchair moves in right direction when the hand gesture device is tilted in right side
4. And lastly, wheelchair moves in left direction when the hand gesture device is tilted on left side

A delay can be seen of minimum 5 sec between the device and wheelchair when the device tilted from one direction to another. It also seen that Bluetooth can provide a good signal of range of about 10 meters.

Therefore, we have completed our aim of providing a hand gestured controlled wheelchair which can used for physically challenged people.

**CHAPTER 9: SUMMARY AND CONCLUSIONS**

**9.1 SUMMARY**

The goal of this project was to find an alternative solution for the wheelchairs present in the market and to do so by creating an affordable model. This empirical study shows how such a wheelchair model benefits from the use of different wireless technologies. The proposed system “Wireless Gesture Control Wheelchair” was designed to cater patients with various kinds of physical disabilities. Since the wheelchair moves according to specific hand gestures each corresponding to its own direction; complete ease of the patient has been kept in mind while making the system. We envisioned this system can be a better alternative to the joy-stick wheelchair model. As for future work, a statistical analysis of the prototype and its abilities to detect deviations in hand movements in multiple environmental settings is planned.\

While promoting this system we would like to emphasize on the following 3 points:

• The first is to encourage people to treat the limbless and abled people normally or at least make them feel normal.

• The second is to help the specially abled, i.e. not only limbless but all kinds of abled people like blind, mute, etc.

• The third is to make the disabled people aware of the governmental help they can get, like scholarships, medical benefits, etc. Without all three of these behaviors occurring, the service will not achieve its intended individual objective and the aim which we created the project.

**9.2 Advantages**

1. It is easy to design and manufacture as all the components are easily available
2. It is portable and hence can be placed anywhere
3. It has low cost of manufacturing
4. The microcontroller can be programmed if any modification is required
5. Due to wireless communication data rate is faster.
6. Wireless makes ease of operation
7. No need of lengthy wires
8. Power consumption is less

**9.3 Disadvantages**

1. If power supply fails system won’t work
2. Failure of device/components may have dire consequences, fatal accidents can occur
3. Can be uncomfortable for some people (for example – small children as their hand is small to fit the band)
4. In prototype stage
5. Can be susceptible to Noise sometimes