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1. What topic area did you choose your project to be related to?
   - My project is related to the safety topic area.

2. What issue or challenge does your project aim to address?
   - The main purpose of this project is to detect the thermal and humidity levels in the user's house, and warn the user when the humidity becomes too high or too low.
   - In addition to that, this project also has a LED display which shows the present humidity levels in the user's house.

3. What is the goal/purpose/objective of your project?
   - The main purpose for creating this project is to prevent the harmful effects of high/low humidity levels such as rapid spread of cold,flu(when there is low humidity), skin issues and respiratory problems(when there is high humidity).Additionally, this alarm system will have an option to mute the device and an LCD display that will show the current humidity levels. The goal of making this device was to stop the negative effects of low and high humidity before they can take place.

4. How does this project relate to the topic area you chose?
   - Because it enables the identification of potentially hazardous humidity levels in a home, this device aids in safety. Numerous issues may develop if dangerously high humidity levels are permitted. Mold and rot can develop in homes with high humidity levels. Low humidity levels, meantime, can harm dwellings, speed up the spread of diseases, dry up the skin and eyes, and more. Therefore, it is crucial to carefully manage the humidity levels in one's house for both their comfort and health. This project will fill that requirement with a device that can tell the user of the humidity level in their home and alert them if it rises to dangerous levels.

5. How does this project address the issue/challenge you selected?
   - This project will carefully manage the humidity levels in one's house for both their comfort and health.This project will fill that requirement with a device that can tell the user of the humidity level in their home and alert them if it rises to dangerous levels.

6. What are the inputs to the system you need to consider for this problem?

a. These need to be in terms of the problem, not anything related to devices (so no mention of things like GPIO)

- The first input will be the Humidity level
- Internal button will be used to mute the buzzer.

b. Each input will need to have a statement of how it is part of the system

- This device shows the humidity levels at all times on the LCD and buzzes if there is any abnormality. So the humidity level is an important input.
- When the buzzer goes off to reset it there will be an internal button to mute the buzzer.

7. What are the outputs from this project?

a. These need to be in terms of the problem, not anything related to devices (so no mention of things like GPIO)

- LCD displays(on LCD display it will show both humidity level and the condition of the house if its (good/bad/ideal)
- Buzzer sound will be the 2nd output

b. Each output will need to have a statement of how it is part of the system

- This device shows the humidity levels at all times on the LCD and also the condition of the house. So for the LCD display will be our 1st output
- Buzzer outputs sound when levels are harmful

8. Are there any constraints?

a. Consider physical behaviors for the implementation and elements of the design.

- If we use this device in environment with high humidity/temperature long term of use may be unreliable
- The storage environment for the DHT11 sensor is recommended to be:
    1) Temperature: 10-40 ○C
    2) 60% relative humidity
- This device is for indoor use only, it may not work if we use the device in different environments such as outdoors.