

## PROJECT SCOPE STATEMENT

**Project Name:** Safe Temp Hand Cleaner

**Prepared by:** Sangyeop Kim

**Date (MM/DD/YYYY):** 2/10/23

**Version History** (insert rows as needed):

| Version | Date<br>(MM/DD/YYYY)        | Comments                  |
|---------|-----------------------------|---------------------------|
| 1.0     | 2/10/23                     | Initial hand in           |
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## 1. Executive Summary

Provide below a brief overview of this project (e.g., project purpose and justification):

### Overview

Our project is a hands-free sanitizer that can read your temperature, it will have a motion sensor that will go off when you put your hand underneath the pump, and the temperature sensor will read the temperature from your wrist to make sure you are at a safe temperature.

### Benefits

This device is needed because it will help to detect if you are sick in a public place like school, or a store. Also, it will give a hands-free sanitizer to keep any germs from spreading. We think this device will be very helpful to reduce the spread of bacteria and viruses, which is needed with Covid-19 going around.

### Components

Our device will be made with 2 sensors; a motion and temperature sensor. It will also include a pump to dispense the sanitizer which will be a bottle insert. It will run on a 9v battery, with a case for it made of plastic.

**Note:** In any instance where there is a discrepancy between the *Project Charter* and the *Project Scope Statement*, the latter is considered authoritative.

## 2. Technical Description

### 2.1 Product Description (Technical description of the Problem):

Ever since the pandemic of Covid 19 has spread over, people started caring about sanitation to prevent the infection process and are often concerned about the temperature because fever is one common symptom of it.

### 2.2 Technical Description of the Solution:

Safe Temp Hand Cleaner decides to build onto a product that enables it to solve both surging issues. By implementing an IR sensor for touchless sanitizer and a temperature sensor with a digital display for immediate personal temperature checks.

### 2.3 Product Description

Technical detail description of the parts, libraries, purchased and made parts used. Be clear in what is your work and what is not.

Include your hand sketches here and use them to describe your project.

Two sensors are the main component of this project: one is an IR sensor that detects the approach, leading to a pump for the liquid sanitizer, and the second is a temperature sensor, linking to the digital display that shows the level of personal temperature. Both sensors will be located beside and operate at the same time. Inside the circuitry, there is one LED light that indicates whether the work procedure is proper or not. An external power source of the battery will be between 9V and 12V.

## 3. Project Description

For each area below, provide sufficient detail to define this project adequately:

### 3.1 Project Scope

- **Includes (list your D deliverables):**

This list of technical tasks performed by you and finished by the end of the semester that will give a D for technical portion of final mark. For example: drawings, BOM, engineering calculations, tolerance stackup, ...

- Pool of Ideas – Liam
- Idea Sketch – Jamie
- Budget – Liam
- Scope Statement – Sangyeop
- Gantt Chart - Jamie
- Risk Assessment - Sangyeop
- Google site – Liam
- Finalize scope package -Sangyeop
- Technical sketches - Sangyeop
- Research parts - Jamie

- **Includes (list your A deliverables):**

This list of technical tasks performed by you finished by the end of the semester that will give a A for technical portion of final mark. For example: machining, welding, soldering, programming, testing, ...

- Acquire parts – Jamie
- Working prototype – Liam
- Circuit built on PCB – Liam
- Building sanitizer unit – Jamie
- Testing and verification of the circuit - Sangyeop

- **Difference to Prior Art:**

- link the website(s) of projects found on the web that are similar to yours. This could be youtubes, instructables, kits, and others.
- describe how your project is different than
- if you use another project as a starting point, identify it AND your modifications.

<https://www.youtube.com/watch?v=bYbaPG7XWgM>  
<https://www.youtube.com/watch?v=vmS5YQITRQ0>  
- Video for how to apply for 555 timer circuit

- **Does Not Include:**  
(Deliverables that could be

- Extra batteries
- Stand

mistaken to be part of the project, but are really not)

### 3.2 Project Completion Criteria:

(Detailed description how to test/verify that the project is complete including e.g. measurements, specifications, ...)

This project aims to operate a touchless sanitizer with displaying the temperature, controlled by an IR sensor that will release the sanitizer through inside the circuitry and one LED light will be on the inner circuit to indicate whether the work procedure operates properly or not by changing the light colour. The LCD display will be updated by the temperature sensor. The range of the time for whole operation will be done by 5 to 7 seconds.

