

Executive Project Summary:

This project is a fully contactless device that reads and displays the temperature of a person on an OLED Screen. It operates based on a contactless switch that enables the device if an object was detected. There is a second contactless switch that switches between the data type displayed from F to C and vice versa. The device also gives a visual and audio indication if the temperature was above (100.4F , 38C) indicating that this person may have a fever. It is unique in its own since it is fully contactless in its operation by reading and saving these temperatures automatically, this is important because we are living in a pandemic fighting the COVID virus, and that helps reading people's temperatures safely with minimal contact to reduce spread.

This device was first planned and divided into main blocks of operations such as the input (sensors) and output blocks(OLED, SDcard, Speaker). These blocks were divided between the project members for individual research and a complete working module of the individual block before integrating them together. Once we had our working individual blocks, we then started integrating all the parts together to combine the project as a working system. During this process, issues arose and were resolved such as using all the SRAM of the microcontroller where we had to rewrite parts of code using different libraries that take up less space, as well as combining the variables used for the parts to successfully communicate with each other. After having a fully working system, we moved to the next phase that is designing an enclosure for the device that would be intuitive and easy for the first time user. Finally, we move to the testing phase to ensure that the device works exactly as planned to meet the customer requirements for the finalization of the device.

As a team, we have learned that the most important aspect to a successful project is communication. All team members must be constantly communicating with each other to ensure that all members have the same goal for the project. That is why we had a smooth process completing the project. By understanding all the details, all parts of the project could be completed only once rather than having to design over and over until all members are on the same page. This will save time and cost for the production of the project while having all members satisfied with the end product.

