OPEN DESIGN AND TECHNOLOGY MODULE
LED LIGHTS AND REED SWITCHES

lumenedge

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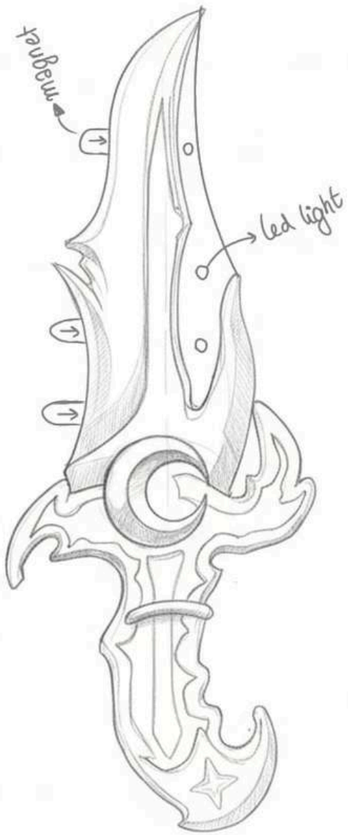
LUMEN EDGE

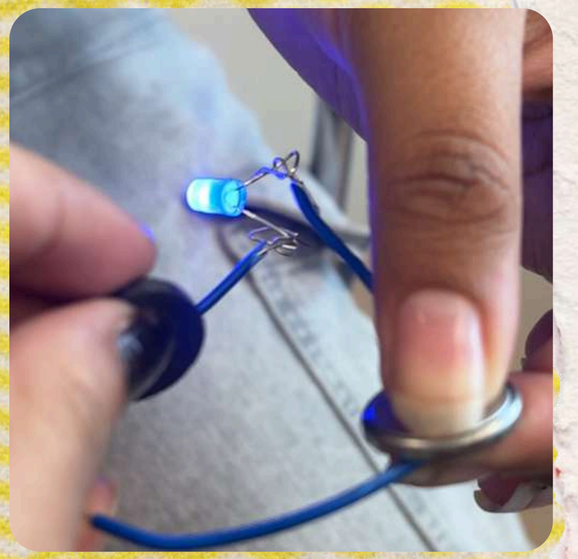
A DAGGER THAT LIGHTS UP

ideation sketch

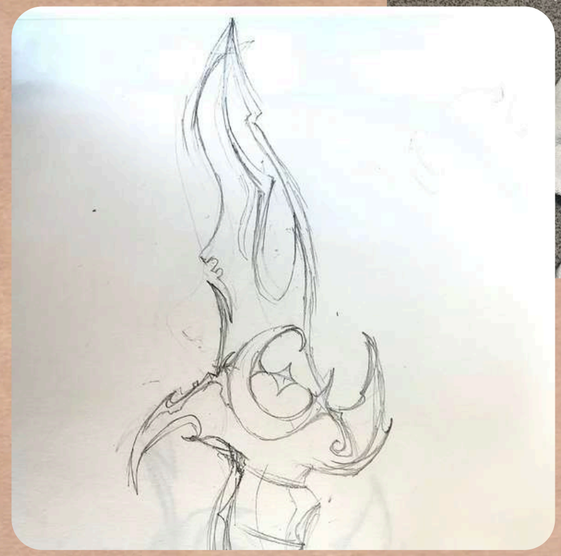
What exactly are we planning to do?
design form and usage?
how do we plan to execute this?



