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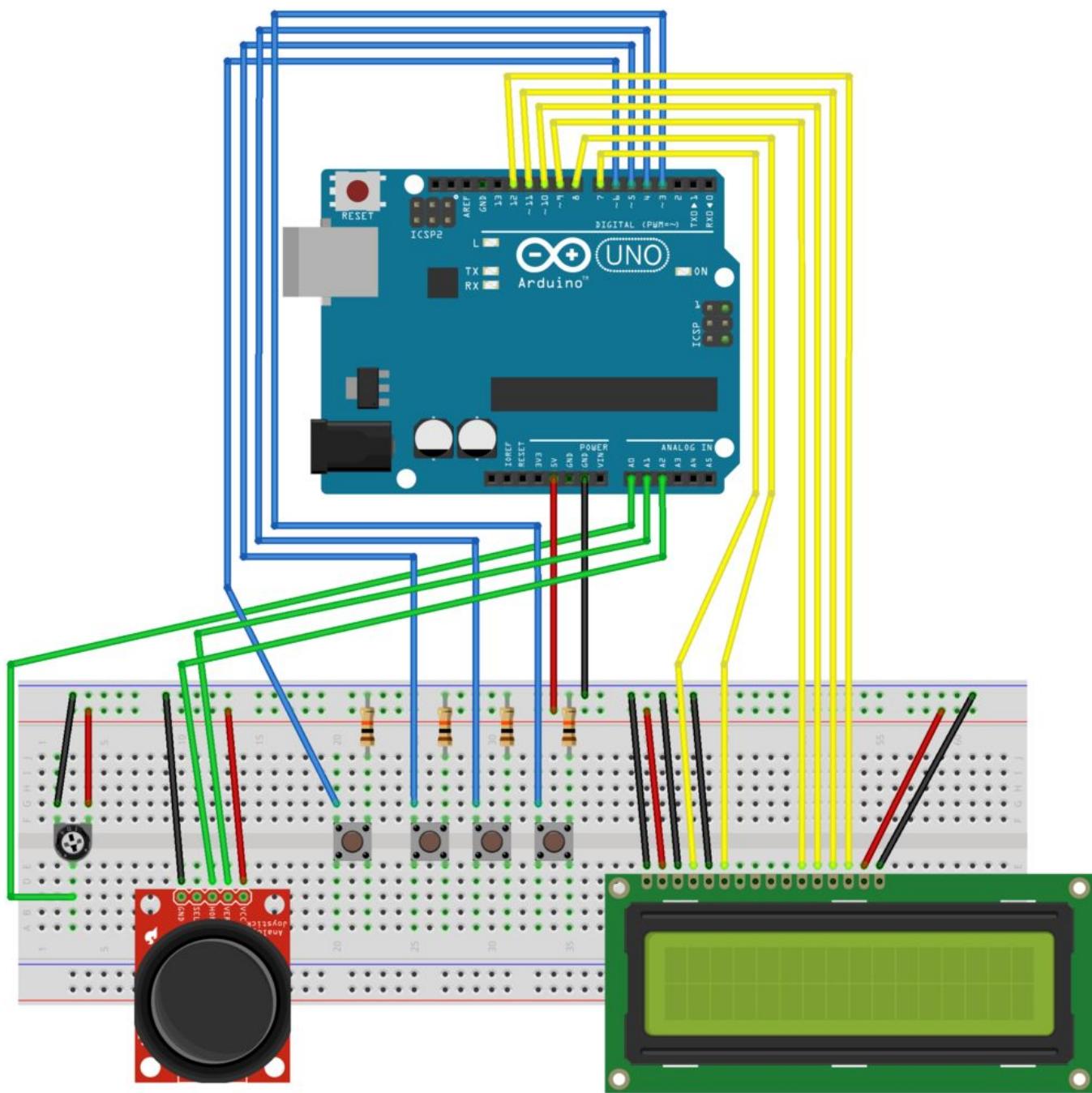
# TEXT EDITOR

by AaronB299 (/member/AaronB299/)

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This project will iteratively show you how to create a fully complete text editor. You will be able to write and delete text on 2 rows each with 16 columns! Thus, one can write up to 32 characters. The joystick's Y position will allow the user to change the row selection and the potentiometer will allow the user to change the current column selection. Then, the user can change the current character displayed by moving the joystick's X position right or left. The characters increment in the following order: [a-z], [A-Z], [0-9], [! , . ?], and finally, a space.

Note, you will know where the cursor is by seeing the current character and then a blink or block followed by the character. A block will be the blink when the current character is a blank and a blank for any other character. Using the potentiometer, you can delete or insert a character at the current cursor location. To delete the character at the cursor position, you can press the delete button. Also, you can uppercase all lowercase letters with the uppercase button and lowercase all uppercase letters with the uppercase button.

