The title of my project is ‘Dual Inputs and Adjustable Output Dc-To-Dc Converter’. It is a converter that converts one direct current input voltage to another output direct current voltage with different voltage levels. The DC-to-DC converter consists of two inputs, that means supply by 2 DC sources, and when one of the supply reduces to 60% from its nominal value, then it will automatically switch to the other source to take over and power up the converter. Besides that, the output voltage of the converter must be adjustable by the user at any level within the range to their desired value. The project uses the relay to act as the switch to control the switching action between two sources. Before the voltage comes to the relay, it will be compared by two OR logic gate and one with the inverter in front of it. After that, only come to the relay part to choose whether to switch to source 1 or source 2 to allow it to supply voltage to the converter.

Buck boost converter will be chosen as DC-to-DC converter part, it will help the user to step up or step down the output voltage level to their desired value. So, with the adjustable output of DC-to-DC converter, the user only can adjust the output either step up or step down to their desired value.

The project report contains the description about the construction, the circuit analysis, circuit diagram, block diagram and etc. Before this, this report also included an introduction to introduce about data input and adjustable output DC-to-DC converter components list, data sheets for the IC and finally is the conclusion to summarize everything about the project together with references.