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:

![Word Cloud Image]

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 "Times New Roman", 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”.

![Font List](image1)

![Font Details](image2)
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()
// 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