

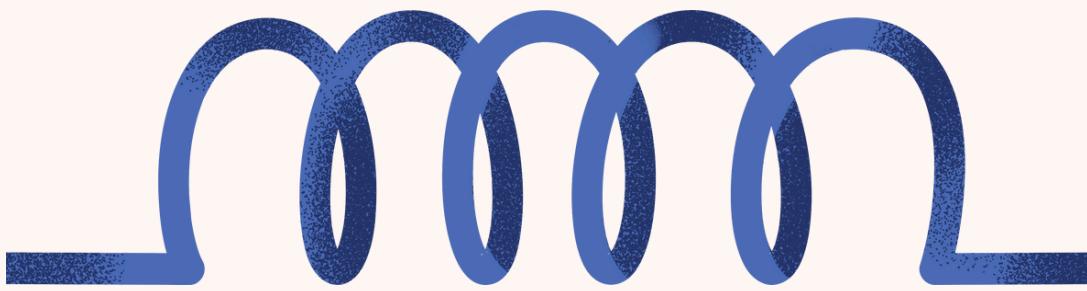
Design Thinking

Presentation



TITLE:

MEGA (Make Earth Great Again)



GROUP MEMBERS

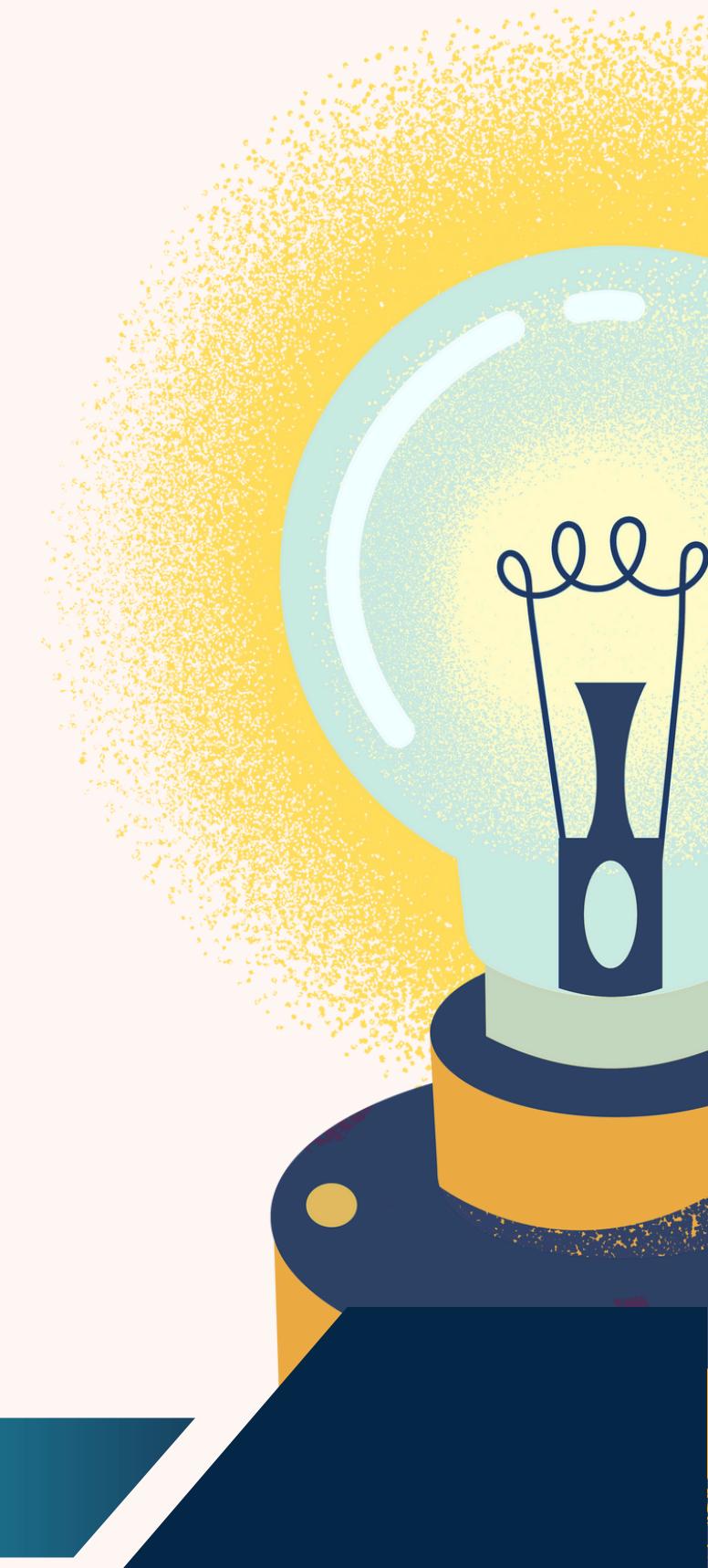
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TINESH A/L GAJENDRA BAHADUR(A25CSO153)