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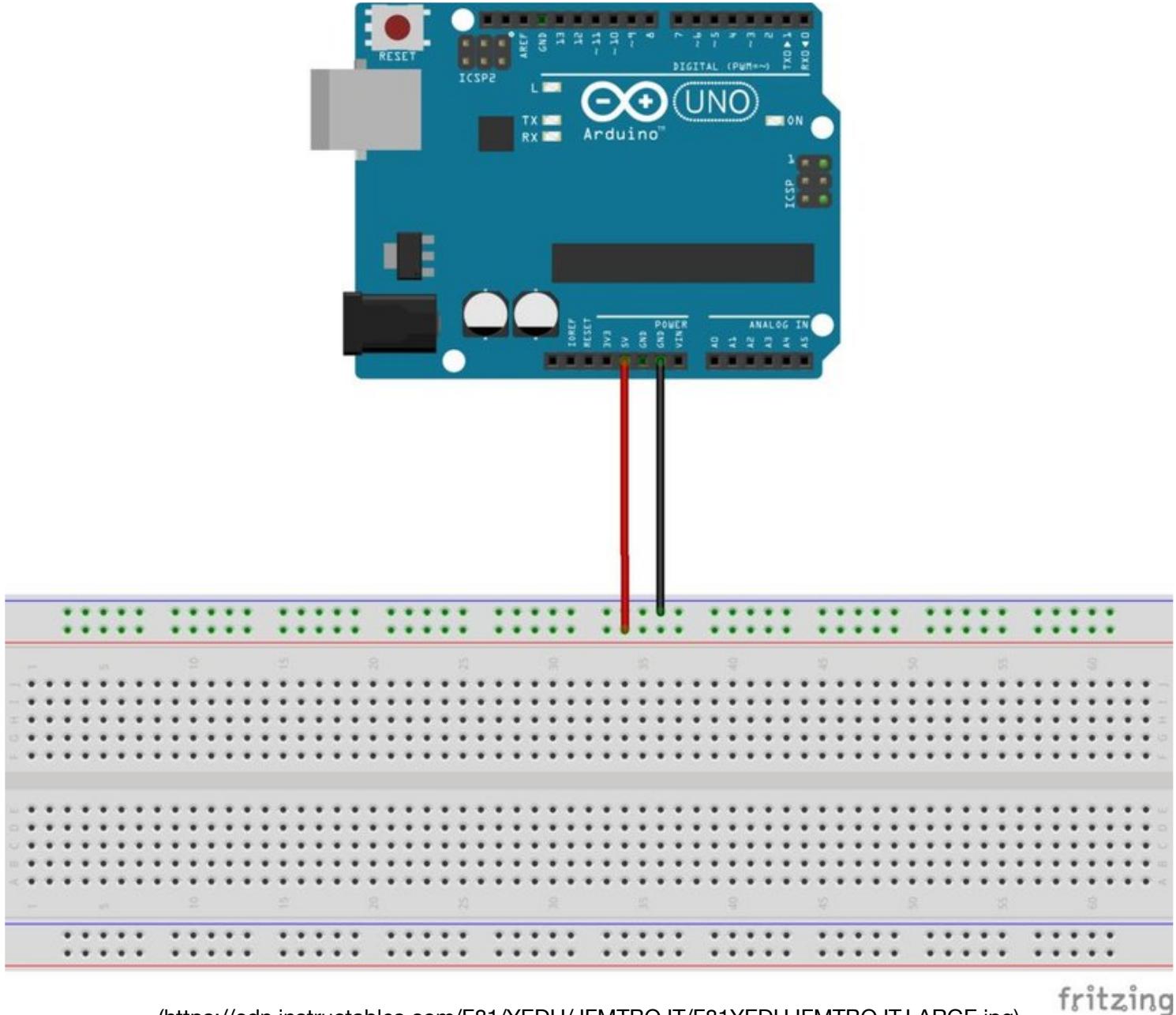
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## Step 1: Add Basic Components



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<https://cdn.instructables.com/F01/VERDU/1EMTR0/IT/F01/VERDU/1EMTR0/IT/LABCE.ino>

1. Add Arduino UNO RV3
2. Add breadboard
3. Connect 5v to breadboard power rail
4. Connect GND to breadboard ground rail

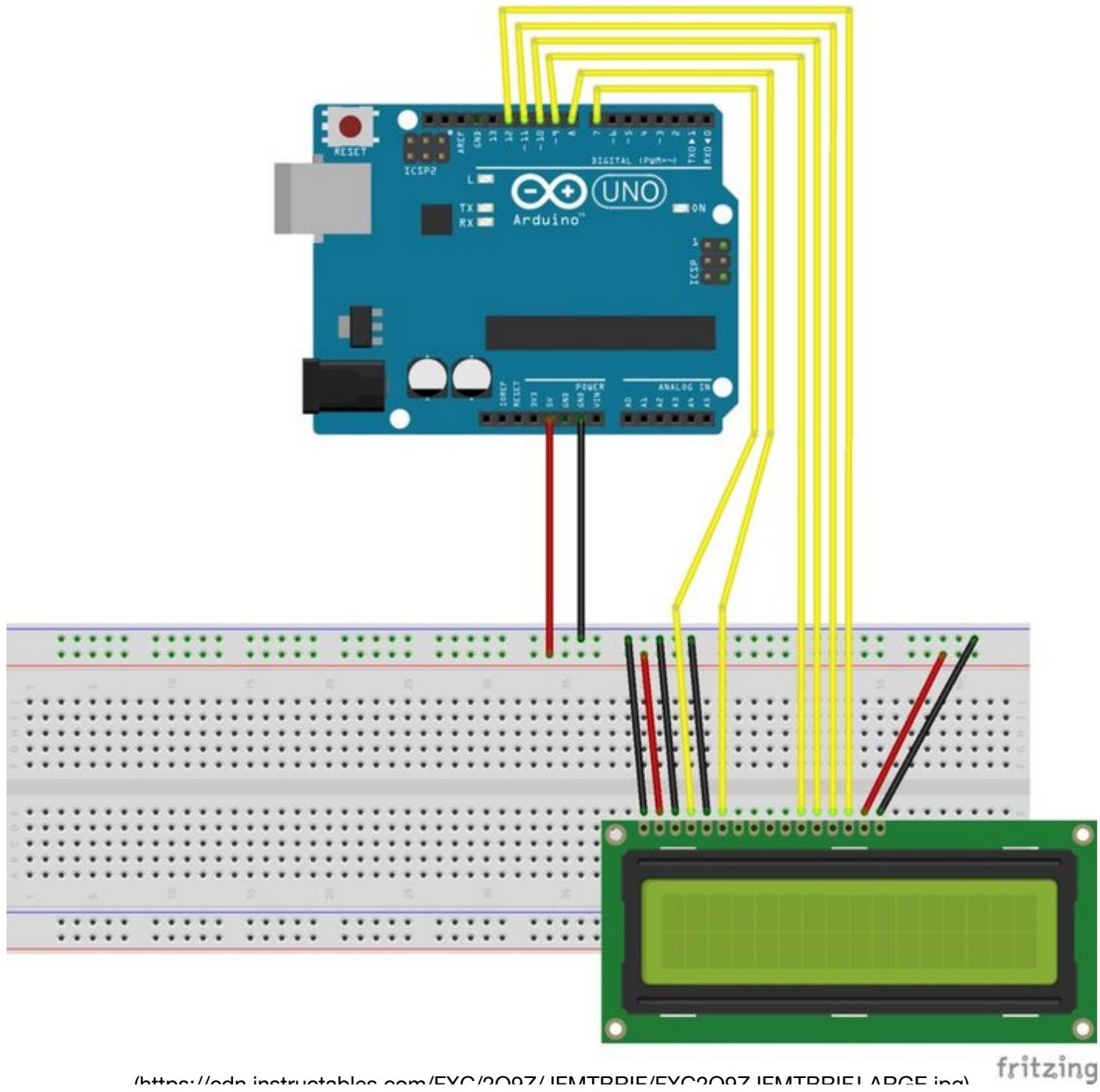
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## Step 2: Add LCD Screen



