Ethics Statement

Ethical issues or ethical dilemmas that could be faced during the course of this project are discussed here. Four main categories of ethical dilemmas are emphasized here.

SAFETY: The main idea of the project is the application of robotics to the elderly environment. As the title suggests, the project would be dealing in working with the health care. So, care should be taken such that the expected standards are fulfilled. Since the project deals with working of the robot in the health care centers, it should be taken care that the robot moves in a correct manner. It should be designed in such a way that it can move around freely and avoid obstacles. It shouldn't be crashing into people or choking them. There shouldn't be any error in decision making; the right patient should be getting the right treatment. To summarize, it can be said that the robot should be reliable in terms of safety, thus minimizing the risk of harming someone's safety.

EFFICIENCY: It should be made sure that the robot must be used efficiently. Efficient use of the available resources must be made. For example, the battery power should be more but at the same time the robot shouldn't get heated, the motors and the sensors should be used effectively so that they last long. The equipment should be handled with care in order to avoid any wear and tear. It should be able to be recycled or reused again. Just because a robot is available it shouldn't be used for performing every small task. To summarize, it can be said that the robot should be sustainable, effective and it performs more work than required.

JOB OPPORTUNITY: This project should be helpful in the field of employment. The robot that is designed should not be like a competitor for the workers; instead, it should be useful to them. Robot should be used in order to reduce the work of the worker but it should not be a cause for terminating a worker from the job. That is, a robot working in a health care center doesn't mean that the nurses should be fired from their job. Also, the robot should increase the opportunities for employment, that is, people should be hired to

program the robot, extend its features, etc. In short, the robot should redistribute the work, not terminate the workers.

BUSINESS: With the improvement in the business sector and development of new technologies, there are also few unpredictable problems that arise. Problems like privacy, security arise. It is necessary to make sure that these issues are properly dealt with. For examples, the code or the prototype should be copyrighted and licensed. Business tactics must be implemented to with stand economically. That means the robot must be designed in such a way that it is cost effective and it raises the economy (or improves the business) of the organization which uses it.

Apart from these four issues, few other common issues must be taken care of. The robot should be user friendly and easy to implement or work with. It should also be environment friendly. That is, it should maintain cleanliness, the working environment must be healthy, and the battery or the microcontroller used should be programmed with care because any short circuit may lead to environmental hazards. The robot should be designed such that it can work under common environmental conditions, it shouldn't be too big or too small, the size should be ideal. Thus, these kinds of ethical dilemmas or issues should be taken care of for the smooth functioning and implementation of the project.