Word Cloud Project Description

Find an essay or similarly-sized text (maybe a poem or the lyrics to a long song?).
Examples: **Einstein Essay**, **Federalist Papers No. 80**.

Analyze the text for the most frequently words used, using websites like **TagCrowd** or **WordSift**.

You can also experiment with turning the text into a sophisticated WordCloud, with websites like **abcya/word_clouds**.

Extend our WordCloud program by designing a Word Cloud consisting of about **30 words**. An example of a good design is shown below:
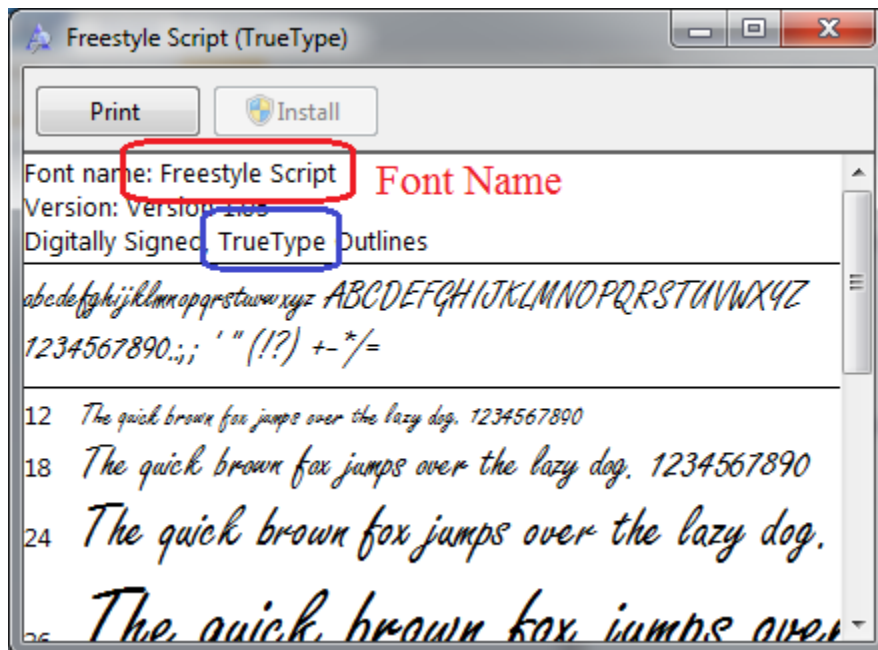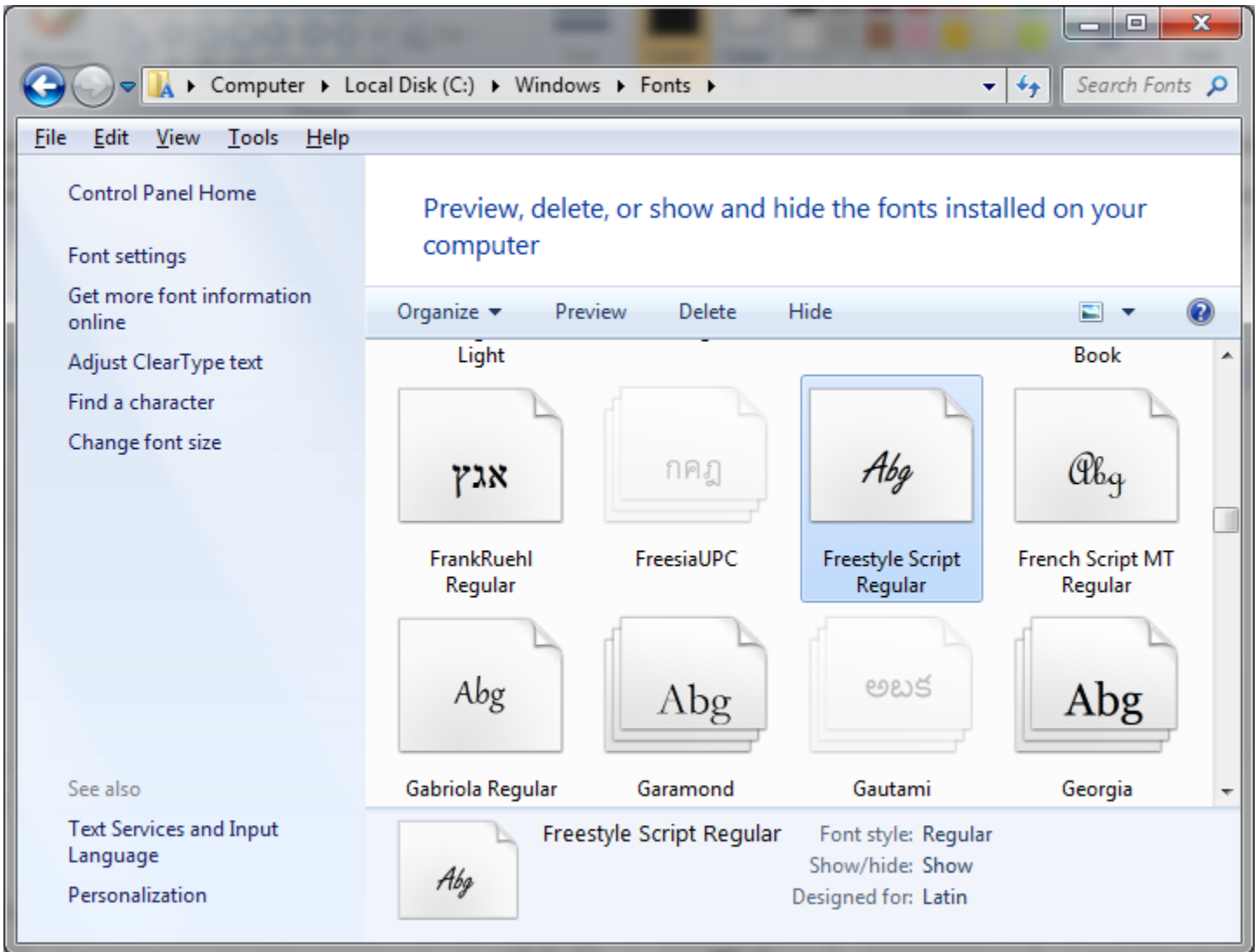

