

Robotics

Team 5

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01

Our Project Title & Goal

MusePiano

:People who don't know music and note can write
music sheet easily

Related work



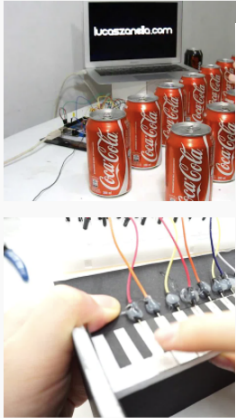
Arduino piano project | Arduino conductive paint | Arduino Capacitive touch

조회수 5.2천회 · 1년 전

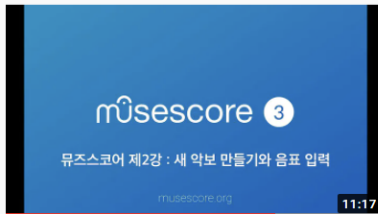
Mr ElectroUino

Arduino piano project | arduino conductive piano and arduino capacitive piano. Making a piano with banana and paper. To build ...

Coke Piano and Launchpad made with Arduino



공는 필터



뮤즈스코어 제2강 : 새 악보 만들기과 음표 입력

11:17

뮤즈스코어 강의 2강 - 새 악보만들기와 음표 입력

조회수 3.2만회 · 1년 전

윤재민

강력하고 쉬운 무료 사보프로그램 뮤즈스코어의 강의 영상입니다. 설치 및 소개 <https://musescore.org/ko> 연재 사이트 ...

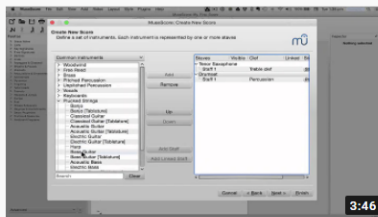


Musescore

구독자 3.53만명 · 동영상 43개

Musescore is an open source music notation app that lets you create and print beautiful sheet music. It is available for Windows, ...

구독



MuseScore in Minutes: Lesson 1 - Score Setup

조회수 52만회 · 5년 전

Musescore

Download MuseScore for free from <https://musescore.org> You can help to translate the captions via <http://goo.gl/wNzbgn> Video by ...

자막

3:46

Motivation

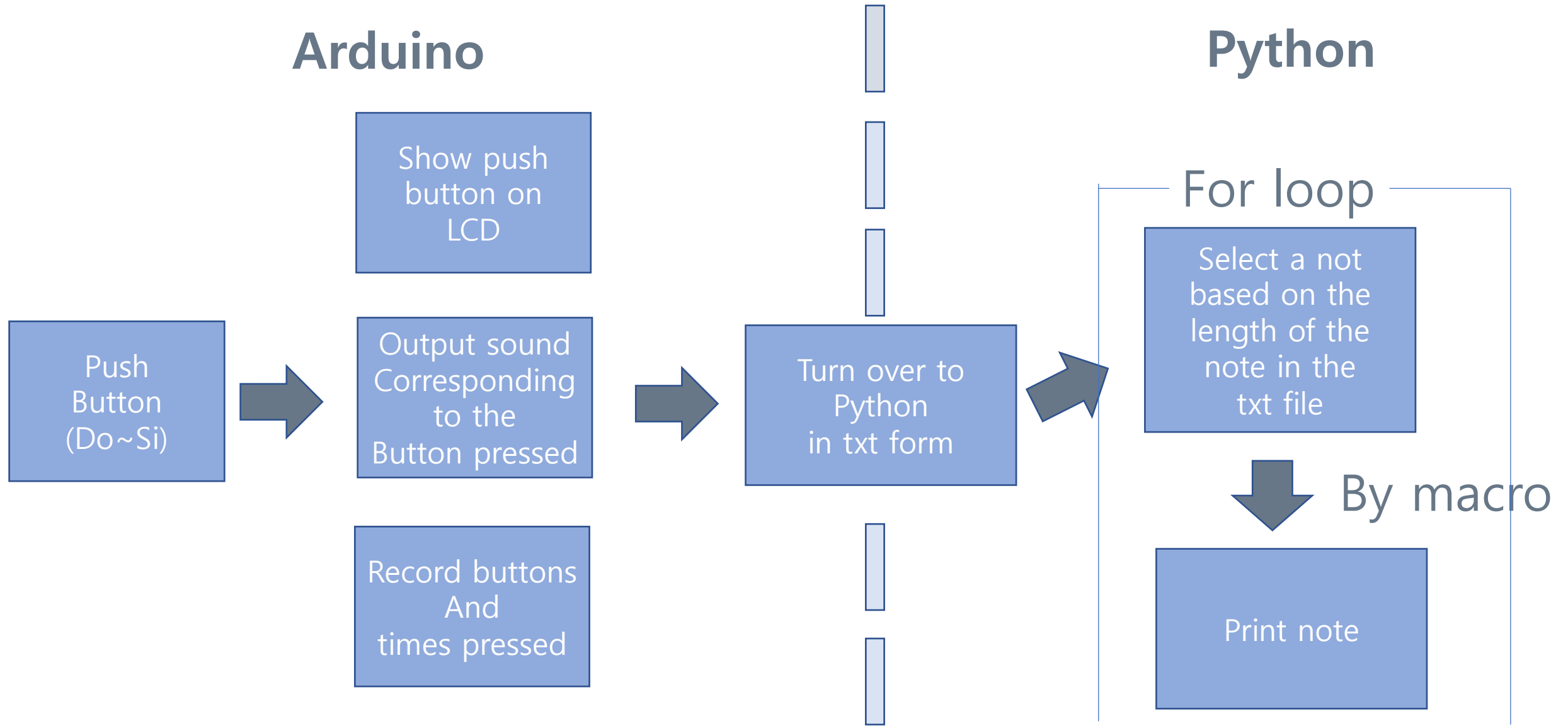
We think it would be good if people who don't know how to draw music sheet, or play the piano as a hobby could get music sheet right away

