The Digital Piano

Robotix.com.au

What is it?

It is a device that uses a speaker and buttons connected to a microcontroller to create 6 different notes that happen when each button is pressed.

How to make it?

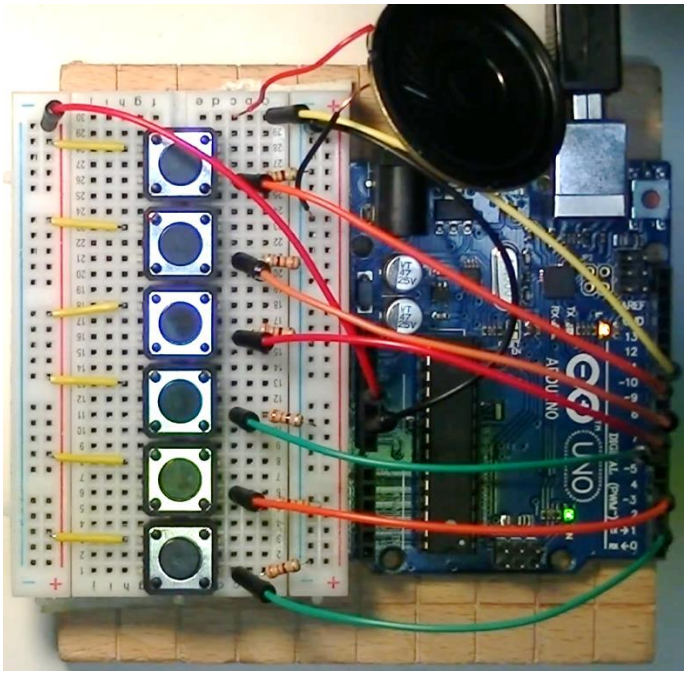
Components:
breadboard, breadboard wire, push button X 6, resistor X 6 (between 360Ω and 1k Ω), Arduino, info cards

Step 1: Connect the Arduino to your computer. In your programs folder locate the "Piano Program and upload it into your Arduino.

Step 2: Connect the +5V Ardunio pin into the red breadboard rail and the GND Arduino pin into the blue breadboard rail.

Step 3: Connect the (-) terminal of the speaker into the blue breadboard rail and the plus terminal into the Pin 11 on the Arduino (speaker may make some unexpected sounds… its ok)

Step 4: Place the button on the middle of the breadboard as in the picture below, now connect one end of the button to the red rail on the breadboard and then use the resistor to connect the other end of the button into the blue rail.

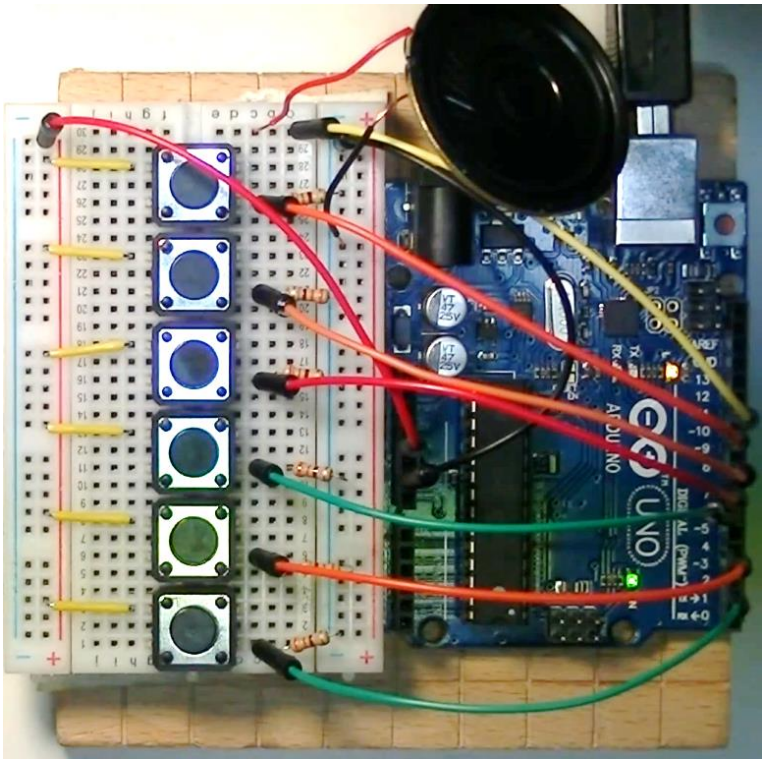


Step 5: Now connect the same pin on the button that is earthed into Pin 2 on the Arduino (see yellow cable)

Step 6: Now press the button and see what happens?... it should create a sound

Step 7: Repeat steps 4 to 6 for 5 more buttons and place the sensor lead (yellow in the picture into pins: 4, 6, 7, 8 10. The Finished piano will look a like the image on the next page

Completed Piano Circuit



Piano Circuit Schematic