

Atelier Processing : typographie

fontViewer.pde

```
/*
*****
Nécessite l'installation de la librairie "Drop"
*****
*/

import java.awt.Font;
import drop.*;

SDrop drop;

PFont defaultFont;
PFont font;
Font nativeFont;
int size = 32;
int margin = 2;
int old_width, old_height;

ArrayList<MyGlyph> glyphs = new ArrayList();
int iFirst, iLast;
float yOffset = 0;
float yVel = 0;
float yMax = 0;
int selected = -1;
//ArrayList

void setup() {
  size(800, 600);
  //surface.setResizable(true);
  //fullScreen();
  old_width = width;
  old_height = height;

  printArray(PFont.list());

  // Drag & drop
  drop = new SDrop(this);

  text(' ', 0, 0); // dirty hack to get processing's default font
  defaultFont = g.textFont;

  //loadFontFile("NotoEmoji-VariableFont_wght.ttf");
}

void loadFontFile(String fontFile) {
  font = createFont(fontFile, size);
  nativeFont = (Font) font.getNative();
  textFont(font);
  glyphs.clear();
  selected = -1;

  //int x = margin;
  //int y = font.getSize() + margin;
  int numChars = 0;
  for (int i = 0; i < 0x10ffff; i++) {
    if (nativeFont.canDisplay(i)) {
      numChars++;
      MyGlyph glyph = new MyGlyph();
      glyph.codepoint = i;
      glyph.s = new String(Character.toChars(i));
      glyph.w = textWidth(glyph.s);
      glyph.h = font.getSize();
      /*if (x + glyph.w + margin > width) {
        x = margin;
        y += font.getSize() + margin;
      }
      glyph.x = x;
      glyph.y = y;
      x += glyph.w + margin;*/
      glyphs.add(glyph);
    }
  }
  updateFont();

  if (!glyphs.isEmpty())
    yMax = max(0, glyphs.get(glyphs.size()-1).y + 4 * margin - height);
}
```

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    println(numChars, "glyphs in font");
}

void updateFont() {
    int x = margin;
    int y = font.getSize() + margin;
    for (MyGlyph glyph : glyphs) {
        if (x + glyph.w + margin > width) {
            x = margin;
            y += font.getSize() + margin;
        }
        glyph.x = x;
        glyph.y = y;
        x += glyph.w + margin;
    }
}

void draw() {
    background(255);

    if (font == null) {
        fill(0);
        textSize(32);
        String mess = "Glissez-déposez une font dans la fenêtre";
        float w = textWidth(mess);
        text(mess, (width - w) * 0.5f, height/2);
        return;
    }

    yOffset = constrain(yOffset + yVel, 0, yMax);
    yVel *= 0.9;

    pushMatrix();
    translate(0, -yOffset);

    textFont(font);
    fill(0);
    iFirst = glyphs.size();
    iLast = 0;
    for (int i = 0; i < glyphs.size(); i++) {
        MyGlyph glyph = glyphs.get(i);
        if (glyph.y > yOffset && glyph.y - glyph.h < height + yOffset) {
            if (i == selected)
                fill(255, 0, 0);
            else
                fill(0);
            text(glyph.s, glyph.x, glyph.y);
            if (i < iFirst)
                iFirst = i;
            if (i > iLast)
                iLast = i;
        }
    }

    if (selected >= 0) {
        MyGlyph glyph = glyphs.get(selected);
        textFont(defaultFont);
        textSize(18);
        String text = String.format("%d | 0x%h", glyph.codepoint, glyph.codepoint);
        float tw = textWidth(text);
        float th = defaultFont.getSize();
        fill(255, 220);
        noStroke();
        rect(glyph.x + 0.5*(glyph.w - tw), glyph.y + 4, tw + 16, th + 8, 8);
        fill(0, 0, 255);
        text(text, glyph.x + 0.5*(glyph.w - tw) + 8, glyph.y + 4 + th + 4);
    }

    popMatrix();
}

void mousePressed() {
    if (font == null)
        return;

    selected = -1;

    if (keyPressed && keyCode == 16)
        println("maj");

