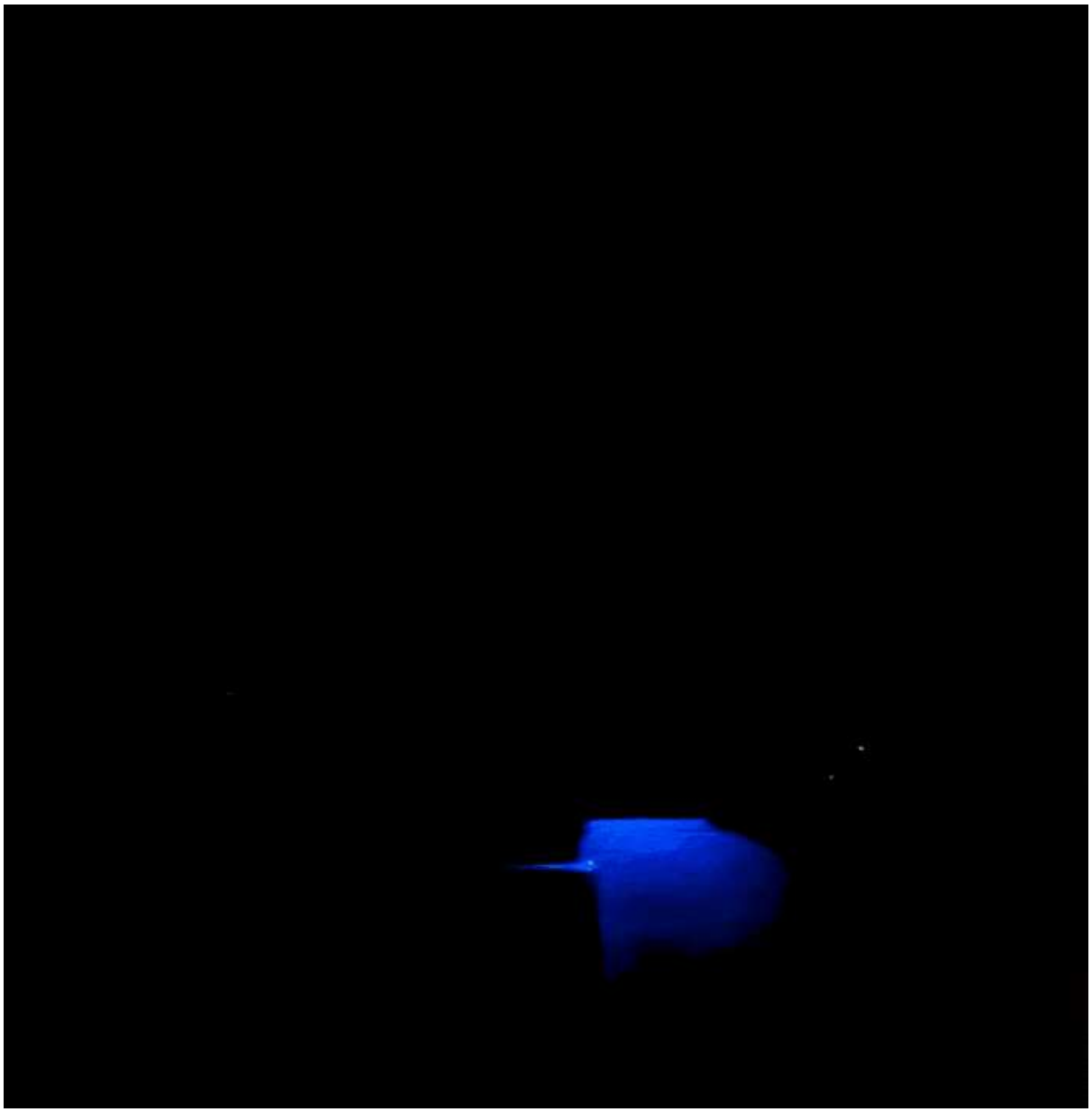
Displaying Anti-aliased Fonts

This repo demonstrates how to use Anti-aliased fonts in Wio Terminal (**i.e. Displaying Japanese characters, Greek characters and other UCS-2 glyphs**)! Further, smooth fonts can also be used to display Normal English characters with your favorite font in your computer.



