

Measuring the total energy consumption of a building with implementation of Python coding.

Project by

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Measuring energy consumption for a building typically involves using sensors and collecting data over time. Here's a simplified Python program that demonstrates how you might calculate energy consumption based on power usage data from sensors:

Below code represents the Measure of energy consumption of a building :-

```
class EnergyMeter:
```

```
    def __init__(self):
```

```
        self.total_energy_consumed = 0
```

```
//Above line denotes that Initialize total energy consumed to 0
```

```
    def record_energy_usage(self, power, time_in_hours):
```

```
        energy_used = power * time_in_hours
```

```
//This above line was the Calculation of energy used in kWh
```

```
self.total_energy_consumed += energy_used  
//Now to give input as total energy consumed
```

```
def get_total_energy_consumed(self):  
    return self.total_energy_consumed
```

Now let us have an example for the above empty program template same using Python Programming ~~

//Example usage:

```
if __name__ == "__main__":
```

```
    meter = EnergyMeter()
```

// Record energy usage for different time periods and power levels

```
meter.record_energy_usage(1000, 1)
```

//Denotes 1000 watts for 1 hours

```
meter.record_energy_usage(800, 2)
```

//Denotes 800 watts for 2 hours

// Now we Get the total energy consumed

```
total_energy = meter.get_total_energy_consumed()
```

```
print(f"Total energy consumed: {total_energy} kWh")
```

~~

This program defines an `EnergyMeter` class that allows you to record energy usage for various time periods and power levels. It maintains a running total of energy consumed in kilowatt-hours (kWh).

In a real-world scenario, you would need sensors or data sources to provide power consumption data over time. You could then use this program as a basis to calculate the total energy consumption for a building.

Please note that this is a simplified example, and real-world energy monitoring systems may involve more complex data collection and analysis methods.