# ECE 575 Group 4 Task Progress Report 4: 24-10-2023

App Development Meeting Report

The meeting held on October 23, 2023, at 10:00 AM was convened to discuss key aspects and progress made on the PWA development.
The following pages have been actively worked on and currently contain placeholder or dummy data:

- Loads
- Analytics Page
- Dashboard
- Limitations and Recommendations
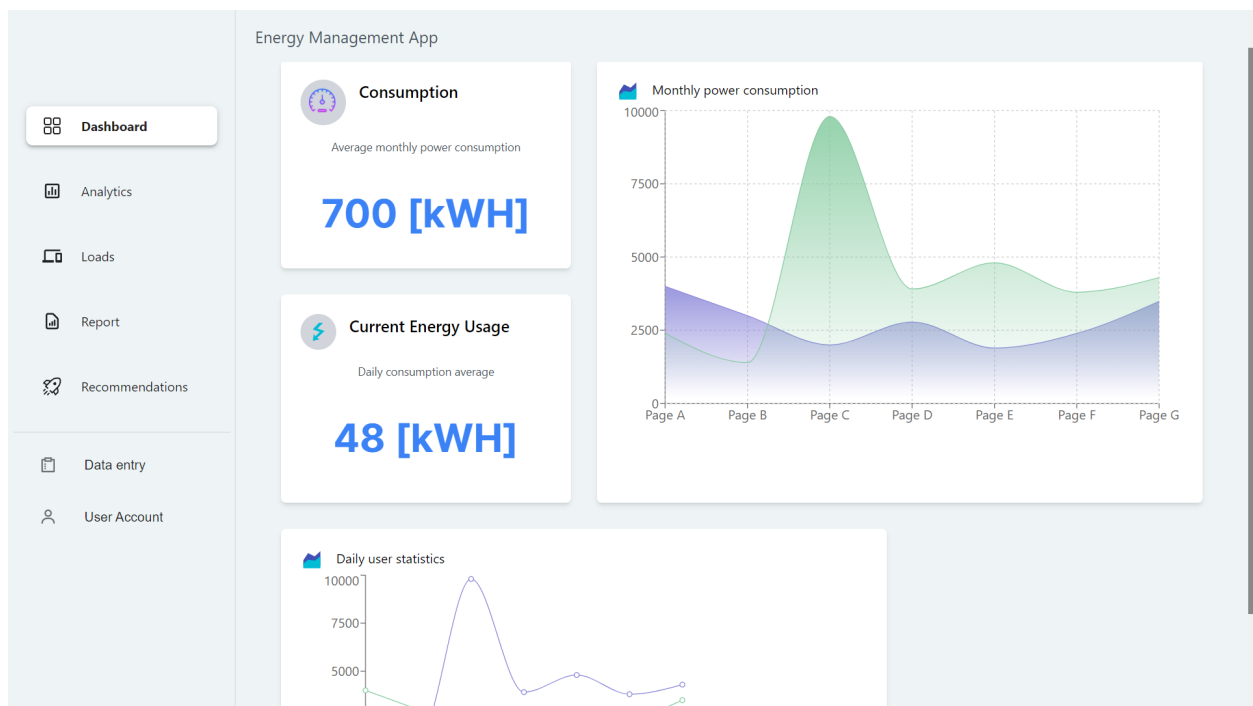
Upcoming Work for This Week:

In the coming week, our focus will be on the following areas:

- Account/Profile Page
- Data Entry

Technology Stack:

As discussed, our server will be hosted on Vercel, ensuring reliable and scalable infrastructure. We are also using Firestore, a database provided by Google, to manage our data effectively. Our application is built using Next.js and TypeScript, ensuring the utmost in performance, maintainability, and security.

Benchmarking point:

In our journey to create an amazing Energy Auditing Application, we are continuously benchmarking our work against other applications in the market.
The applications we are currently assessing include:

1. eAuditor Audits and Inspections
2. Grid Rewards: Energy Efficiency
3. My Power Consumption

Conclusion

So far we have made a significant step and will continue improving on the same as per the course requirement.

Data collection meeting report

Date of Audit: 11:00 AM October 23, 2023
Served by: David Vugusa (technician)

Introduction:

This energy audit report presents findings related to the energy consumption within the School of Information Science. The audit primarily focused on the number of active devices and their energy consumption patterns.

Equipment Inventory and Rating:

1. Desktops:

- Number: 103
- Active : 74
- Inactive: 28 (due to failed power supply)
- Hp : 78 @ 300 Watts
- Dell: 20 Low consumption + 2 High consumption
- Acer: 2 , 300 Watts

2. Number of sockets : (all double sockets)

- Computer lab

  36*2 = 72 (double Sockets)

  21*2 = 42

- Classes

  2*9 = 18

- Offices

  28*2 = 56

In the computer lab 22 pairs of sockets are idle for use by students. The rest are connected to CPU's

3. Switches [ethernet Switches 24 ports each]

- High traffic 9
- Low traffic 3
- Rating
  - 100-240V
  - 50-60 Hz
  - 4-8 Amperes

4. Routers

- Power over Ethernet (POE)

5. Photocopiers
- Number : 4
- Rating :240V

6. Printers
- Number : 13
- Rating
  - 220-240 V
  - 5.1 A
  - 50/ 60 HZ

7. Light bulbs   Total 278 ; Faulty 97

- Lecture rooms : 12 × 11 = 132
- Office block : 22×4 = 88
- Corridors : 8
- Workshop : 16 (Only one bulb working)
- Store room : 24

8. Projectors: 11 (SONY)

- Rating: 100- 240 V; 3.2-1.4 A

   Projection screen: 10

- Rating : 150 - 240 V

9.Radio (Broadcasting station)

a) Transmission room:

- Transmitter : DC 24 V
- AVR (Automatic Voltage Regulator) = 240 V
- UPS : Input voltage 100- 240 V; Output voltage 240V

b) Studio mixer + console

- Screen (LG) ; 122 Watts
- Monitors 3 ; 300 Watts
- microphone 3; 48 V
- off-air monitor (analog radio)

Identified Concerns

During the construction and design power consumption was not a consideration, resulting in higher energy usage.

Measures to Curb Power Consumption:

1. Devices not in use are frequently switched off to minimize energy consumption.

2. Desktops are configured to optimize power consumption by enabling auto-sleep mode during non-peak hours.

Recommendations:

In light of the audit findings and the concerns identified, we strongly recommend considering the following measures to reduce energy consumption and promote sustainability:

- Installation of new lighting tube fittings to be used with the energy saving / LED tubes.Though it may be costly now in long term it will reduce the energy consumption significantly

Conclusion:

This energy audit report highlights the energy consumption patterns and equipment inventory within the Information Science Building premises. It also underscores the need for more sustainable energy practices, particularly by incorporating the new energy saving LED tubes. By implementing the recommended measures, the library and its associated facilities can not only reduce its energy costs but also contribute to environmental conservation.