Defuse the Bomb

A CSC 102 Project

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BOMB DEFUSAL MANUAL

Defuse the Bomb | A CSC 102 Project Introduction:   
This project is meant to be a game in which the players need to diffuse a “bomb” that is connected to the Raspberry Pi. The bomb has 4 phases that the players need to complete in order to successfully diffuse the bomb and win the game before the timer runs out and without making too many mistakes (strikes).

Defusing Bombs

The bomb will “explode” when its countdown reaches 0:00, or when too many strikes have occurred. You defuse the bomb by disarming all of its phases before the countdown expires.

Phases

The bomb has four phases, each of which must be disarmed to defuse the bomb. The phases can be disarmed in any order. Once a phase is disarmed, it becomes inactive and changing it doesn't affect the bomb. Instructions for disarming the phases are provided in this document.

Strikes

A mistake in disarming any of the 4 phases will result in a strike. You begin the game with 5 strikes, and if that number reaches 0… BOOM (You lose).

Phase 1: The Keypad

Phase 2: The Toggles

Phase 3: The Wires

Phase 4: The Button

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Defuse the Bomb | A CSC 102 Project The Toggles Toggle Phase

The correct state of each toggle switch is based on the answer to a mathematical equation of sorts. The equation in question is below 

(hint: the answer’s digits should mirror the number of toggles on the bomb)

ABC – 37C | Don’t let the equation Hex you too much!

An Important thing to keep in mind is that you are essentially speaking to a computer, so do with that what you may…

0 = OFF 1 = ON

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Defuse the Bomb | A CSC 102 Project The Button Button Phase 

Take a close look at the button. The colors will reveal its many

secrets. Use the binary sequence of each color to determine the

decimal value. Use these decimal values as the key to unlock the

button.

| Button color | Release instructions |
| --- | --- |
| Red | Red = 0011 |
| Green | Green = 0101 |
| Blue | Blue = 0100 |

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Defuse the Bomb | A CSC 102 Project The Keypad Keypad Phase

*I hope you like Riddles! If not, this phase might pose a bit of a challenge for you!* 

Important information about the keypad phase is provided

in the bomb's “bootup” text.

The correct combination can be determined by first

answering the riddle provided in the bomb’s bootup text.

Once each of the letters of the word that answered the

riddle is shifted the correct number of spaces in the, you will most likely get a random jumble of letters. Don’t worry, you did this step correctly, you then will type in your now shifted jumble of words into the keypad to diffuse this phase.

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Defuse the Bomb | A CSC 102 Project The Wires Wires Phase 

*Which wires should you“cut”? One wrong “snip” leads you*

*one step closer to an “explosion”!*

The correct wires to “cut” is based on a word given to the user. The word will have letters missing coordinating to the wires that need to be cut. For example the word “\_OMB\_” AKA ”BOMBS” the user will take out the first and last wires.

The wires are labeled as follows:



1 2 3 4 5

Note that the actual color of the wires doesn't matter, and the color of the wires on your bomb may be different than those in this document.

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