Libraries Installation

Installing the SD Card library for Wio Terminal

- visit File System Overview

Installing the TFT LCD Library For Wio Terminal

- visit TFT LCD Overview

Generate vlw Font file

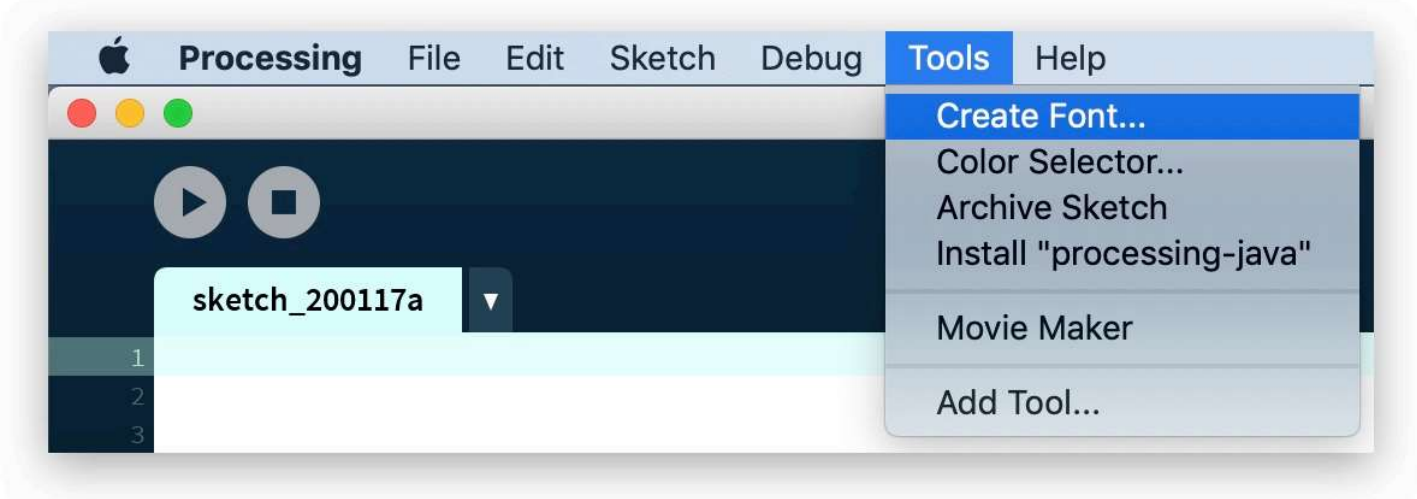
Here demonstrates how to generate a vlw font file that can be used for smooth font in Wio Terminal.

Step 1

Download the **Processing** software and download according to your operating system.