little wip

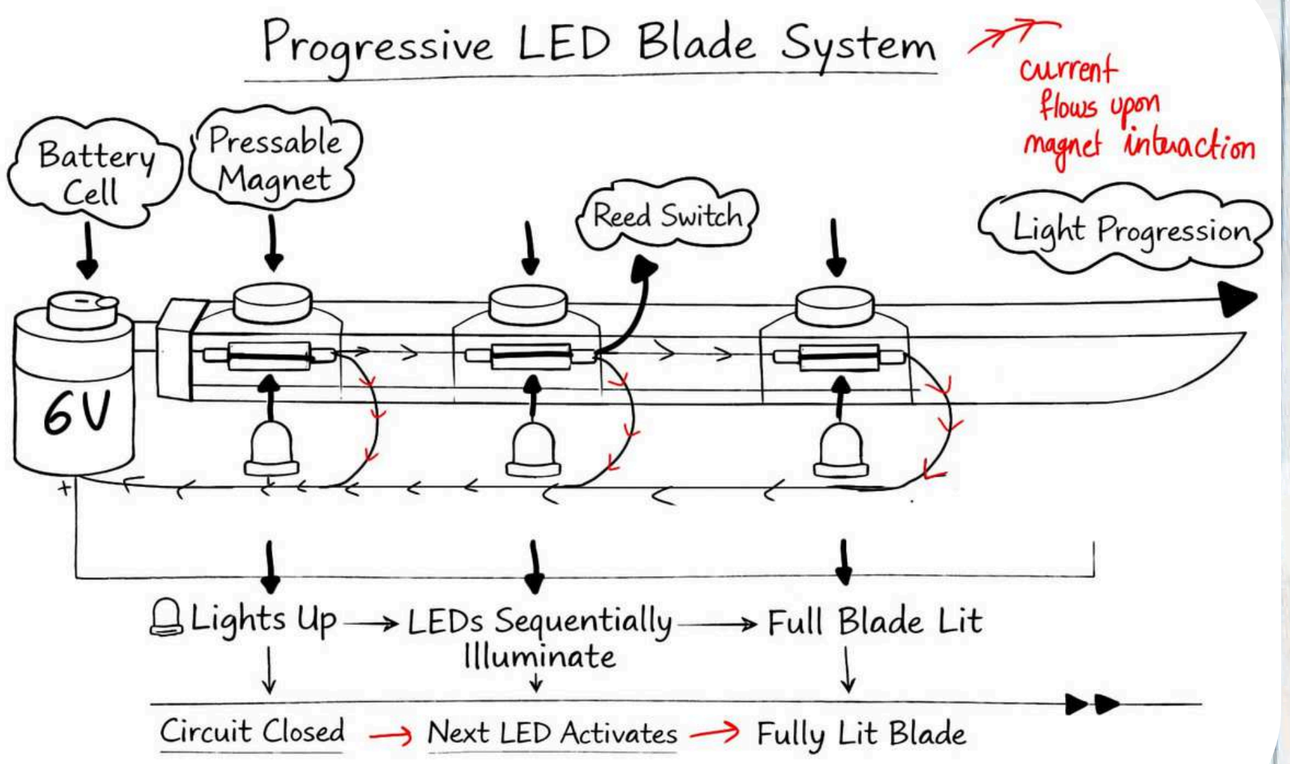


the first working circuit!



the blade- sketch vs base model

what?

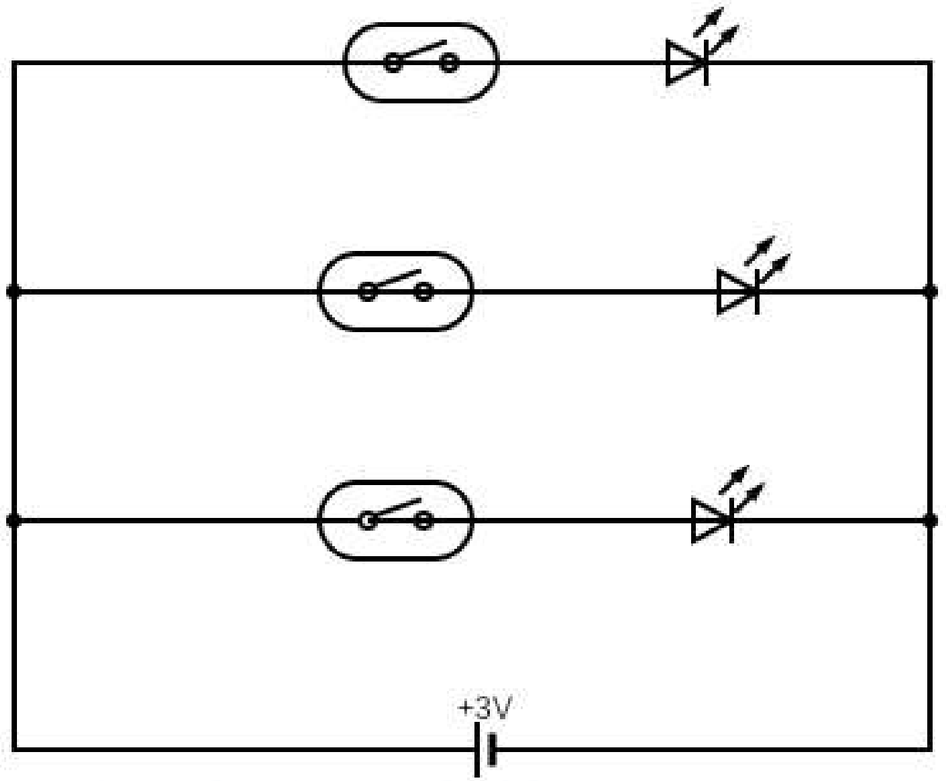


Our concept uses basic LEDs, reed switches, a cell, and magnets to create an interactive, pressable lighting mechanism. Magnets are embedded in a mechanical press system along the blade. When pressed, each magnet aligns with a corresponding reed switch, momentarily closing the circuit.

