

Defuse the Bomb
A CSC 102 Project

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Bomb Defusal Manual

To start the game:

- **Make sure all wires are plugged in**
- **Drag the window to fullscreen**
- **Make sure all toggles are turned off**
- **Make sure the timer starts at 5 minutes**

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The Game

This game is based on the TV show "Family Guy". Stewie Griffin, evil mastermind and youngest son of Lois and Peter, has built a bomb to destroy their hometown of Quahog. Who else but Peter is tasked to defuse it. However, due to Stewie's propensity for verbal communication, Peter turns to his friends and family for potential clues to defuse the situation. Can you help Peter save Quahog?

Defusing bombs

When the game starts, the user has **5 minutes** to figure out 4 different puzzles. The bomb "explodes" if you make 5 mistakes

while trying to diffuse the bomb or the timer hits 0:00. You must defuse all 4 puzzles correctly to defuse the bomb.

Phases

The bomb has four different phases; you can defuse the "bomb" in any order. Once the bomb is disarmed, it becomes inactive.

Strikes

If the player makes a mistake while trying to defuse the bomb, you lose a strike, if the player uses all 5 strikes, the bomb will "explode."

Information

Each time the bomb is "booted," it will be the same version of the game everytime but in this version of the game, it is **the same bomb every time**. The keypad code, wire configuration, and switch pattern are consistent, ensuring a single, solvable path to defusal.

Disarming the bomb will require specific information about the bomb. **Pay attention to each clue**

Regarding the Toggles

The correct state of each switch is based on the number of members in the Griffin family.



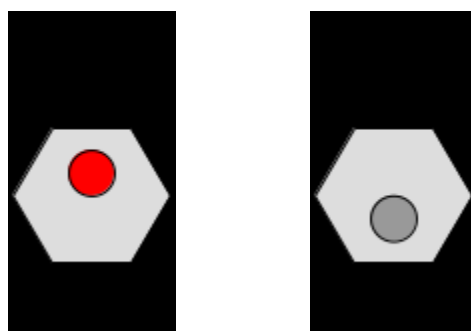
You must first figure out how many members are in the Griffin Family to obtain the target value. You must then convert this number into a 4-digit binary code. These toggle switches will represent this 4-digit binary code number.

How to convert a value to binary

To convert a decimal (base-10) number to binary (base-2), you repeatedly divide the number by 2 and keep track of the remainders. Start by dividing the number by 2 and writing down the remainder (either 0 or 1). Then, take the quotient and divide it again by 2, recording the next remainder. You continue this process until the quotient becomes 0. Finally, you take all the remainders you've recorded and read them **from bottom to top** (in reverse order) – that sequence of 1s and 0s is your binary number.

2^3	2^2	2^1	2^0
8	4	2	1

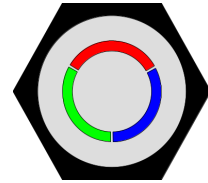
Each switch represents a value in Binary, up=1 and down=0 the user must figure out the binary order and act accordingly.



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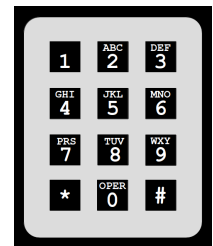
0

Regarding The Button



At some point, you must press the button. The issue is that you must press the button in a certain color. At the end of the game you must press the button 8 times.

Keypad



In the keypad phase, the player must correctly enter the 4-digit code "1999" to progress and prevent the bomb from detonating. The code is a reference to the year *Family Guy* premiered, making it both functional and thematic.

The interface displays a virtual keypad with digits 0 through 9. The player clicks the buttons to input numbers one at a time. As each digit is entered, it is added to the current input string. Once four digits have been entered, the game automatically checks if the input matches the preset code, "1999".

If the code is correct: a success message appears, and the game advances to the next phase.

If the code is incorrect: you get a strike.

After five total strikes across all phases, the bomb explodes, and the game ends.

The keypad is visually styled like a digital bomb interface and may include an optional display screen showing the entered digits. Players cannot delete once they've input four digits – this adds pressure and fits the high-stakes nature of the challenge.

Regarding the wires

The wires must be "cut" based on the fact that you can't trust an even wire

The wires slots are labeled as follows:

1	2	3	4	5
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Important note: The wire colors don't matter. All that matters is the slot that the wires are plugged in to

The following clue helps cut the wire:

"I don't know, you can never trust an even wire, Lois."

Wires