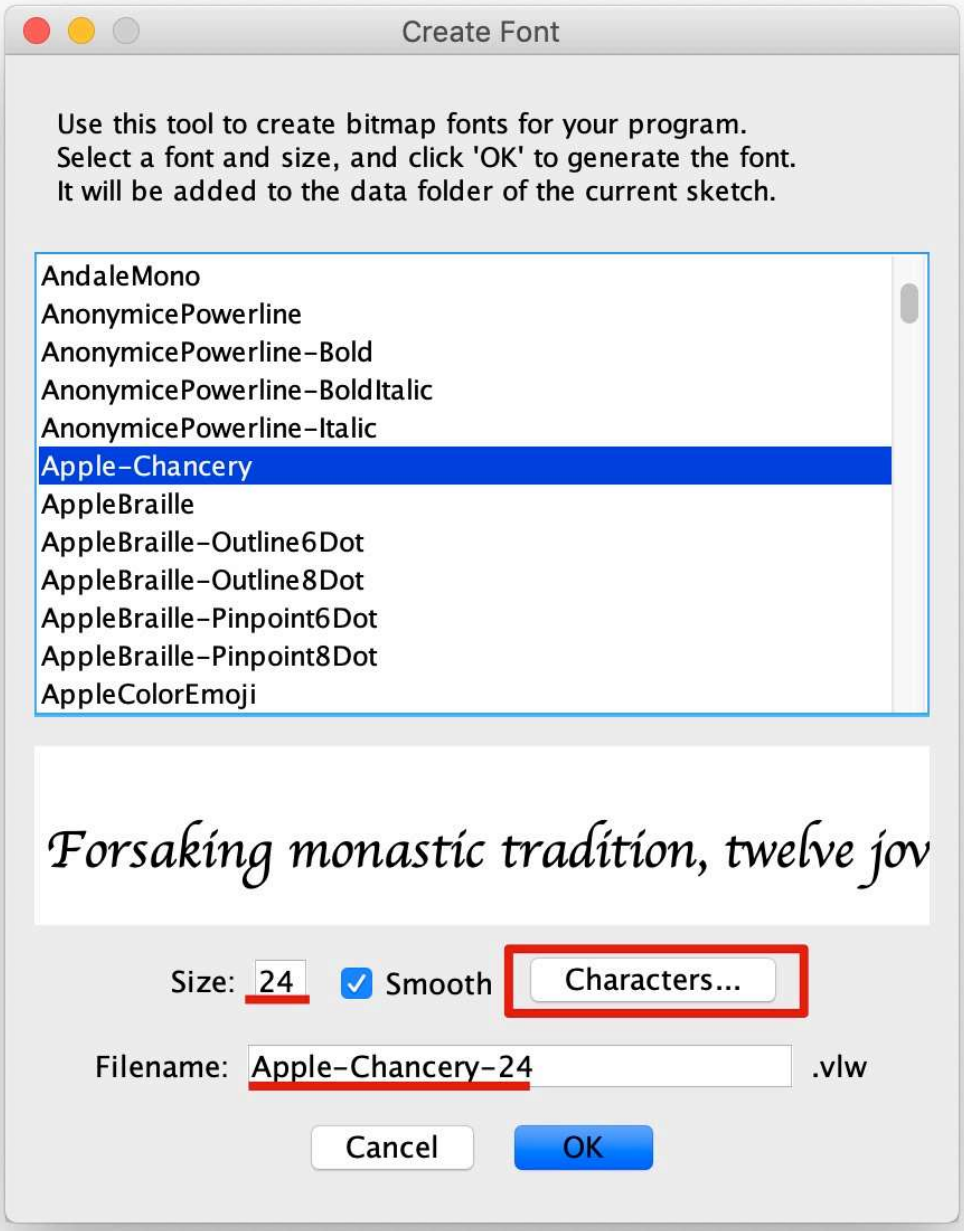
Step 2

Open **Processing**, and navigate to `Tools` -> `Create Font...`



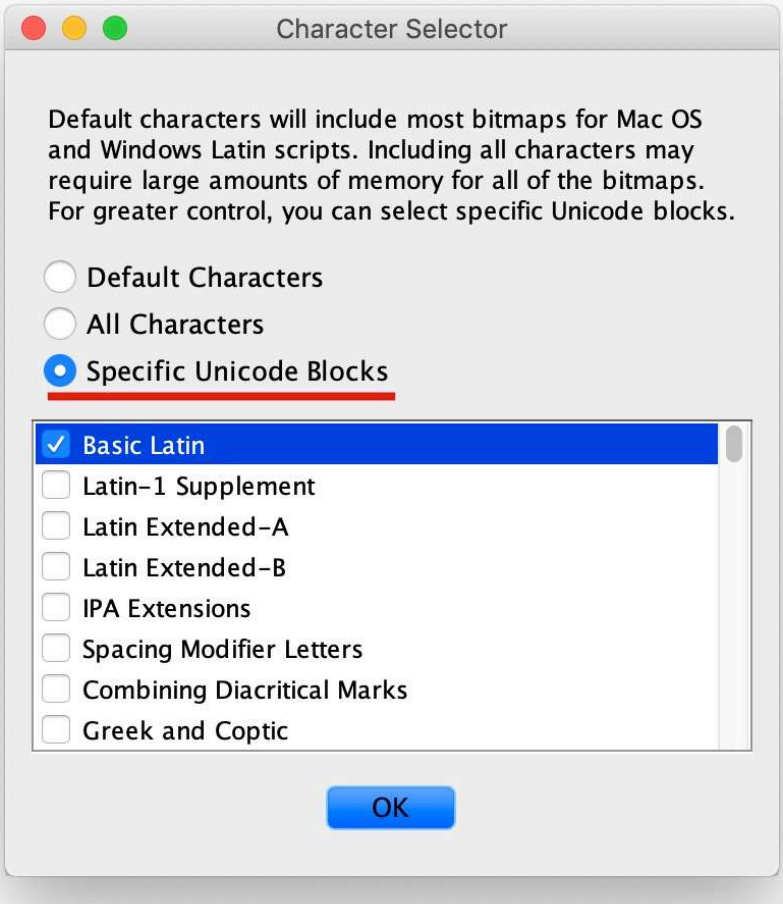
Step 3

A **Create Font** Window will appear. You are able to choose the font available from your computer. Change the font size, and click `Characters...`. You can also change the Filename of the vlw file.