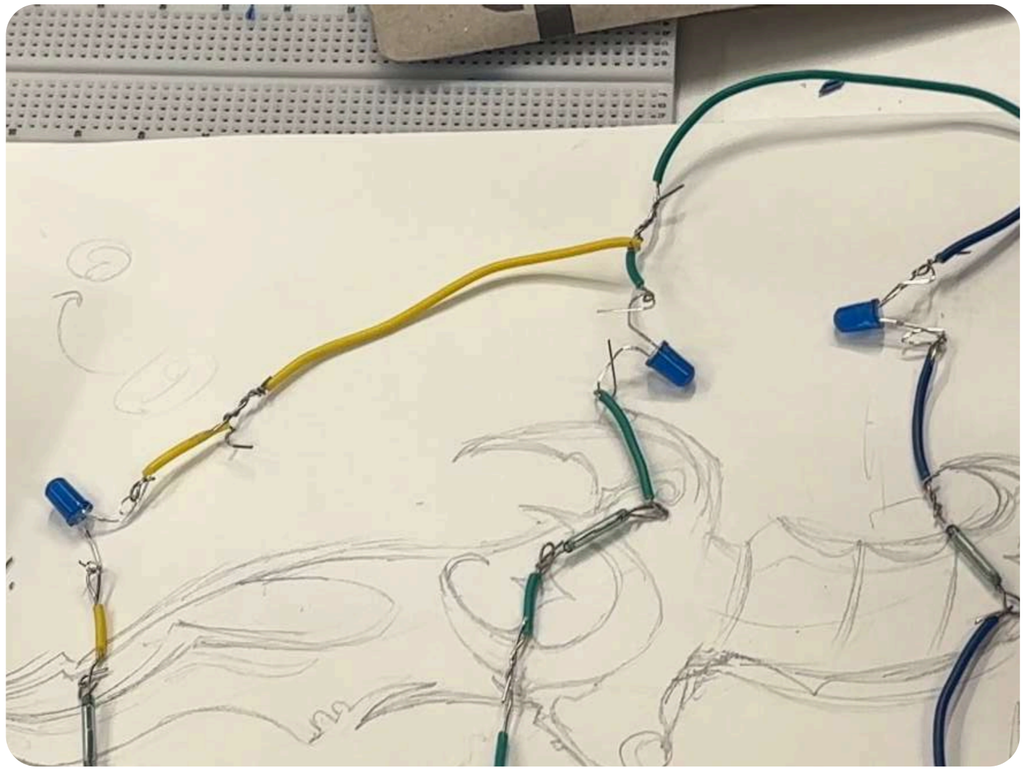
This sequential activation allows the LEDs to illuminate progressively, inch by inch, creating a transitional glowing effect along the blade. The interaction is entirely physical and intuitive. No microcontrollers, no programming, no unnecessary components. Just alignment, contact, and light.

The system relies on independent, simple circuits arranged linearly so that each press triggers the next segment of illumination. The result is a tactile, responsive blade that visually communicates motion and progression through light, driven purely by basic electronics and mechanical intent.

CIRCUITS



DIAGRAMATIC REPRESENTATION



FINAL CIRCUIT

CONCLUSION

This project helped us understand technology not as an isolated technical system, but as a design tool shaped by intent, interaction, and form. By working with basic components such as LEDs, reed switches, magnets, and simple circuits, we explored how technical decisions directly influence user experience and physical behavior. The progressive illumination of the blade was achieved through the alignment of mechanical action and electrical logic rather than complexity, reinforcing the idea that technology can remain simple, legible, and expressive when approached from a design perspective.

As designers, this project shifted our view of technology from surface-level functionality to purposeful integration. We learned to see circuits as part of the overall design language, understanding how choices such as using a parallel circuit, translating physical pressure into activation, and positioning components affect interaction. The process showed us that designers do not need advanced electronics knowledge, but rather a clear understanding of how technical systems behave to shape meaningful experiences.

THANK YOU

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