

Lesson 13 Matrix Keyboard

Overview

In this lesson, we will learn how to use a matrix keyboard.

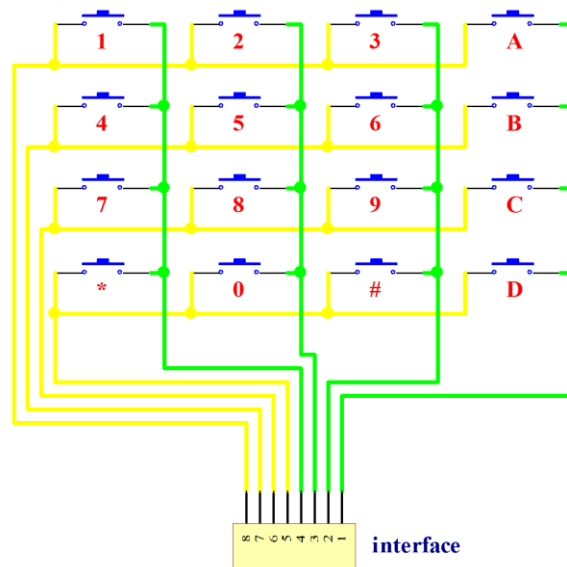
Requirement

- 1* Raspberry Pi
- 1* 4x4 Matrix Keyboard
- Several Jumper wires

Principle

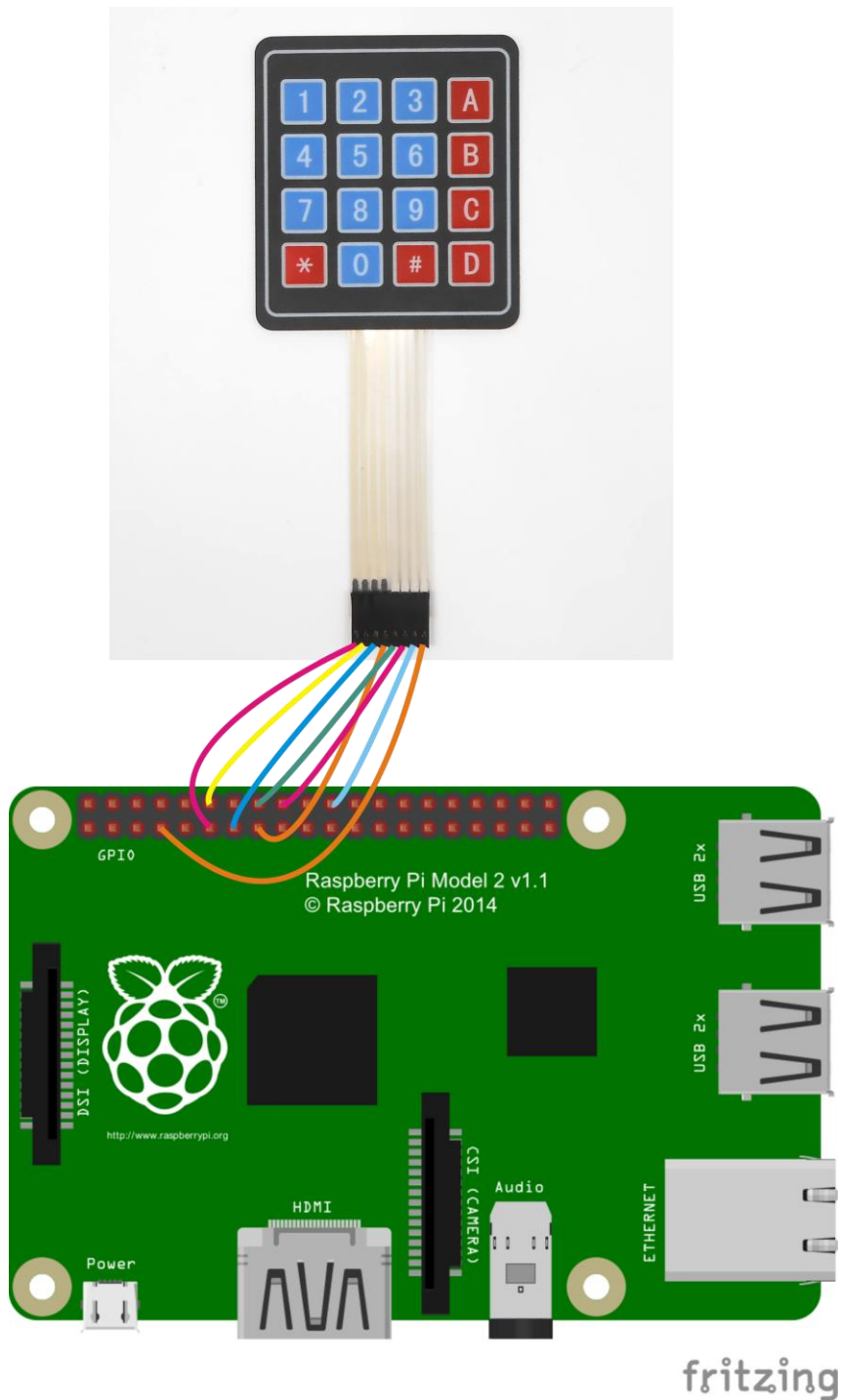
In order to save the resources of the microcontroller port, we usually connect the buttons in a matrix in an actual project.

The following is the schematics of 4x4 matrix keyboard:



Procedures

1. Build the circuit



2. Program

C user:

2.1 Edit and save the code with vim or nano.

(Code path: /home/Adept_Ultimate_Starter_Kit_C_Code_for_RPi/13_matrixKeyboard/matrixKeyboard.c)

2.2 Compile the program

```
$ gcc matrixKeyboard.c -o matrixKeyboard -lwiringPi
```

2.3 Run the program

```
$ sudo ./matrixKeyboard
```

Python user:

2.1 Edit and save the code with vim or nano.

(Code path: /home/Adept_Ultimate_Starter_Kit_Python_Code_for_RPi/13_matrixKeyboard.py)

2.2 Run the program

```
$ sudo python 13_matrixKeyboard.py
```

Now, when you press one of the button on the 4x4 matrix keyboard, you will see the corresponding key value will be displayed on the terminal.

