# Implementation

1. This section discusses our project implementation, including procurement of parts and assembly.

## Component Procurement

How did we choose where to get our components from?

There are 3 alternatives for the decision of where to get components from. First one

is ordering from the global websites like Digikey. Advantages of this choice is availability of almost all type of components in various ratings. However, it has disadvantageous like being very expensive due to Dollar- TL currency and additional taxes and long delivery time. The second one is buying from local shops like in Konya Sokak. Advantages of that is we can get directly to components without a delivery time. Disadvantageous of this choice is lack of datasheets and limited variety of components. We have used this choice as an emergency way. Last one is ordering from websites like Direnç.net or Robotistan. Advantages of that is availability of large amount of type at affordable prices and 2 or 3 days delivery time.

As a result, we get initial componenents from Direnç.net, additional compenets is supplied by local shops.

Provide a complete bill of material (including price if applicable)

Any “lessons learned” regarding component procurement. (e.g. online listing may not match the received material).

-Even the simulated voltage and current value within the limit of component, buy more than one. A wrong switching or closing can burn the most reliable component.

- Online listing may not match the received material so do not choose other components without seeing visually by yourself.

- Inner dimensions of the box can be different due to parts that used in connection of box, try to buy by hands or order bigger box.

-Find a local shop that you can go easily in case of emergency situation like forgetting to order components or burning case.

-Order to suitable input-output terminals and implement your circuit. When you are on the implementation phase of circuit, you need to plug the input and output cable so many times and this can cause a trouble for circuit.

- Order different rating fuses, you can use low rating fuses at the start of your project.

## Project Assembly

How did we assemble the project? Were there any lessons we learned about assembly or things we would do differently if we did the project again?

Firstly, drawing the circuit schematic and connections can be logical for project. Terminals of the Triac and bridge rectifier is not proper for our circuit board. So, we drilled holes for that components. After that point, connection changes in these two components cause us lots of trouble. We should buy klemens for components and connect to circuit board with the help of this klemens.

After the circuit connections, we start to test our circuit. According to our test result we made changes in the circuit such as changing potentiometer rating for good control at output and changing the size of heatsinks.