4. INVESTIGATION

A. Idea Generation

In order to efficiently generate ideas and a working hypothesis, our group maintained a schedule and an organized list of assignments. Before our first formal meeting, we agreed to read all the files and watch all the videos regarding the project. By doing this, we were informed of the project objectives and acquired time to formulate ideas and a working hypothesis of how the reflow soldering oven should work. In our group meetings, these ideas and hypotheses were discussed, recorded, and written down for reference later on. We decided that each idea and hypothesis should undergo a performance test and analysis every time the segment in which it is used for is completed, in order to keep track of its function and operation.

During the first meeting, everyone volunteered their area of strength and interest whether it was hardware, software, user interface, organization, etc. and we deliberately divided the whole project and assigned individual tasks according to these areas of strength and interest. Through this method, each team member is focused on what they are capable of doing, which is appropriately time-efficient in a time-constrained schedule. This was the most efficient way to generate ideas because each person is focused on one particular task instead of stressing on the big picture. On the other hand, anyone was welcome to contribute ideas and suggestions to another member’s assigned task to keep the project open-ended.

B. Investigation Design