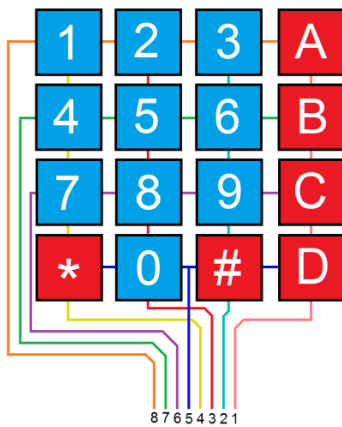# Hardware

Figure 1: Matrix Keypad Connections

Pins 8, 7, 6, 5 on the keypad should be connected to digital pins 5, 4, 3, 2 on the Arduino respectively.

Pins 4, 3, 2, 1 on the keypad should be connected to digital pins 9, 8, 7, 6 on the Arduino respectively.

Software

```
#include <Keypad.h>


const byte ROWS = 4; //four rows
const byte COLS = 3; //three columns
char keys[ROWS][COLS] = {
```

```
{'1','2','3'},
{'4','5','6'},
{'7','8','9'},
{'*','0','#'}
};

byte rowPins[ROWS] = {5, 4, 3, 2}; //connect to the row pinouts of the keypad
byte colPins[COLS] = {8, 7, 6}; //connect to the column pinouts of the keypad

Keypad keypad = Keypad( makeKeymap(keys), rowPins, colPins, ROWS, COLS );

void setup(){
        Serial.begin(9600);
}

void loop(){
        char key = keypad.getKey();
        if (key){
                Serial.println(key);
        }
}
```

Links

- Connecting a 4 X 4 Membrane Keypad to an Arduino : 6 Steps - Instructables