The LCD is where the text editor's display will be outputted. The LCD screen's pins must be connected to the breadboard and Arduino Uno R3 in the following order. From left to right with the left starting at LCD pin 1 and ending at the right with LCD pin 16:

1. Ground
2. Power

3. Ground

4. Pin 7

5. Ground

6. Pin 8

7. Leave unconnected

8. Leave unconnected

9. Leave unconnected

10. Leave unconnected

11. Pin 9

12. Pin 10

13. Pin 11

14. Pin 12

15. Power

16. Ground

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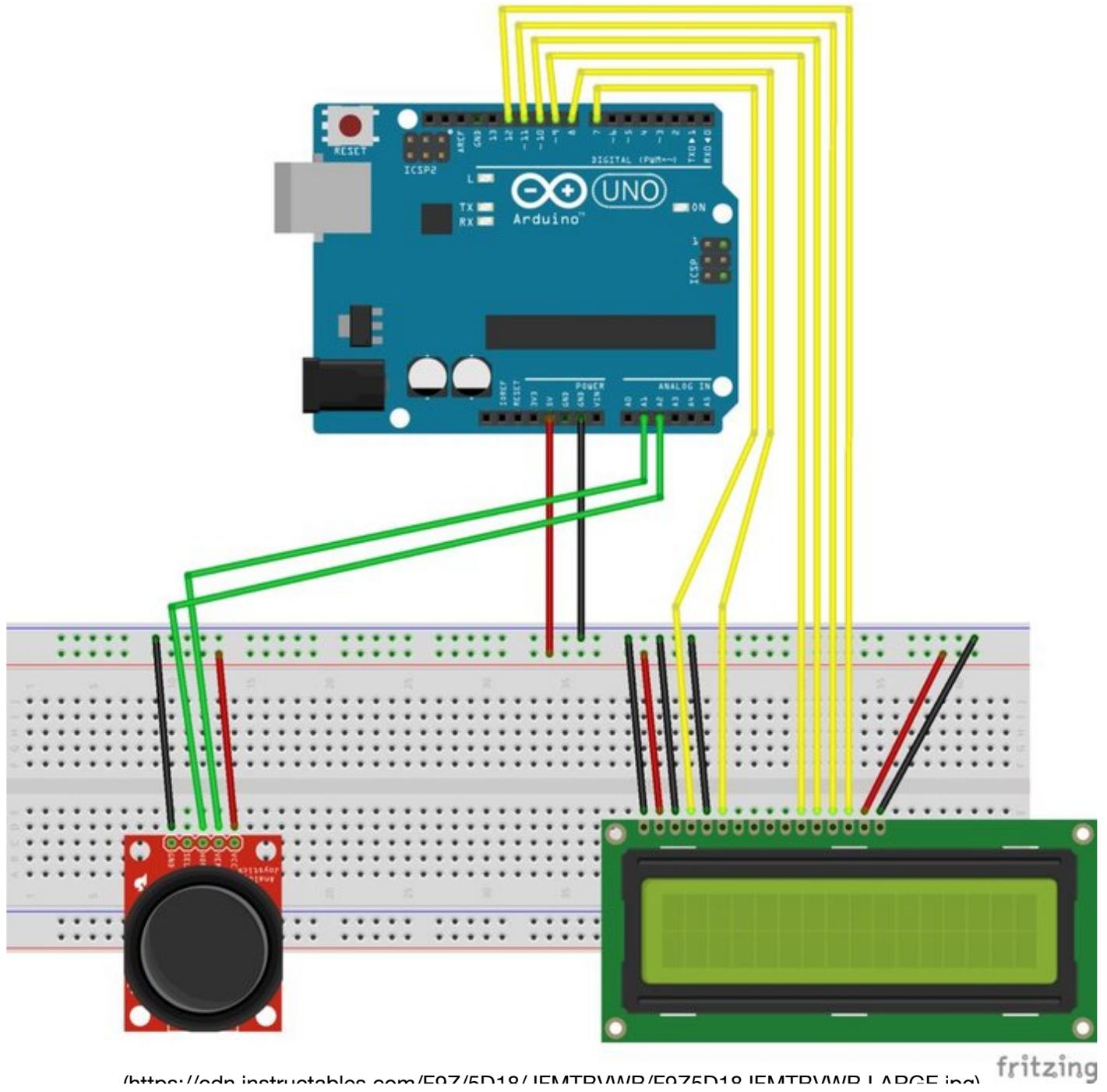
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## Step 3: Add Joystick