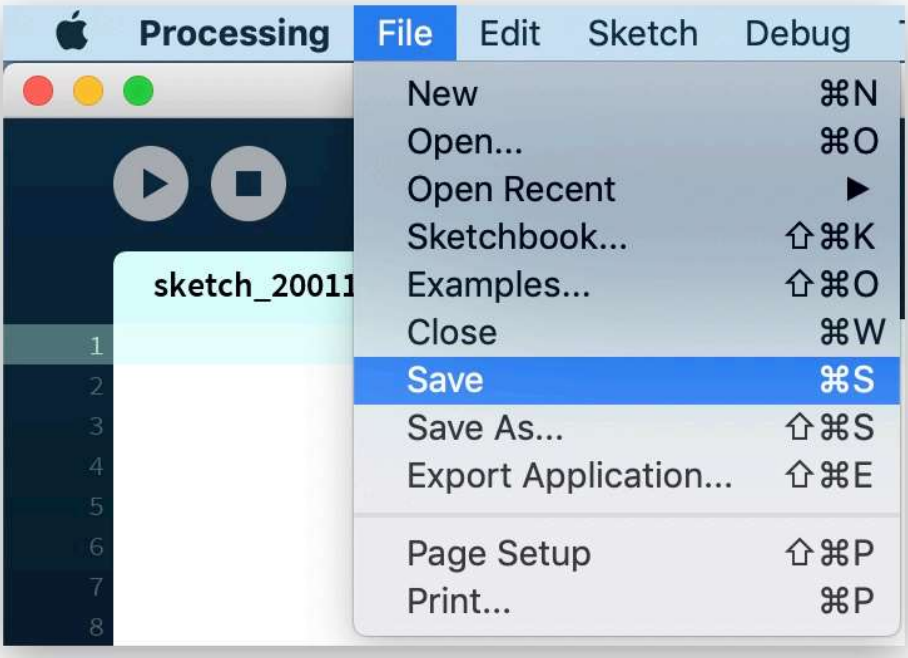
Step 4

A **Character Selector** window will appear, and you are able to choose the specific language Unicode Characters Blocks(i.e Basic Latin in this case). ***For Asian characters, CJK Compatibility or CJK category unicode Blocks are recommended to use.*** Click OK to save font settings.



Step 5

Navigate to `File` -> `Save` and save the sketch file into your local drive in your computer. Now, we have generated the vlw font file!



Storing into SD Card

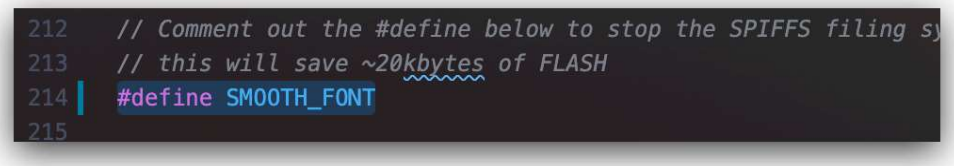
Once generated the vlw font file, you can find the vlw file inside `data` folder inside the sketch file you saved in the previous step.

Now, copy the vlw font file into the SD card and put the SD card back in Wio Terminal.

Configuring the LCD Library

By default, the smooth font option for LCD Library is **turned off** to save resources on Wio Terminal. **So it needs to be configured to enable smooth font in Wio Terminal.**

Navigate to the Arduino Library folders(**libraries**) -> **Seeed_Arduino_LCD** and open `User_Setup.h` with editor. Search `#define SMOOTH_FONT` and uncomment the line as followed:



Now you have enabled smooth font in Wio Terminal, you can display any fonts or characters that you like!

Displaying

- **To load font from SD card to Wio Terminal:**

```
void loadFont(String fontName);
```

where `fontName` is the name of the vlw font file.

- **To show all the characters inside vlw on screen:**

```
void showFont(uint32_t td);
```

where `td` is the delay time between screens while showing all the characters.

- **To unload fonts:**

```
void unloadFont();
```

To display characters in screen, you can use the functions just like in the tft libraries using `tft.println()`. Further, you can use other functions like `tft.setCursor()` and `tft.setTextColor` to change the position and color of character displaying.

Note: Please check the `User_Setup.h` in the LCD library and make sure that `#define SMOOTH_FONT` is uncommented.

Complete Code

Please download the complete code and the example vlw files here.

```
#include<SPI.h>
#include "Seeed_FS.h"
```

```
#include "SD/Seeed_SD.h"
#include"TFT_eSPI.h"

TFT_eSPI tft;

void setup() {
    tft.begin();
    Serial.begin(115200);
    tft.setRotation(3);
    tft.fillScreen(TFT_BLACK); //Black background

    while(!SD.begin(SDCARD_SS_PIN, SDCARD_SPI)){
        Serial.println("SD card error!\n");
        while(1);
  }
  delay(1000);

  tft.loadFont("Apple-Chancery-24");
  // Show all characters on screen with 2 second (2000ms) delay between screens
  tft.showFont(2000); // Note: This function moves the cursor position!

  tft.setTextColor(TFT_RED,TFT_BLACK);
  tft.setCursor(0,0);

  tft.println("Konnichiwa");
  tft.println("Sayonara");
  tft.println();
  tft.unloadFont();

  tft.loadFont("Latin-Hiragana-24");
  tft.setTextColor(TFT_GREEN,TFT_BLACK);
  tft.println("こんにちは");
  tft.println("さようなら");
  tft.unloadFont();

}
void loop(){}
```

Tech Support & Product Discussion

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*Last updated on **Jan 11, 2022** by **gunengyu***