For the final Project, Dan, Jacob, and Evan would like to make a Traffic Light controller on the DE2-115 board. The controller will output the Traffic signals to LEDs using the GPIO pins on the board and take DIP switch input as car sensors for the lanes coming into the intersection. The logic will be implemented in C using a NIOS II processor set up using Qsys. The NIOS II will output light controls as integers encoding the behavior of each light including left turn arrows. These integers will be taken as inputs to a VHDL model which will output the logical values used to drive the LEDs with the GPIO Pins.