The joystick controls the row and current character. The y position of the joystick controls the row while the x position of the joystick controls the current character.  
How to set it up:

1. Add joystick
2. Connect GND to the ground rail of the breadboard
3. Connect the 5V to the power rail of the breadboard

4. Connect the x or horizontal pin to A1 on the Arduino UNO

5. Connect the y or vertical pin to A2 on the Arduino UNO

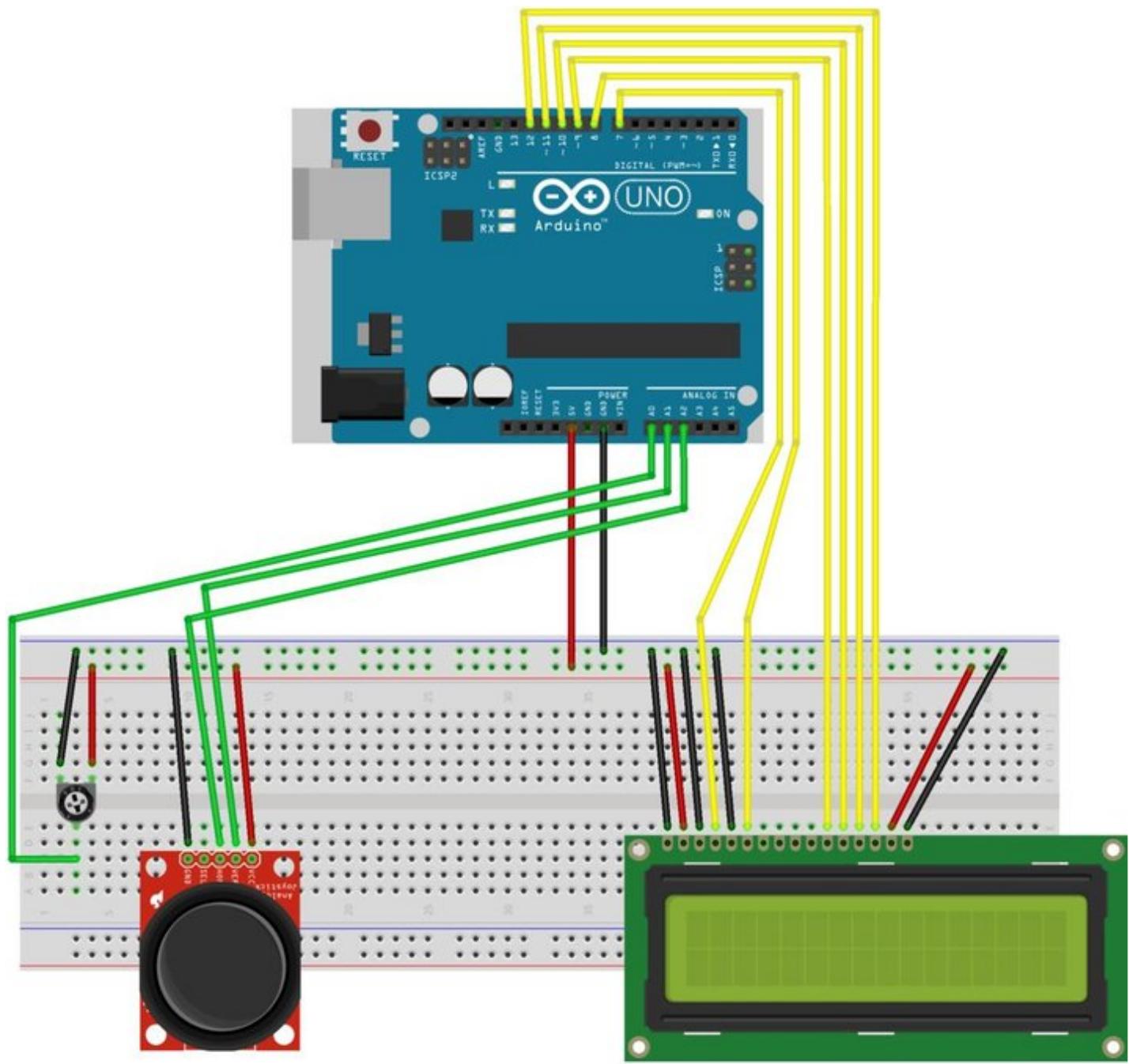
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## Step 4: Add a Potentiometer



The potentiometer controls the horizontal position of your cursor. How to set it up:

1. Add a potentiometer
2. Connect the top left potentiometer wire to the negative rail of the breadboard
3. Connect the top right potentiometer wire to the positive rail of the breadboard
4. Connect the output potentiometer wire to A0 on the Arduino UNO

