Domain: HealthTech

1.Lack of Affordable Health Monitoring Devices for Rural:

Communities Develop a low-cost, portable health monitoring system using microcontrollers and sensors to track basic vitals (heart rate, temperature, SpO2 for underserved areas.

2. Health Support Devices for People with Chronic Conditions:

Create a **continuous monitoring device** for chronic conditions (asthma, heart issues) that detects abnormal patterns and triggers alerts.

Domain: Renewable Energy Technology

1.Poor Energy Storage Optimization in Small-Scale Renewable Systems:

Create a smart battery management system (BMS) for renewable energy storage to improve battery life and safety.

2.**Lack of Intelligent EV Charging Infrastructure:**

Create a renewable-powered smart EV charging station with real-time usage tracking and automated load management to optimize energy distribution and prevent overloading.

Domain: Smart Cities

1.Poor Traffic Flow Due to Static Traffic Signal Systems:

Develop a smart traffic signal controller that adapts signal timing based on real-time traffic density.

2.Inefficient Real-Time Monitoring of Urban Infrastructure

Design a **sensor-based monitoring system** to track the health and usage of urban infrastructure such as roads, streetlights, or any public utilities of choice.

Domain: ClimateTech (Education-Driven)

1. Absence of Real-Time Carbon Emission Monitoring

Develop a **hardware-based carbon emission sensing system** to estimate emissions from vehicles, generators, or small industries.

2. Inefficient Renewable Resource Utilization

Tracking Build a **climate impact monitoring system** that measures renewable energy contribution and emission reduction.

Domain: Edu tech

1.Design a low-cost portable learning device using a microcontroller that stores educational content locally and allows students to access lessons, quizzes, and basic experiments without internet.

2. Affordable Mini Virtual Lab Kit :

Develop a hardware-based virtual lab system that allows students to perform real physics/electronics experiments using sensors and microcontrollers, view readings digitally, and control experiments remotely.