Defuse the Bomb

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Introduction

The Game:

- Based on "Keep Talking and Nobody Explodes"
- Cooperative bomb defusing party game
- Players race to defuse bombs using a manual

Our Version:

- Physical hardware device with buttons, switches, etc.
- Realizes the game concept with tangible interactions
- Built using Raspberry Pi and Python
- Final project in CSC 102 at the University of Tampa

Defusing Bombs

Phases:

- Four phases to defuse the bomb
- Can be disarmed in any order

Strikes:

- Mistakes result in strikes
- Too many strikes lead to explosion

Information:

- Random bomb versions with numerous variations

The Toggles

- Description:
  - Randomized sequence based on serial number
  - Numeric digits assembled into a target value
  - Transformed into 4-digit binary code
- Interaction:
  - Toggles represent binary bits
  - LEDs illuminate based on binary code

The Button

- Description:
  - Button cycles through colors
  - Significance tied to background color
- Interaction:
  - Press button when color matches background
  - Timing and color matching crucial

The Keypad

- Description:
  - Random hexadecimal values displayed
  - Player enters decimal equivalent
- Interaction:
  - Enter decimal values matching hexadecimal
  - Adapt quickly to changing backgrounds

The Wires

- Description:
  - Trio of wires representing primary colors
  - Decoding RGB values to determine cutting sequence
- Interaction:
  - Cut wires in descending order of RGB values
  - Navigate labyrinth of electrical connections

Code Structure

- Classes:
  - LCD, Pushbutton, Bomb
  - Timer, BombPhases, Keypad
  - BombTimer, PhaseThread
- Additional Functionality:
  - GUI setup and interaction
  - Thread management and configuration options

Wrap-up

- Summary:
  - Detailed presentation of project features
  - Incorporates various hardware components and Python programming
- Next Steps:
  - Testing and refining code
  - Exploring additional puzzle ideas and interactions