### 3.3 External Dependencies:

A list of all

- Tech Advisor meetings
- Shipping times
- Deadlines
- Availability of homework labs
- Frequent meetings

### 3.4 Constraints:

- Meet Milestone dates
- Health and safety precautions when building/testing
- Making time for regularly scheduled classes

## 4. Project Milestones

### 4.1 Estimated Schedules

Key project milestones relative to project start are as follows. (Insert rows as needed):

| <i>Project Milestone</i>             | <i>Target Date<br/>(MM/DD/YYYY)</i> |
|--------------------------------------|-------------------------------------|
| • Submit Application                 | 01/20/2023                          |
| • Finalize scope package             | 02/10/2023                          |
| • Test circuit breadboard            | 03/09/2023                          |
| • Build sanitizer unit               | 03/22/2023                          |
| • Test completed touchless sanitizer | 03/31/2023                          |
| • Project Complete and presentation  | 04/03/2023                          |

## 5. Project Approach

### 5.1 Scheduled Status Meetings

(Insert rows as needed):

| <i>Meeting</i> | <i>Purpose</i> | <i>Frequency</i> |
|----------------|----------------|------------------|
|----------------|----------------|------------------|

|                         |                     |                  |
|-------------------------|---------------------|------------------|
| Team meetings           | Project progression | Weekly           |
| Tech Advisor Meeting    | Guidance and help   | As needed/weekly |
| Project Manager Advisor | Guidance and help   | As needed        |

## 5.2 Scheduled Status Reports (Insert rows as needed):

| Report                    | Purpose                     | Frequency                 |
|---------------------------|-----------------------------|---------------------------|
| Google site updates       | Reports on project progress | Weekly                    |
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Briefly describe how each of the following will be handled. Provide links to relevant documents as appropriate. Modify example text provided or enter your own.

### 5.3 Issue Management:

- Project-related issues will be tracked, prioritized, assigned, resolved, and communicated in accordance with the *Project Management Methodology*.
- Issues will be reported to the PM advisor within 48 hrs of them arising and no team internal solution is implemented. Issue descriptions, owners, resolution and status will be maintained in an Issues Log in a standard format.
- Issues will be addressed with the project owner and communicated in the project weekly status report

### 5.4 Change Management:

The change control procedures as documented in the Project Change Management Plan will be consistent with the Project Management Methodology and consist of the following processes:

- A Change Request Log will be established by the Project Manager to track all changes associated with the project effort.
- All Change Requests submitted via Change Request Form will be assessed to determine possible alternatives and costs.
- Change Requests will be reviewed and need to be approved by the project owner before implementation is allowed.
- The effects of approved Change Requests on the scope and schedule of the project will be reflected in updates to the Project Plan.
- The Change Request Log will be updated to reflect current status of Change Requests.

## 5.5 Communication Management:

The following strategies have been established to promote effective communication within and about this project. Specific Communication policies will be documented in the Project Communication Plan.

- The Project Manager will present project status to the project Sponsors on a bi-weekly basis; however, *ad hoc* meetings will be established at the Project Manager's discretion as issues or change control items arise.
- The Project Manager will provide a written status report to the project Sponsors on a monthly basis and distribute the Project Team meeting minutes or at predetermined dates.
- The project Sponsors and PM Advisor will be notified via e-mail of all urgent issues. Issue notification will include time constraints, and impacts, which will identify the urgency of the request for service.
- The Project Team will have weekly update/status meetings to review completed tasks and determine current work priorities. Minutes will be produced from all meetings.
- The Project Team will arrange weekly or bi-weekly meetings with their technical advisor. Minutes will be produced from all meetings.
- All electronic Project Documents will be maintained in central storage accessible by all project stakeholders. Security backups are maintained in case of a storage failure.

## 5.6 Procurement Management:

A Procurement Management Plan will be written by the project team. It will document the following:

- Teams are handling their own procurement management and use their own approval process for purchases.
- All procurements for industry sponsored projects have to be pre-approved by the PM-Advisor. A costed Bill of Material with vendor information containing all components is required before the approval can be sought.

## 5.7 Resource Management:

The project team will produce a Resource Management Plan that will document the following:

- Identify the need for resources to the PM advisor as early as possible to allow a smooth progress.
- Seek lab technicians for their input on lab availability and how to work on your project in their lab.

## 5.8 Attached documents

Attached to this Scope Statement is the Gantt chart, Budget and Risk assessment. All documents belong to this document and signatures. They all reflect the different aspects of the plan for this project.

- Risk Assessment: The signature below means that the Project Managers have found all red risks for this project

## 6. Project Scope Statement Approval / Signatures

**Project Name:** Safe Temp Hand Cleaner

**Project Manager:** Sangyeop Kim

*The purpose of this document is to provide a vehicle for documenting the initial planning efforts for the project. It is used to reach a satisfactory level of mutual agreement between the Project Manager and the Project Sponsors and Owners with respect to the objectives and scope of the project before significant resources are committed and expenses incurred.*

*I have reviewed the information contained in this Project Scope Statement and agree:*

| Name                      | Role                      | Signature | Date<br>(MM/DD/YYYY)        |
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*The signatures above indicate an understanding of the purpose and content of this document by those signing it. By signing this document, they agree to this as the formal Project Scope Statement document. The attached documents (Gantt chart, Budget and Risk assessment) have been created in accordance to this document.*