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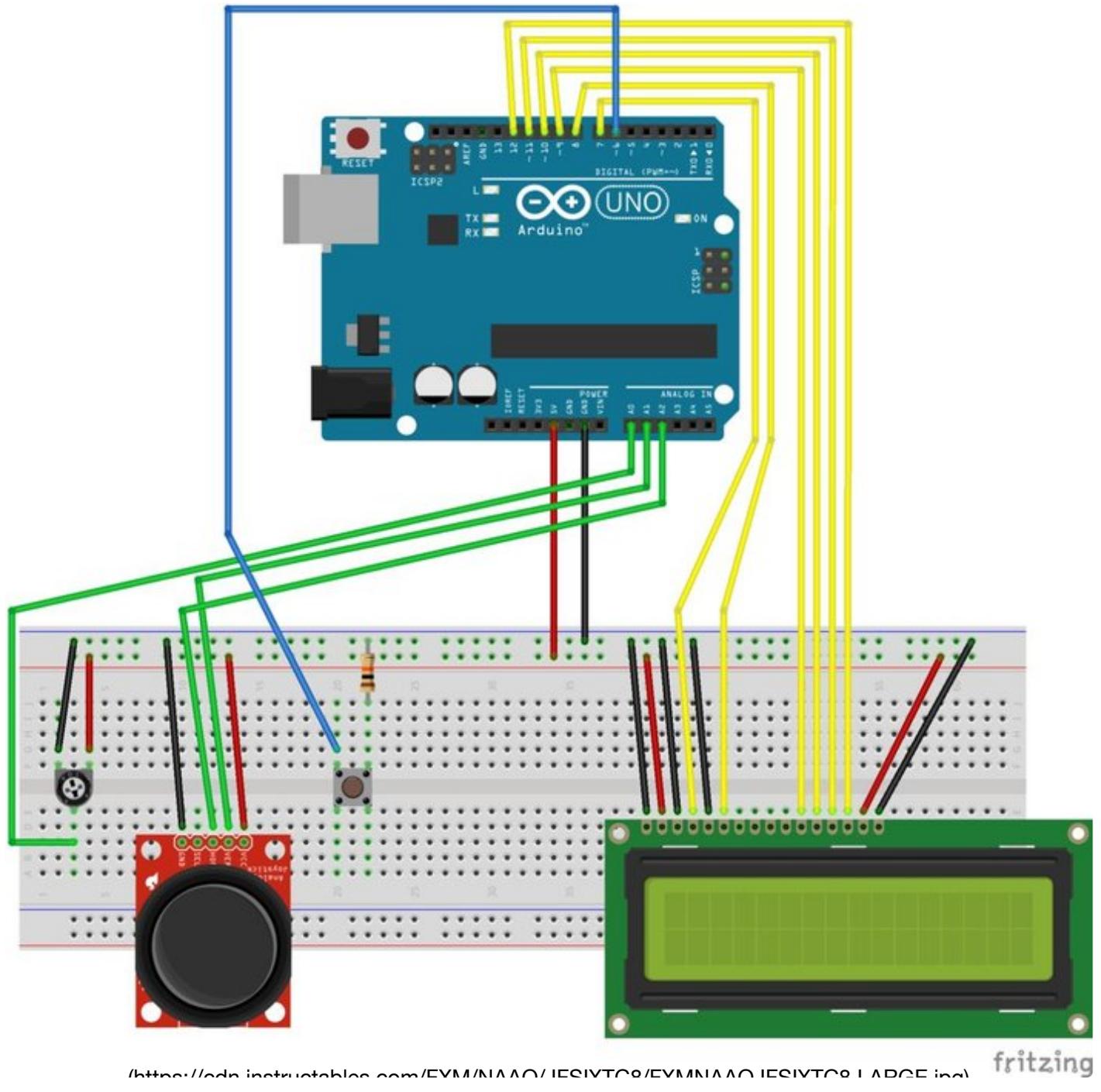
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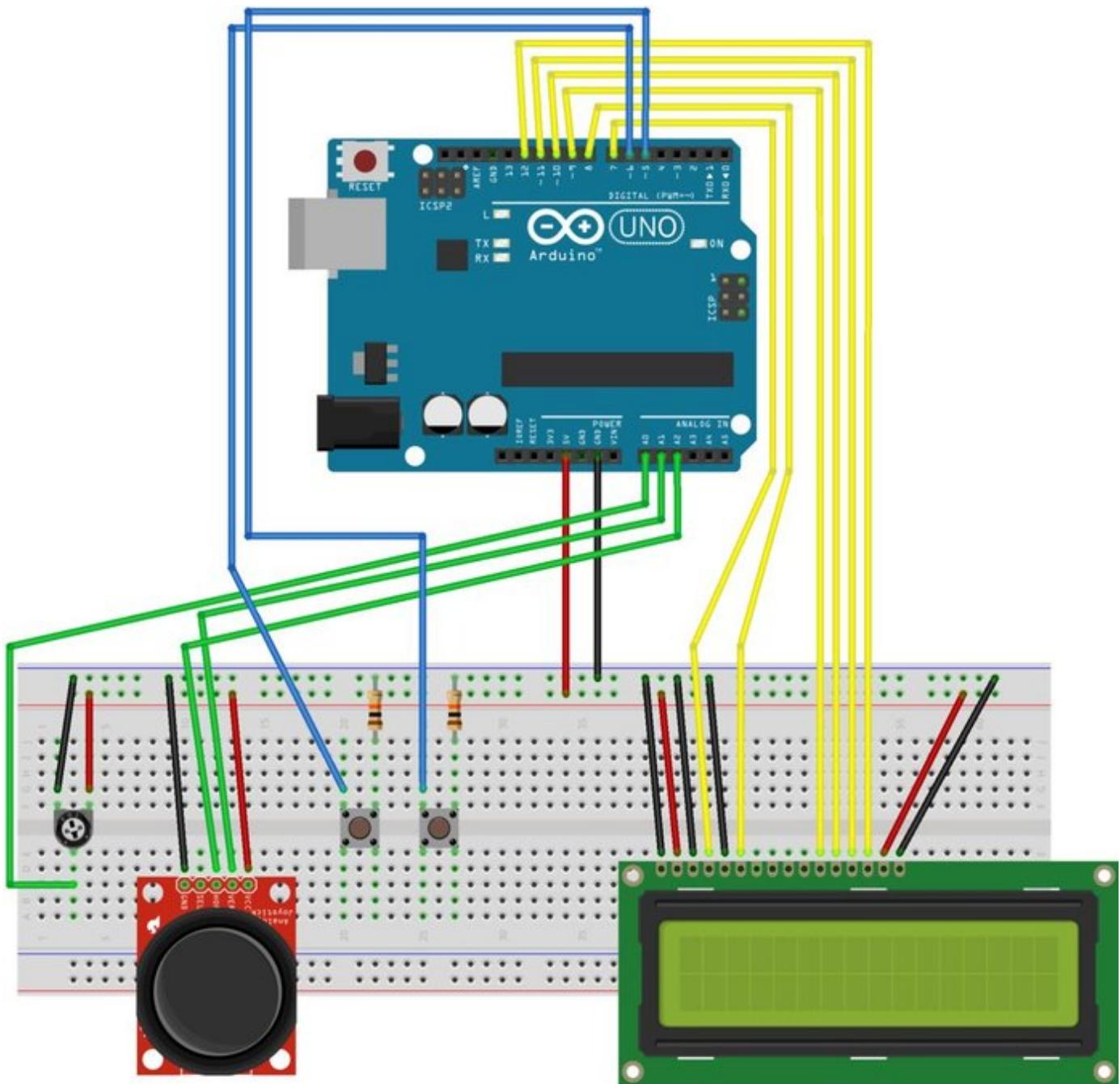
## Step 5: Add the Select Button