03

Proposed system – Image Capture



Proposed system – Block diagram



03 Proposed system – Overall system architecture

Function 1

If you press button,
LCD show the note
that button point

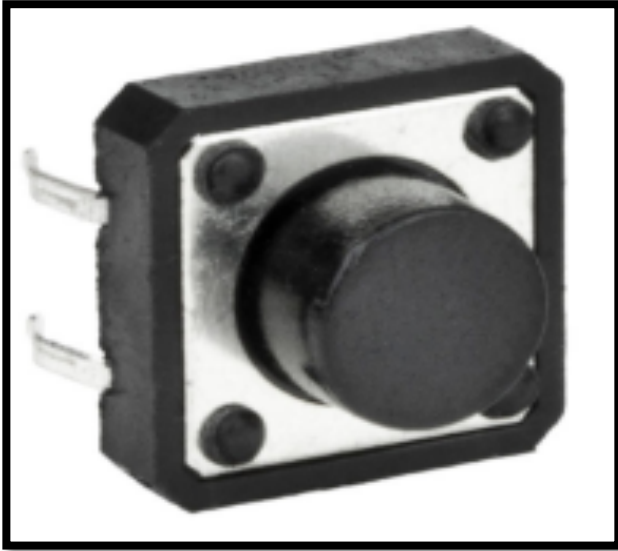
Function 2

Produce music
based on files

Function 3

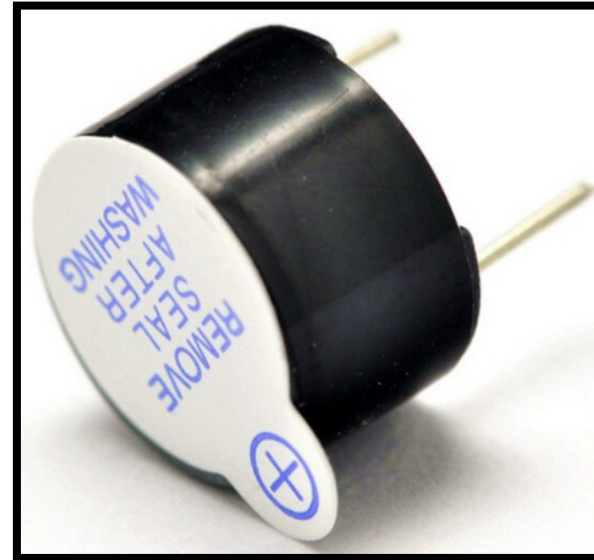
If you press one,
Print screen
automatically
appear

