Defuse the Bomb

A CSC 102 Project

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Github: https://github.com/dayflay/final-project

Team individualization

What did you tweak to the design provided by your instructor that makes it different from the other teams? In other words, what did you do to make your version of the “bomb” unique?

Our version of the bomb stands out because we went beyond just making it functional—we made it modular, expandable, and more dynamic. We built in a seeded randomizer so the game’s always different but still testable. It’s super easy to add or swap out modules, which gave us a ton of room for creativity. One of the few things we added was AI-generated trivia questions in a trivia module, which made the game way more interactive. On the hardware side, we had full control of the toggles, a button, wires, a keypad, a screen, and even audio, which allowed us to fully take advantage of the different modules so that each one could truly be unique.

Future development plans

If you were to continue working on this project, what would you do? Where could you go from here to make it better, more interesting, more fun? What could be done to increase the project’s broader impact (e.g., to make it marketable)?

If we kept going, we’d probably add even more modules with different mechanics to keep things fresh. Since it’s already modular, it’d be easy to plug in new ideas. We’ve got a solid hardware base already—Raspberry Pi with a button, toggles, wires, keypad, screen, and audio—but adding even more hardware (like sensors, vibration feedback, and maybe even a camera) could make the experience even cooler. It’d be awesome to build it into a bigger puzzle box or maybe even something marketable for escape rooms.

Lessons learned

What did you learn by working on the project throughout the course? In your opinion, did it relate to *The Science of Computing* curriculum (and, if so, how)? How was the experience beneficial to problem solving in general? What did you learn that will benefit you in future courses in the Computer Science curriculum?

This project really helped us pull together everything we've been learning—modular design, logic, problem solving, and working with hardware and software at the same time. It felt like we were able to apply everything we learned, especially the way we had to break down problems, test things, and iterate. It helped us think more like a developer, not just someone writing code. Plus, working together as a team definitely helped with learning how to split tasks efficiently and combine different ideas into one working project.