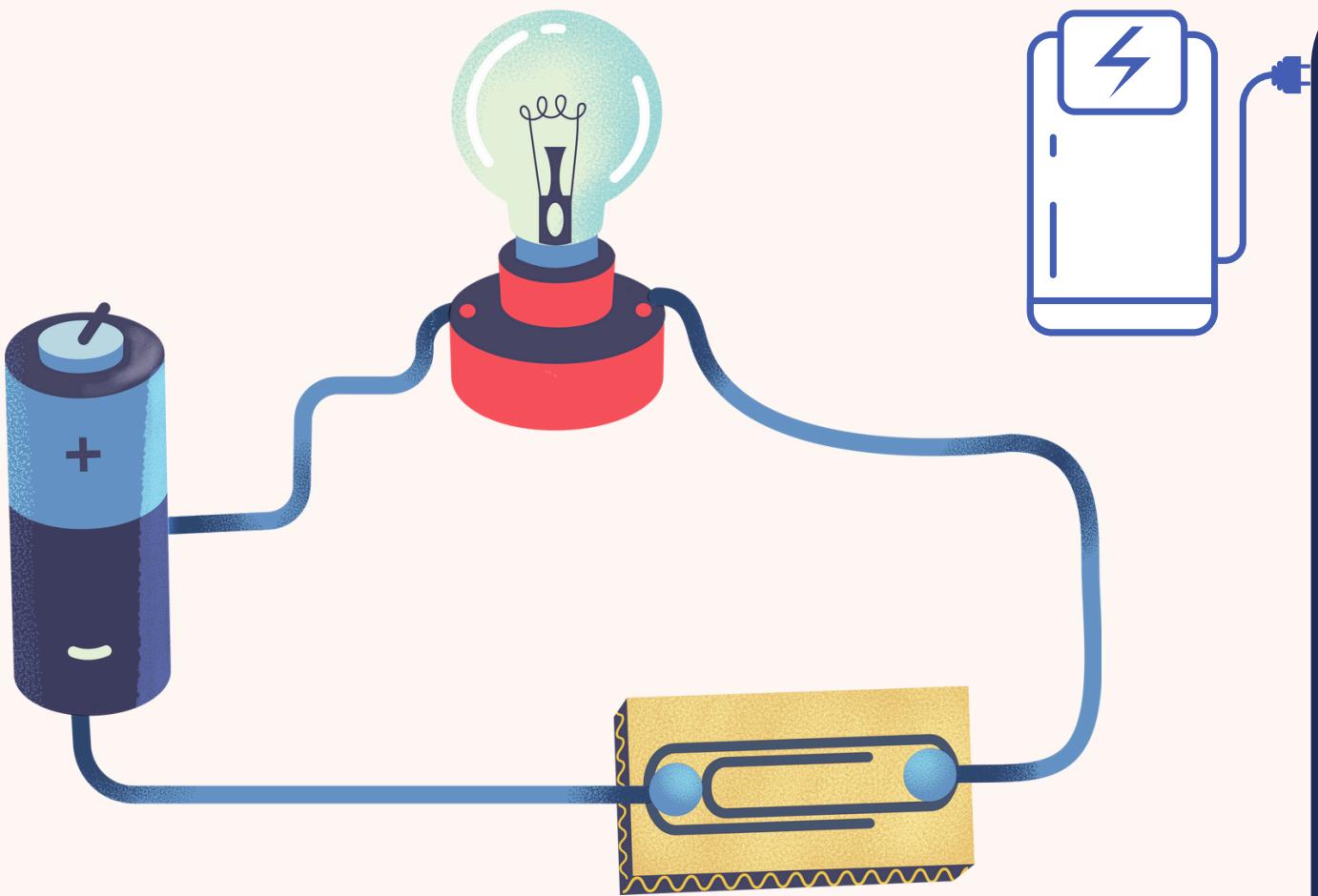
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