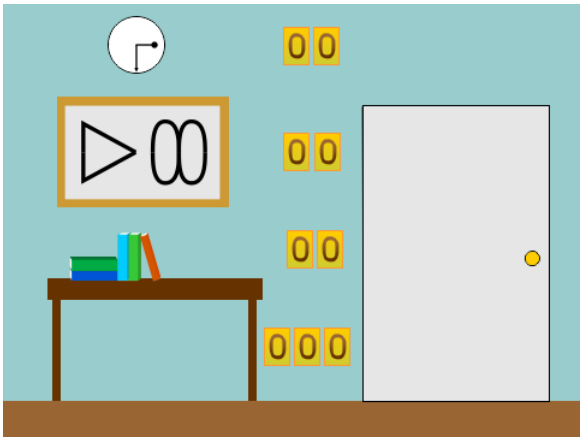
MEDIUM

Room Escape

http://scratch.mit.edu/projects/30428650/#editor

Can you solve the puzzles and find the secret codes to escape the room? Room Escape games are about solving puzzles and exploring to figure out how to escape a room.



The program has four main sprites—the clock, the painting, the books, and the door—one for each puzzle. When you solve a puzzle, the sprite should disappear, revealing a secret underneath. There are also nine optional sprites for the combination numbers.

(Finished game: http://scratch.mit.edu/projects/30367666/)

1. Books

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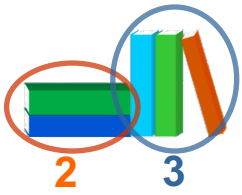
Let's start with the book puzzle. The secret code for the books puzzle is 23. The reason is that there are two books lying sideways and three books standing up. Write a program for the books so that when they are clicked on, it will ask you to type in the secret code. If the answer is correct, you should hide the books.



When the green flag is clicked to start the game, you should make sure that the books sprite is showing or people will see the secret code underneath.

2. Painting

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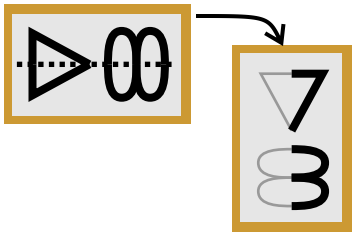

When you draw a line through the middle of the painting, you will see the numbers 7 and 3. The secret code for the painting is 73. Write a program for the painting that will ask you for a code if you click on it. If you get the right answer, the painting should disappear.

3. Clock

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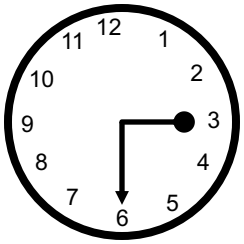

The hands of the clock are pointing at the numbers 3 and 6. The secret code for the clock puzzle is 36. Write the program for the clock puzzle.

4. Door

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When you solve the books, painting, and clock puzzle, you will find the three secret numbers 8, 5, and 1. Write a program for the door that will ask you for the secret code if you click on it. If you get the right answer, the door should disappear.

Try It: Combination Lock

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Instead of typing in the secret codes, let's use the combination locks to enter in the code instead. Click on one of the sprites for the combinations, and then click on the costumes tab. There should be one costume for each number. Write a program so that when the combination is clicked on, it should change to the next costume. When the green flag is clicked to start the game, it should start with the costume for the zero number.

Does the number on the combination change properly now? If so, copy your program to the other numbers of the combination lock. Don't forget that you can use the "Backpack" at the bottom of the screen to copy code between sprites.

Try It: Checking the Combination

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Now you need a way to check if the combinations are correct. First, the books, painting, clock, and door need to know when the combinations are being changed. Change the programs for combination numbers so that they broadcast a message when they are changed. A broadcast sends a message to all the other sprites telling them that something has happened. Remember that you can use the Backpack to copy code.

Now, you can check the combination codes. Change the programs for the sprites for each puzzle. When one of them receives a message that the combinations have changed, it should check if the combination code is correct. If it is correct, the sprite should hide itself.

More Ideas

Try changing the puzzle sprites to have different answers. Or try making entirely new puzzles for the game!

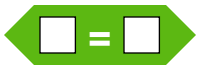
Useful blocks for this exercise

Events

Looks

Sensing

Operators



Control