Final Task

The final task of IoT is not like previous tasks. Here we will focus more on the application part of IoT and I also want to give you the freedom to choose your project. I understand this is a mini-project type task and you can lose motivation so there are many part-markings in this mini-project. Take your time and finish it. This task is made to check your understanding of IoT using Arduino IDE at TinkerCAD

Design and simulate an IoT system using the concepts and tools you've learned in this course.

Project Guidelines:

1. **Choose a Theme:**
   Select a theme or problem that excites you! Here are some examples:

- **Smart Home:** Create a system to control lights, fans, or appliances.
- **Environmental Monitoring:** Monitor temperature, humidity, or air quality.
- **Security Systems:** Build a basic alarm or surveillance system.
- **Health Monitoring:** Design a wearable or stationary health tracker

[You can choose any theme easy or difficult. This theme selection does not contain any marks to your final score.]

2. **Plan Your System:**

- Define the purpose and the problem your IoT project solves.
- Create a block diagram showing the system components.

[Define your purpose and problem in one or two sentences. You can also show a block diagram on paper.]

3. **Tools and Components:**

- **Input Devices:** Sensors like temperature, ultrasonic, or gas sensors.
- **Output Devices:** LEDs, buzzers, motors, or displays.
- **Controller:** Arduino or Raspberry Pi simulation.

[Fill this carefully in the form]

4. **Code and Simulate:**

   Use **TinkerCAD** to simulate your IoT system. Your project should include:

- Write the necessary code
- Test and refine your system in TinkerCAD.

Submission link: link