Abstract:

Environmental monitoring is crucial in today's world to track and assess the state of our ecosystems and natural resources. This abstract explores the fundamental aspects of environmental monitoring, including the use of sensors, data collection, analysis, and its significance in mitigating environmental challenges. It highlights the role of technology and data-driven approaches in understanding and managing our environment, addressing issues such as climate change, pollution, and biodiversity conservation. Environmental monitoring serves as a vital tool for informed decision-making and sustainable resource management, contributing to a healthier planet for current and future generations. This abstract provides a concise overview of the importance and methods of environmental monitoring, emphasizing its role in safeguarding our planet's well-being.

Phase 1: Problem Definition and Design Thinking

In this part you will need to understand the problem statement and create a document on what have you understood and how will you proceed ahead with solving the problem. Please think on a design and present in form of a document.

Project Definition: The project involves setting up IoT devices to monitor environmental conditions in public parks, including temperature and humidity. The primary objective is to provide real-time environmental data to park visitors through a public platform, enabling them to plan their outdoor activities accordingly. This project includes defining objectives, designing the IoT sensor system, developing the environmental monitoring platform, and integrating them using IoT technology and Python.

Design Thinking:

Project Objectives: Define objectives such as real-time environmental monitoring, aiding park visitors in activity planning, promoting outdoor experiences, and enhancing visitor satisfaction.

IoT Devices Designs: Plan the deployment of IoT sensors (e.g., temperature and humidity sensors) in public parks.

Environmental Monitoring Platform: Design a web-based platform to display real time environmental data to the public.

Integration Approach: Determine how IoT devices will send data to the environmental monitoring platform.