03 Proposed system – Overall system architecture



Push Button

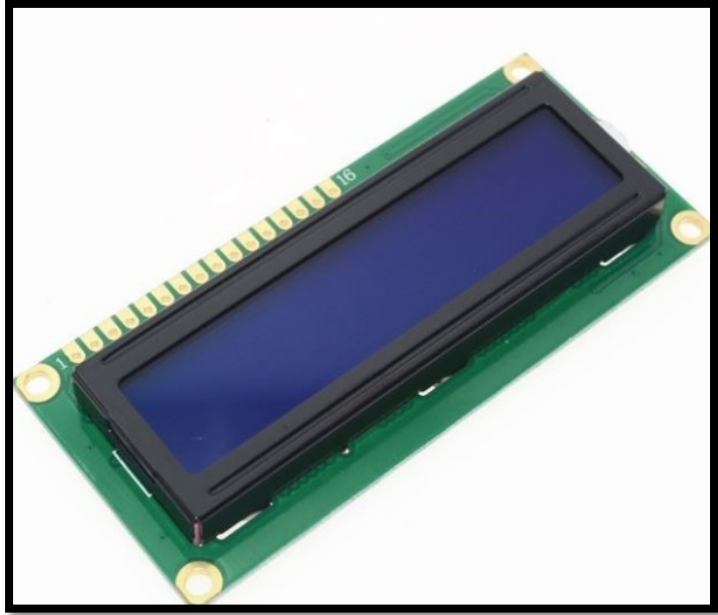
It will replace the piano keyboard



Piezo Speaker

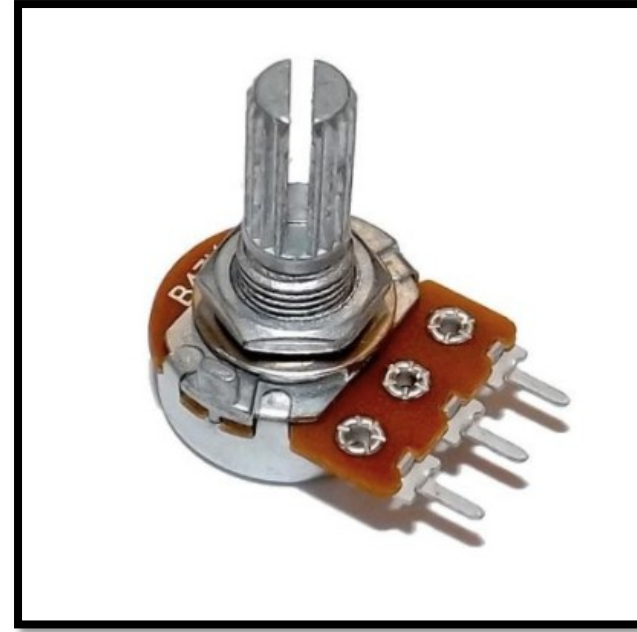
When the button pressed,
sounds occur

03 Proposed system – Overall system architecture



LCD

Print the tone
When we
Press button



Variable Motor

Adjust the output value of
LCD

03

Proposed system – Sketch code

Sound & Print a note
(if lcd is full, erase all output on screen)

```
//When the lcd screen is full, erase all the output on the screen.
if(cnt == 4){
    delay(100);
    lcd.clear();
    cnt=0;
}

//When Do_button is pressed
if(Do == HIGH){
    //To print note in lcd
    lcd.print("Do-");
    //To send note in Serial
    Serial.println('C');
    //Output sound to Piezo
    tone(47,522,500);
    delay(500);

    //When Do_button is not pressed
    if(Do == LOW){
        noTone(47);
    }
    //Count the number of note displayed on the LCD
    cnt++;
}
```

Read the notes and the length of the notes in the file then enter them into a

```
for i in melody: # read i from melody and output a note
                  #to the length of the note

    if is_digit(i): #if i is digit, change note
        speed = float(i)
        # print(speed)
        if speed >= 1.0:
            if speed >= 2:
                key_press_once("6")
            else:
                key_press_once("5")
            # print("4분음표")
        elif speed < 1.0:
            # print("8분음표")
            key_press_once("4")
    else: #if i is word, output note
        note.append(i)
        key_press_once(i)
        if count == 0:
            control_down()
            count = 1
```

<https://youtu.be/GAPQ8E9BB4k>



05

Special points of our proposed system

Pros

01

Convert the
Contents of
Button to
Sheet music

02

Check the
notes
immediately

Cons

01

It can only
be
implemented
within
one octave

Conclusion

Team 5 creates **"MusePiano"**
that can easy and quick to translate the code into sheet music

Future Work

- 1.function of raising and lowering octaves
2. Now, we have to set the meat manually
But we will make it possible to change automatically

Team member	Work	Contribution(%)
Gu Bon Wook (202035305)	Idea design and feedback Check progress Coding & Making hardware Make a ppt	25%
Park Jae Hyeok (202035335)	Idea design and feedback Writing plan report Making hardware & Coding Edit the Video Presentation(final)	25%
Lee Ha Jeong (202035375)	Idea design and feedback Writing plan report Purchase of supplies Coding & Making hardware Take a video	25%
Lee Ji Heon (20184735)	Idea design and feedback presentation(middle) Coding & Making hardware Upload the video	25%

Thank you