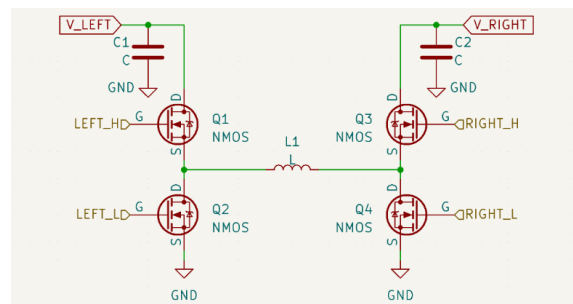


# Week 2 Report

## 1. Supercapacitor controller

Read and understand the principle and construction of the four-switch Buck-Boost bidirectional buck-boost circuit (symmetric buck-boost converter).



By applying suitable duty cycles to two half-bridges to achieve the desired left and right voltage ratios, thereby controlling the current on both sides. Then, the chassis power limit is stabilized to 40W by detecting the power demand and controlling the charge and discharge of the supercapacitor.

## 2. Understand the controller parameters and requirements for building a digital model for testing and subsequent developments

For example, the model implementation, possible failures and countermeasures. Still working on it.