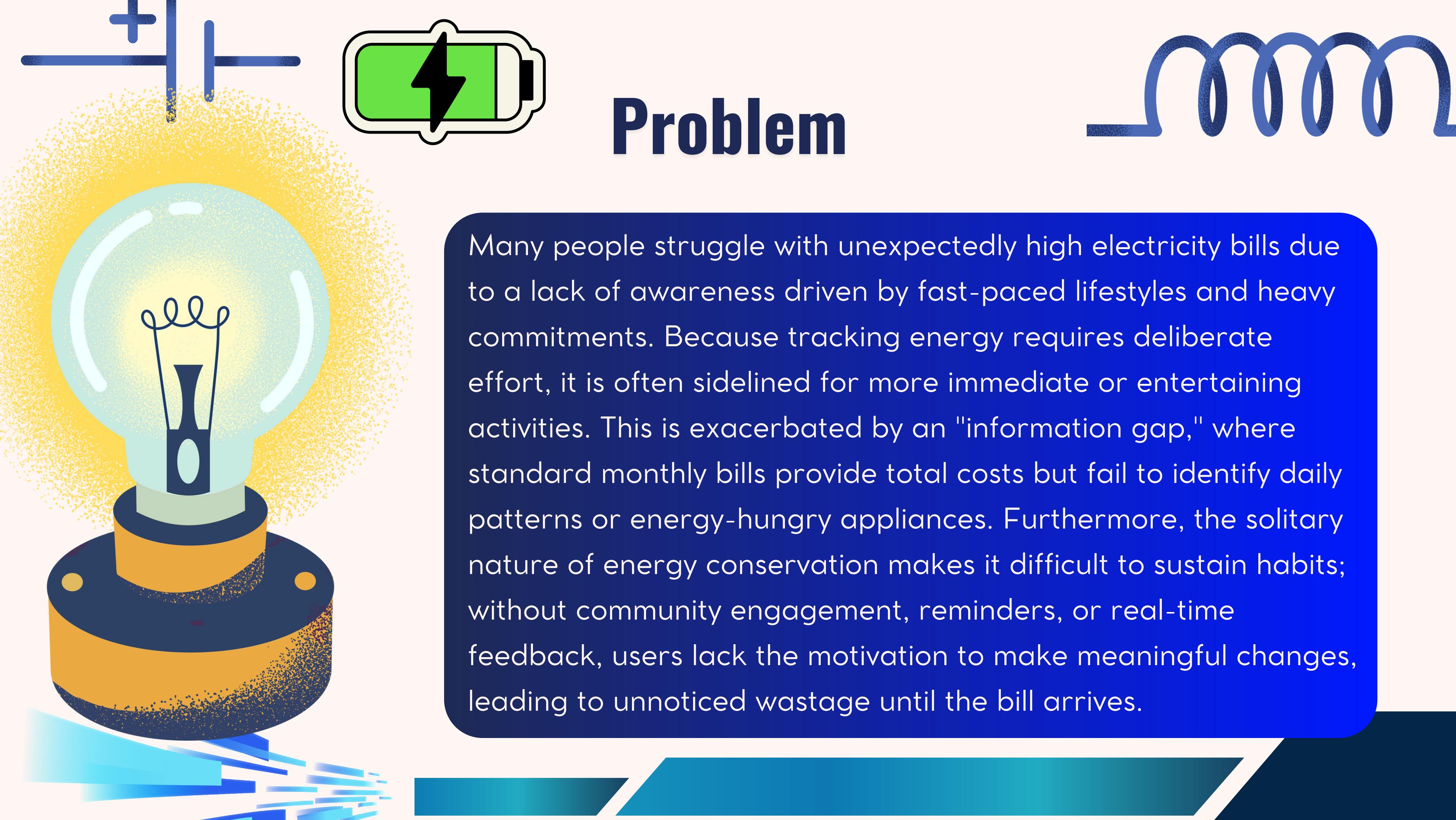
WONG SENG CHOON(A25CSO162)



