**3.1 Team Oral Project Proposal – 3 marks/due week #3**

1. Greet the instructor (mention the name of the person you are greeting)
2. Introduce yourself:
   1. pronounce clearly your first and last names
   2. state your Seneca program (e.g. Computer Engineering)
   3. state the purpose of this occasion (e.g. “We are here to propose our project ideas for TPJ655/452”)
3. Introduce your project ideas:
   1. state the name of your proposed project
   2. explain why you decided to undertake this project
   3. state all functional features of your project
   4. show a sketch of the system block-diagram
   5. discuss major components and the general approach to building the project
4. Listen to your course instructor’s remarks and take notes
5. Close your project proposal with some complimentary remarks (e.g. “Thank you”, “We believe our project will be a success”)

Our project is called “License Plate Recognition System”. We decided to choose this as our capstone project because, as Computer Engineering students, we want to implement both hardware and software into this project. We also thought that learning about machine learning would be beneficial to our future professions as automation is a growing and thriving field. From the hardware portion, we will be using a raspberry pi as the main MCU, a relay, a servo motor, and a speaker. For the software portion, we will be using python to incorporate Microsoft Azure’s API for Cognitive Service, as well as using a json database. Our features will include the following:

* A python script, running on the raspberry pi, will capture a photo using the webcam
* The script will then send the jpeg to the Azure service
* The Azure service will parse the image and return a json object with all license plate information
* The json will then be checked through a database
  + If the license plate is found, the pi will trigger the relay and start the motor
  + If the plate is not found, a sound will be played through a speaker

Major components will include:

1. Creating the python script to run on a timed base.
2. Taking images with the webcam using the script
3. Incorporating the Azure API
4. Implementing the speaker and relay/motor functionality