This is the select button which will finalize the character selection. How to set it up:

1. Add a push button
2. Connect the top left push button wire to pin 6 on the Arduino
3. Connect the top right push button wire to a 10k resistor
4. Connect the 10k resistor to the negative rail on the breadboard

## Step 6: Add the Uppercase Button



(<https://cdn.instructables.com/EEA/UNOW0/IESIVTD7/EEAUHOW0/IESIVTD7/LARGE.ino>)

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This is the uppercase button which will change all lowercase letters to uppercase while not modifying non-lowercased letters. How to set it up:

1. Add a push button

2. Connect the top left push button wire to pin 5 on the Arduino
3. Connect the top right push button wire to a 10k resistor
4. Connect the 10k resistor to the negative rail on the breadboard

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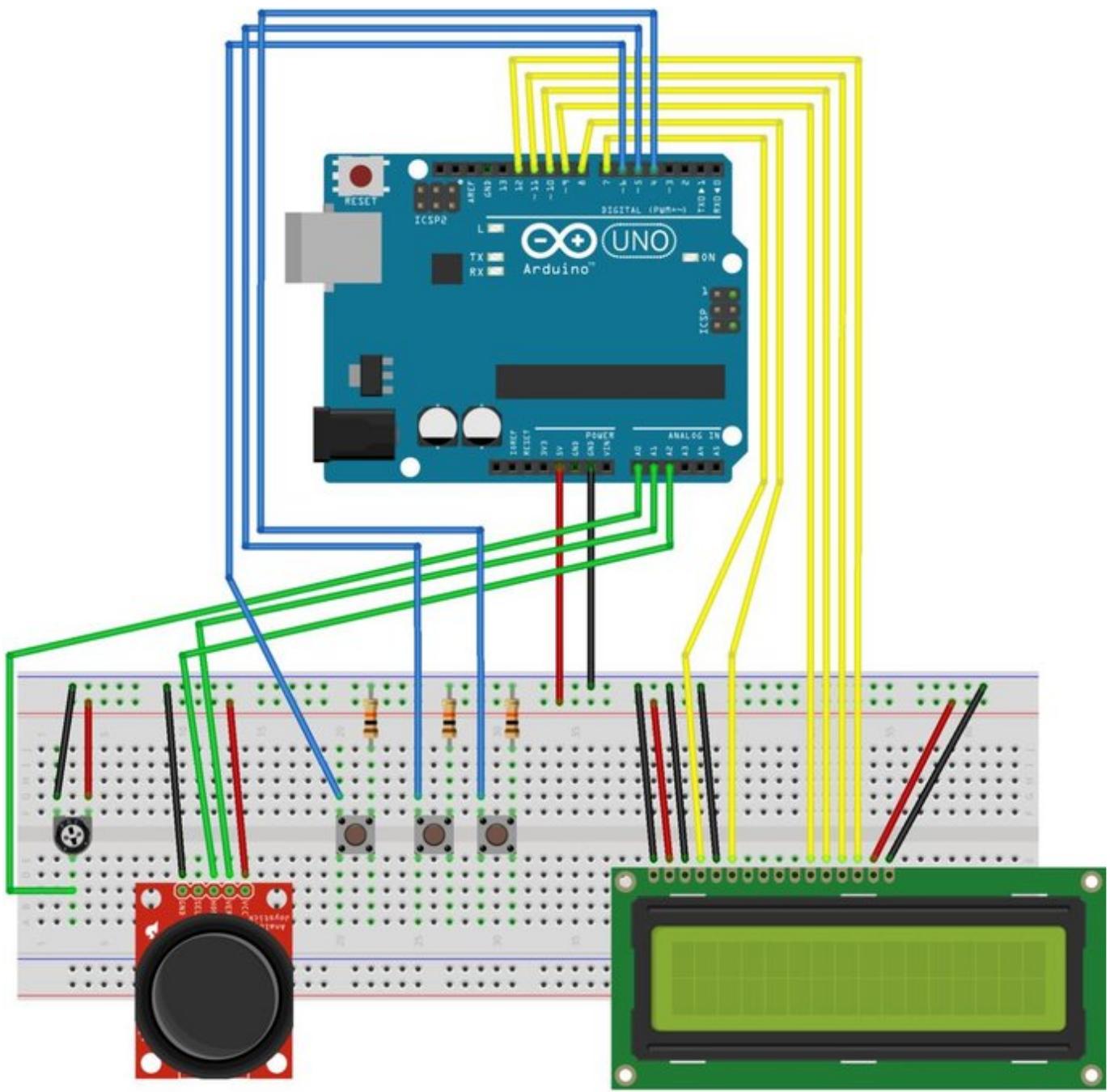
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## Step 7: Add a Lowercase Button