Introduction



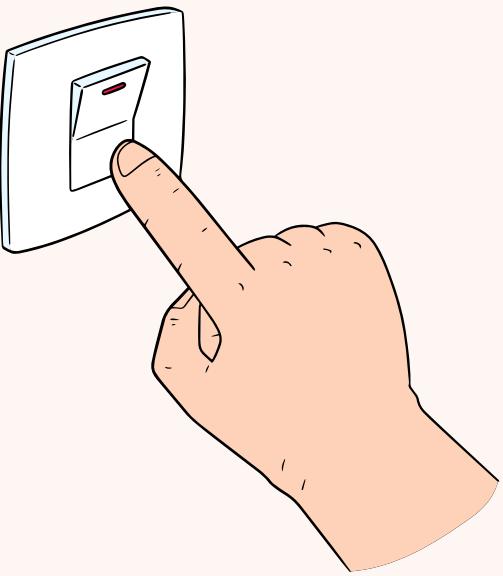
Developed for SECP1513, Project MEGA addresses the global energy crisis—where fossil fuel reserves are projected to last only another 100 years. Using the Design Thinking framework, we developed a smart application that integrates real-time TNB data to make "invisible" electricity usage visible. By combining software engineering with behavioral psychology, MEGA features a community ranking system that transforms energy conservation into an engaging, social experience. This project allowed our team to master the SDLC process while creating a proactive tool designed to foster a long-term, positive environmental impact.



Problem

Many people struggle with unexpectedly high electricity bills due to a lack of awareness driven by fast-paced lifestyles and heavy commitments. Because tracking energy requires deliberate effort, it is often sidelined for more immediate or entertaining activities. This is exacerbated by an "information gap," where standard monthly bills provide total costs but fail to identify daily patterns or energy-hungry appliances. Furthermore, the solitary nature of energy conservation makes it difficult to sustain habits; without community engagement, reminders, or real-time feedback, users lack the motivation to make meaningful changes, leading to unnoticed wastage until the bill arrives.

SOLUTION



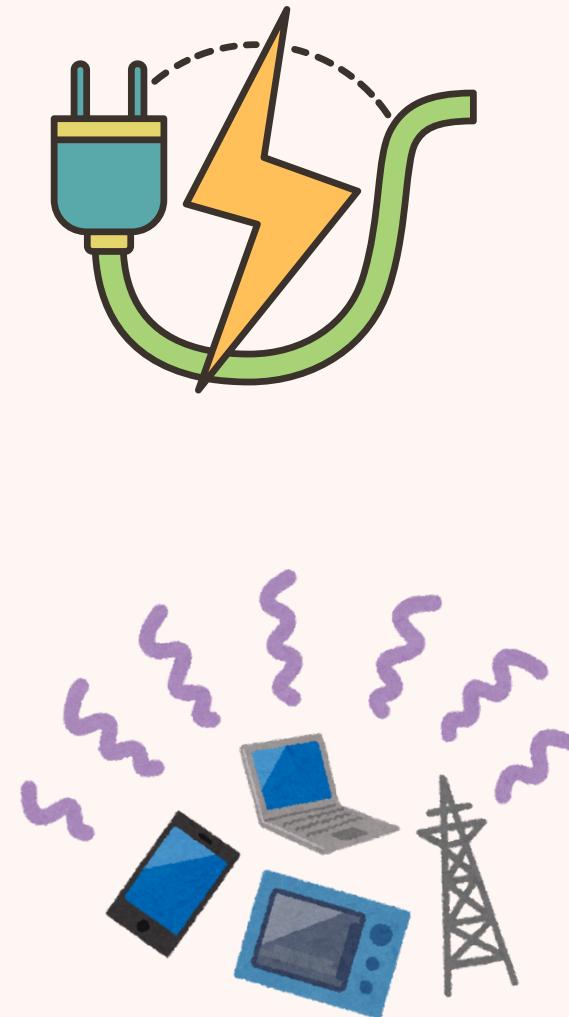
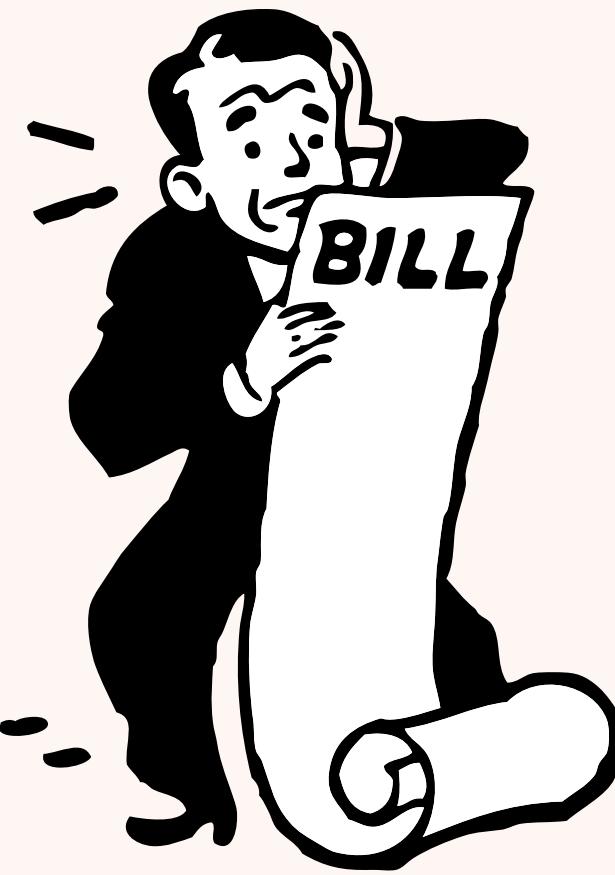
To address these challenges, we propose a multi-purpose, interactive application designed to transform electricity monitoring into an engaging, social experience. Moving beyond static billing, the app provides real-time tracking of consumption patterns and appliance-specific data, supplemented by actionable energy-saving tips and challenges. By integrating social media elements—such as community discussion groups and the ability to share achievements—the platform fosters peer motivation and collective accountability. Ultimately, the application aims to bridge the information gap and turn energy conservation into a rewarding daily habit, making sustainable living accessible and communal even within a fast-paced lifestyle.

