**Format for the Proposal**

To: Susan Hubbard

From: Diksha Pande, Pratiksha Kapse, Nomaan Faiyaz Shaikh, Padam Rana

Date: 5th September 2019.

Subject: Team Activity #2

Purpose: Present a Project idea

**Project Name**

Project Brain Gateway

**Project Idea**

Project Brain Gateway integrates the digital system and the human brain, allowing them to control electric devices via thoughts. This project consists of implantation of microchips in the human brain which will process and transmit thoughts in the form of signals.

**Problem or Need**

As we know many people are suffering from disorders like Alzheimer’s and short-time memory loss. Our project will help such people to communicate with the world via thoughts. It will help the patients to use electric devices like mobile phones and computers by simply thinking about them. Also, this project will be helpful for humans suffering from paralysis, they will be able to perform physical activities such as grasping a coffee mug with a Robotic Arm using their brain signals. In addition, this project will help normal people to perform the day to day tasks such as calling, answering phone calls just by their thoughts.

**Significance**

To solve the difficulties of communication with disabled people, this project involves implantation of the gadget into the human brain that will allow a person to control devices with the power of signals. It will make the life of people much easier just by sending signals to the target devices to perform simple tasks or accessing information on devices via signals rather than actual communication. It will lead an application that can significantly improve a patient’s quality of life.

**Research**

1. Major research is required in receiving the data which will require in the interface to convert the digital signal into brain impulse.
2. The security of smart chip is an issue.
3. Thorough research is required for working and testing the device on humans.
4. Neuralink(American Neuro technology Company) has developed an implantable brain-machine interface that can interpret the brain activities and record it on to a digital device. Further research on Neuralink will be very helpful for us to enhance our project scope.