MOUSE PLUMBER MANUAL

Defuse the Bomb-CSC 102

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The Game

This project reimagines the concept of a bomb defusal challenge through the quirky lens of a determined plumber mouse trapped in a maze of underground pipes. His mission? Solve a sequence of puzzles to unlock gates and safely navigate the pipe system before pressure builds and the whole thing explodes. Inspired by the digital party game Keep Talking and Nobody Explodes, our version brings the tension and teamwork into the real world using physical components like buttons, switches, and wires. Unlike the original, which is purely virtual, this game is built on a Raspberry Pi and requires players to interact directly with the device. Each puzzle phase—from flipping the correct toggle to solving keypad math—requires quick thinking, coordination, and a steady hand. The game is self-contained, meaning players serve both as the “Defuser” and the “Expert,” using this manual to understand and complete each phase.
All software for this project was developed in Python and serves as the culmination of a final group project in CSC 102 (The Science of Computing II) at the University of Tampa. The result is a physical, story-driven puzzle experience where code meets creativity—and only the cleverest can help the mouse survive.

Defusing Bomb

In our game, the pipes will burst if the countdown reaches 0:00 or if the player accumulates too many strikes by making incorrect moves. To prevent the explosion, players must successfully complete all puzzle “phases” before time runs out.

Phases

Our game features four distinct gates, each representing a challenge the plumber mouse must pass through to progress through the pipe system. These gates—also known as phases—can be completed in any order. Once a gate is cleared, it becomes inactive and no longer affects the outcome of the game. This manual provides all the information needed to navigate and disarm each gate successfully.

Strikes

In our game, making a mistake while attempting to pass a gate results in a strike. Accumulating too many strikes causes the pipes to burst. In some cases, a strike may also reduce the remaining time or cause the countdown to accelerate, increasing the pressure on the player to act quickly and carefully.

Information

In our version, the game begins with a brief bootup sequence before launching into a series of four fixed puzzle challenges. While the content remains consistent each time, players must still approach each gate with focus and problem-solving skills. The bootup screen is purely thematic and does not provide any gameplay information—your task begins once the first challenge appears.

Regarding the Toggles

After the game boots up, the first challenge you'll face is a riddle displayed on the screen. Your goal is to determine the correct answer and indicate it by flipping the appropriate toggle switch.
Each possible answer corresponds to a specific toggle on the Raspberry Pi, ordered from left to right. Think of the toggles like multiple-choice options:

- The first toggle (far left) represents option A
- The second toggle is option B
- The third toggle is option C
- The fourth toggle (far right) is option D

Once you believe you've figured out the correct answer, flip up the toggle that matches your choice. If it is correct then you move on.

⚠ Be careful! Flipping the wrong toggle will result in a strike and a time penalty. If you're right, you'll pass through this gate and move on to the next puzzle.
Take your time, think critically, and make your choice wisely.

Regarding the Button

For our game the button is only being used to say you are ready to play and move on past the start screen. Once you have passed the start screen the button will no longer function nor will it benefit you in completing the gates.

Where button is being implemented:

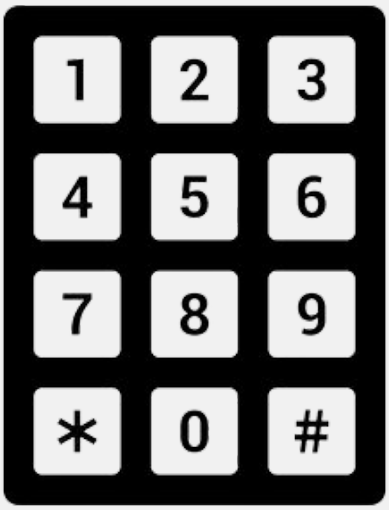
- Start Screen, telling the game you are ready to try.

Regarding the Keypad

One of the puzzles you'll encounter will require you to input a numerical answer using the keypad. Each key represents a digit, and together they form your final response. It's a straightforward input method: simply press the numbers that make up your answer.

Once you've entered your response, you will either move on to the next gates puzzle or stay stuck for the time being.

⚠ Be sure of your input before confirming. An incorrect number will result in a strike and may reduce your remaining time.



Regarding the Wires

In this phase, you'll encounter a puzzle that requires you to unplug specific wires based on a prompt shown on the screen. The wires correspond to different possible answers, and your task is to determine which ones must be removed to solve the puzzle correctly.

The game is reading your binary combination for the wires plugged in, your job is to find which wires need to be unplugged. Be sure you're confident in your choices before doing so.

Carefully follow the prompt, identify the correct wires, and you will be able to move forward.