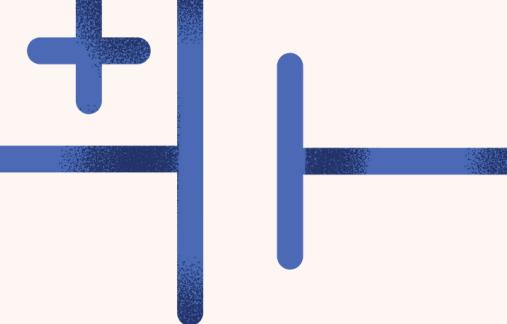


Mega Demonstration

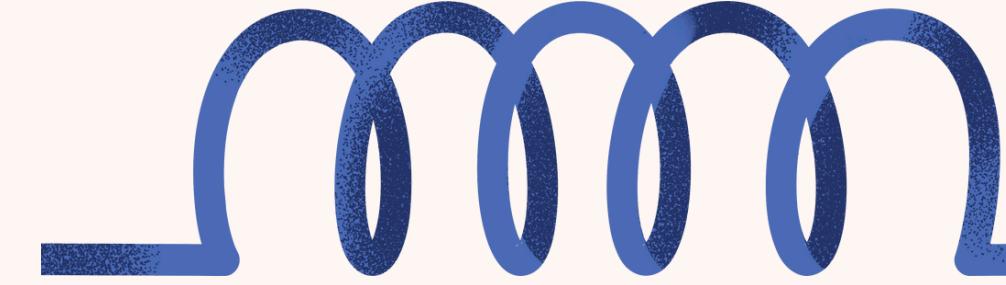
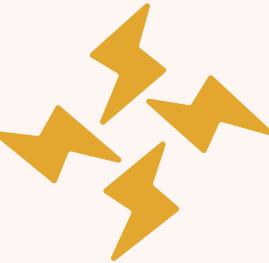
Conclusion ⚡

- Technical Growth: Applied SDLC and Design Thinking to build a scalable application.
- Human-Centric Design: Leveraged psychology and gamification (ranking) to boost user engagement.
- Team Collaboration: Mastered the art of constructive feedback and transparent communication.
- Core Mission: Driven by a shared goal to create a positive environmental impact.





References



1. Castro, V., Georgiou, M., Jackson, T., Hodgkinson, I. R., Jackson, L., & Lockwood, S. (2024). Digital data demand and renewable energy limits: Forecasting the impacts on global electricity supply and sustainability. *Energy Policy*, 195, 114404. <https://doi.org/10.1016/j.enpol.2024.114404>
2. Holechek, J., Geli, H. M. E., Sawalhah, M. N., & Valdez, R. (2022). A global assessment: Can renewable energy replace fossil fuels by 2050? *Sustainability*, 14(8), 4792. <https://doi.org/10.3390/su14084792>
3. Dumas, J., Dubois, A., Thiran, P., Jacques, P., Contino, F., Cornélusse, B., & Limpens, G. (2022). The energy return on investment of whole energy systems: Application to Belgium. *arXiv*. <https://arxiv.org/abs/2205.06727>
4. Ainslie, G. (1975). Specious reward: A behavioral theory of impulsiveness and impulse control. *Psychological Bulletin*, 82(4), 463–496. <https://doi.org/10.1037/h0076860>



Thank You