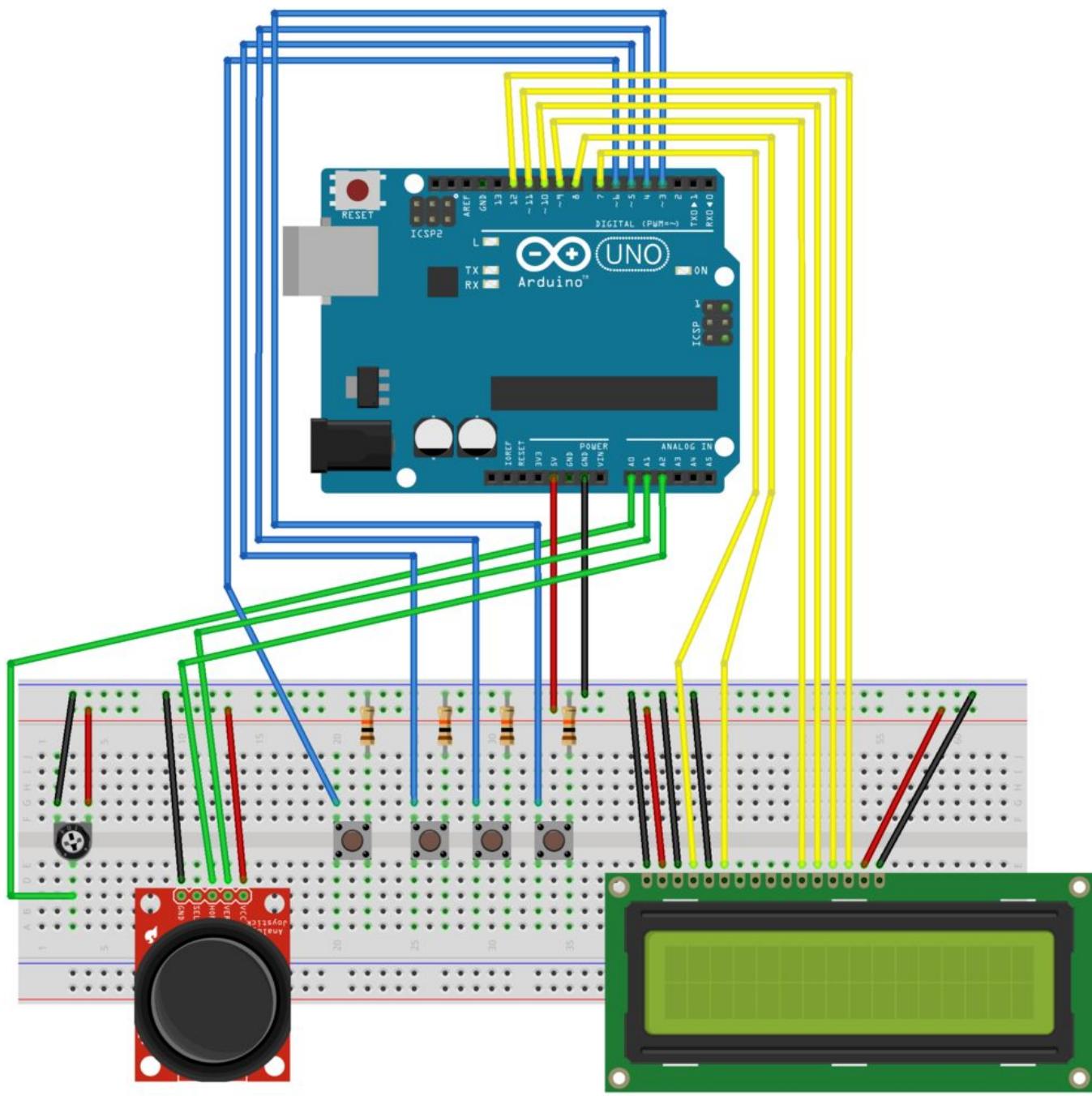
<https://cdn.instructables.com/F/L/U5E9W/1ESIVTED/E1UEEW/1ESIVTED/1APGE.ino>

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This is the lowercase button which will change all uppercase letters to lowercase while not modifying non-uppercased letters. How to set it up:

1. Add a push button
2. Connect the top left push button wire to pin 4 on the Arduino
3. Connect the top right push button wire to a 10k resistor
4. Connect the 10k resistor to the negative rail on the breadboard

## Step 8: Add the Delete Button



This is the delete button which is used to delete the character where the cursor is currently located. How to set it up:

- ## 1. Add a push button

2. Connect the top left push button wire to pin 3 on the Arduino
3. Connect the top right push button wire to a 10k resistor
4. Connect the 10k resistor to the negative rail on the breadboard

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## Step 9: Add Code

Next, the code must be the code:

1. Connect Arduino UNO to computer
2. Download Arduino code
3. Open Arduino code in Arduino IDE
4. Upload code to Arduino UNO

aaron\_barlow\_exam\_2

[Download](https://cdn.instructables.com/ORIG/FI2/L8HD/JFSIZBH5/FI2L8HDJFSIZBH5.ino) (<https://cdn.instructables.com/ORIG/FI2/L8HD/JFSIZBH5/FI2L8HDJFSIZBH5.ino>)

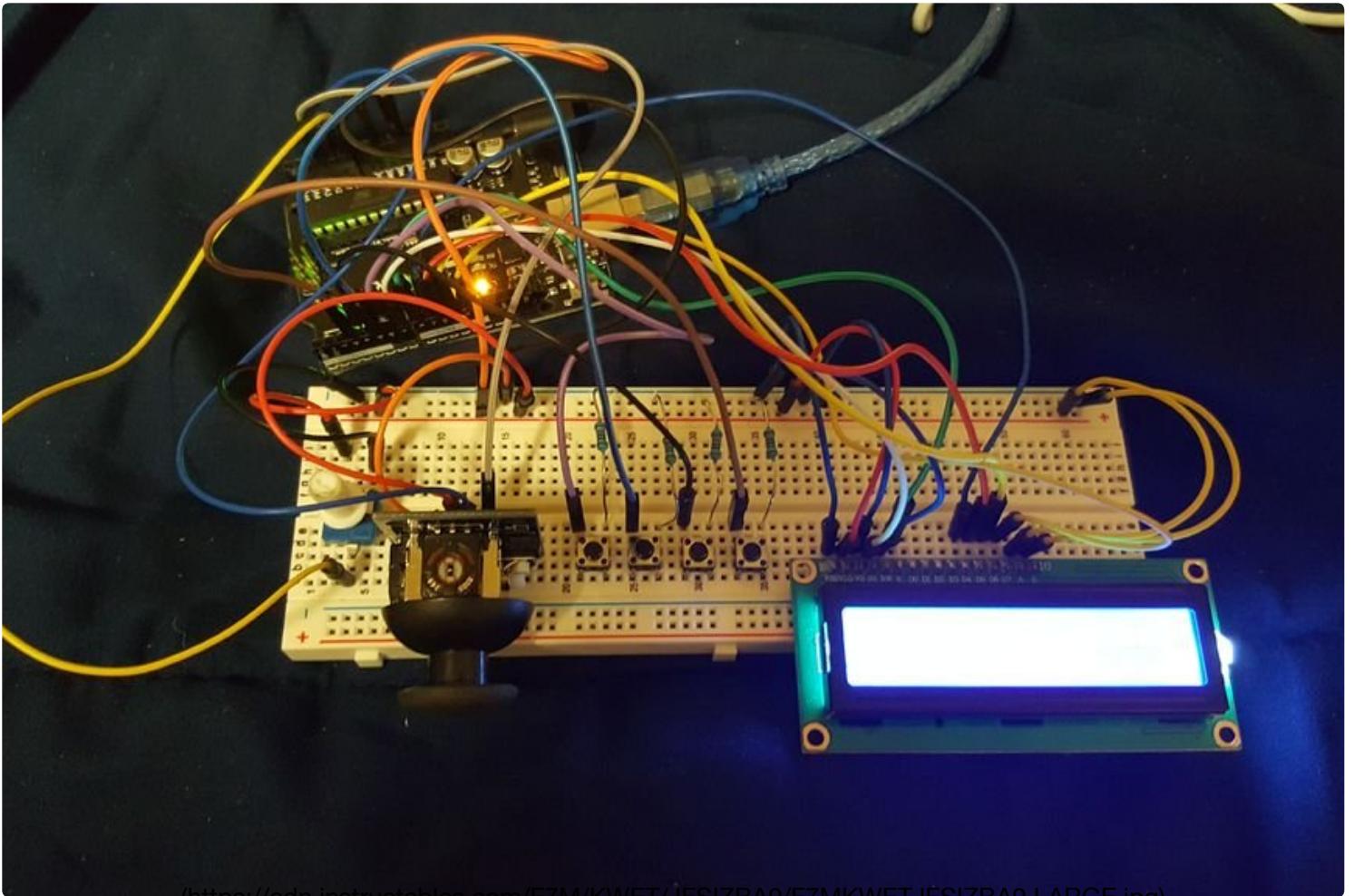
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## Step 10: Final Project Overview



<https://www.instructables.com/FZM1QWETI0GIZRAO/FZM1QWETI0GIZRAO-LARGE.html>

You are done, this is roughly what the completed project should look like.

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## Step 11: Example Text Editor Output



This is an example of what output you ought to be able to produce with the text editor.

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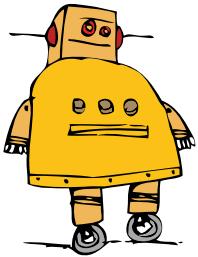
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