Note that your first program/design will not move – we will modify the program to add movement later.

A Note about Fonts: You don't need to create a different font for each **Word** object, i.e. you can use the same font for multiple **Word** objects. You should name your font variables using the name of the Windows font itself – e.g. **fontTNR** for "**T**imes **N**ew **R**oman", or **fontArial** - so that your code is clear. Using more than 3 fonts will probably lead to a horrific design - one or two fonts is probably more than enough. Just pass the font variable as a parameter to the **Word** object through its **Constructor** when you create it in **setup().**

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You can find the names of available **FONTS** in the **C:\Windows\Fonts** folder.
Processing appears to only be able to use **TrueType** fonts. Double click on the font to see both (a) its name and (b) whether the font is TrueType.

For **RGB color codes**, search the Internet for "RGB color codes".

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Starting Code

```
// WordCloud.pde

final color BLACK = color(0);
final color WHITE = color(255);
final color RED = color(255, 0, 0);
final color BLUE = color(0, 0, 255);
final color GREEN = color(0, 128, 0);
PFont fontC, fontTNR;

void setup() {
  size(1000, 800);
  background(WHITE);
  fontC = createFont("Lucida Calligraphy", 24);
  fontTNR = createFont("Times New Roman", 24);
  Word w1 = new Word("Venus", 290, 500, fontC, 128, RED, 0);
  w1.display();
} // setup()

// (continued next page)
```

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```
// Word.pde

class Word {
  // class variables
  String word;
  float x, y;
  PFont font;
  float size;
  color clr;
  float angle;

  Word(String word, float x, float y, PFont font, float size, color clr, float angle)
{
    this.word = word;
    this.x = x;
    this.y = y;
    this.font = font;
    this.size = size;
    this.clr = clr;
    this.angle = angle;
  } // constructor

  void display() {
    pushMatrix();

    translate(this.x, this.y);
    rotate( radians(this.angle) );

    // Comment out these two lines when you've finished!
    fill(this.clr);
    ellipse(0, 0, 10, 10);

    textFont(this.font);
    textSize(this.size);
    textAlign(LEFT);
    fill(this.clr);
    text(this.word, 0, 0);

    popMatrix();
  } // display()

} // class
```