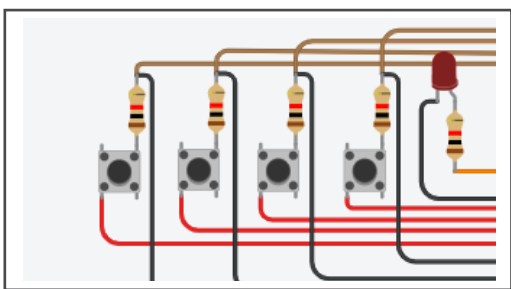
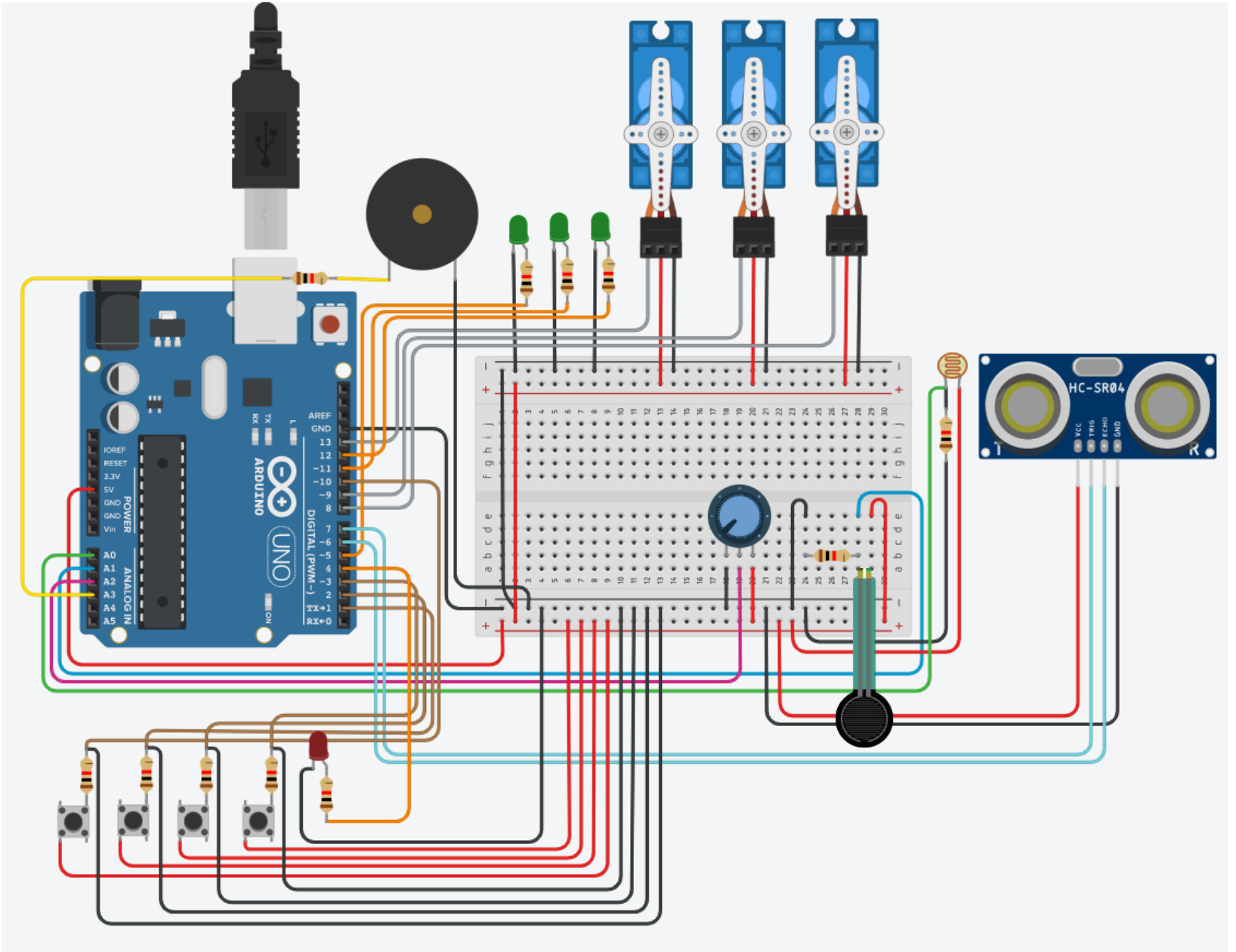


Step 2: Scheme of electrical connections

In this part we can see the different connections we have made from the Arduino Uno controller board to the various mechanisms that make up the project. It has been made in order to understand the electrical system in a global way more clearly, as well as being useful to be able to compare it with the programming code.

The scheme is divided into 3 different tests. The first consists of the 4 buttons and the red LED, located at the bottom. The second is about the photoresistor and distance sensor connections, which would open door 2 on the coffin. The next test is the force resistive sensor and the potentiometer. Finally, the last section corresponds to the 3 servomotors that open the different doors in the coffin, in addition to the 3 indicative LEDs when completing the corresponding tests, and finally, the passive buzzer, which sounds in case the three green LEDs turn on. Even so, we will see each test in depth.

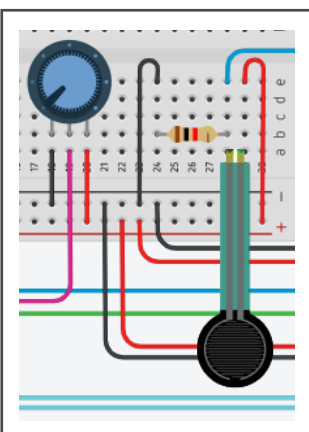
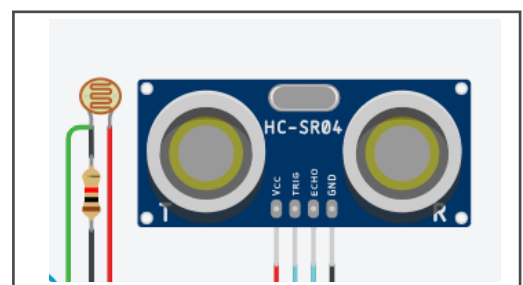


1 test

This is the first test that the user faces. There are 4 buttons and a red led, which only turns off if you have passed the test. The goal is to press three buttons at the same time, although you don't know first-hand which one it is. By means of a riddle you will be able to know which are the ones that open the first door.

2 test

In the next test the user faces two electrical parts that should work simultaneously to go to the next phase. In this case they are a distance sensor placed in the box that you want to open and a light sensor placed in the box that you opened in the previous test. It is necessary to test by means of certain distances and different intensities of light.



3 test

In test 3 the user must regulate the potentiometer in a specific position, in addition to applying a certain pressure on the force resistive sensor to open the final door, where the gift will be. These two sensors are arranged in the same box that has been opened.

4

This fourth reserved section is destined to explain the operation of the 3 green LEDs, the 3 servomotors and the passive buzzer. Starting with the servomotors, these act as opening the doors of boxes 1, 2 and 3 of the coffin. Once test one is completed, the servomotor one rotates 180° and allows the door to open.

So with the 3 tests. The LEDs corroborate that you are doing the tests correctly, so that the user knows at all times which test he is in. Finally, the passive buzzer sounds at the end when the 3 LEDs are lit and the last door opens with the candies.