    for (int i = iFirst; i <= iLast; i++) {
        MyGlyph glyph = glyphs.get(i);
        if (mouseX > glyph.x && mouseX < glyph.x + glyph.w &&
            mouseY + yOffset > glyph.y - glyph.h && mouseY + yOffset < glyph.y) {
            selected = i;
            println(glyph.s);
            break;
        }
    }
}

```

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void mouseReleased() {
    if (width != old_width || height != old_height) {
        updateFont();
        println("update");
        old_width = width;
        old_height = height;
    }
}

void mouseWheel(MouseEvent event) {
    yVel += 2 * event.getCount();
}

class MyGlyph {
    public String s;
    public int codepoint;
    public int x, y;
    public float w, h;
}

void dropEvent(DropEvent theDropEvent) {
    if (theDropEvent.isFile() && (theDropEvent.toString().endsWith(".ttf") || theDropEvent.toString().endsWith(".otf"))) {
        loadFontFile(theDropEvent.toString());
    }
}

```

textEffects.pde

```

abstract class TextEffect<T extends TextEffect> {
    protected String text;
    protected PVector position = new PVector();
    protected int delay = 0;
    protected PFont font;
    protected color col;
    protected int init = -1;
    protected boolean removable = false;

    protected TextEffect() {
        font = g.textFont;
    }

    public T delay(float seconds) {
        delay = round(seconds * 1000);
        return (T)this;
    }

    public T setText(String text) {
        this.text = text;
        reset();
        return (T)this;
    }

    public T setPosition(float x, float y) {
        this.position.set(x, y);
        reset();
        return (T)this;
    }

    public T setFont(String font, int size) {
        this.font = createFont(font, size);
        return (T)this;
    }

    public T setFont(PFont font) {
        this.font = font;
        return (T)this;
    }

    public T setColor(int r, int g, int b) {
        col = color(r, g, b);
        return (T)this;
    }

    public T setColor(color c) {
        col = c;
        return (T)this;
    }

    public abstract void update();

    public boolean isRemovable() {
        return removable;
    }

    public void reset() {
        init = -1;
        removable = false;
    }
}

```

```

class TextFade extends TextEffect<TextFade> {
    private int fadein = 2000;
    private int sustain;
    private int fadeout = 2000;

    public TextFade(String text, float x, float y) {
        super();
        this.text = text;
        this.position.set(x, y);
        sustain = text.length() * 60;
    }

    public TextFade setDuration(float fadein, float sustain, float fadeout) {
        this.fadein = round(fadein * 1000);
        this.sustain = round(sustain * 1000);
        this.fadeout = round(fadeout * 1000);
        return this;
    }

    public void update() {
        int time = millis();

        if (init < 0) {
            init = time;
        }

        if (time < init + delay) {
            return;
        } else if (time < init + delay + fadein) {
            float alpha = (time - init - delay) / float(fadein);
            alpha *= g.colorModeA;
            fill(col, alpha);
            if (font != null) textFont(font);
            text(text, position.x, position.y);
        } else if (time < init + delay + fadein + sustain) {
            fill(col);
            if (font != null) textFont(font);
            text(text, position.x, position.y);
        } else if (time < init + delay + fadein + sustain + fadeout) {
            float alpha = (time - init - delay - fadein - sustain) / float(fadeout);
            alpha = (1.0 - alpha) * g.colorModeA;
            fill(col, alpha);
            if (font != null) textFont(font);
            text(text, position.x, position.y);
        } else {
            removable = true;
        }
    }
}

class TextHScroll extends TextEffect<TextHScroll> {
    private float speed;
    private float textWidth;

    public TextHScroll(String text, float y, float speed) {
        super();
        this.text = text;
        position.y = y;
        this.speed = speed;
    }

    public void update() {
        int time = millis();

        if (init < 0) {
            init = time;
            if (speed > 0)
                position.x = -textWidth;
            else
                position.x = width;
        }

        if (time < init + delay) {
            return;
        } else if (speed > 0 && position.x < width || speed < 0 && position.x + textWidth > 0) {
            position.x += speed;
            fill(col);
            if (font != null) textFont(font);
            text(text, position.x, position.y);
        } else {
            removable = true;
        }
    }
}

```

Article extrait de : <http://lesporteslogiques.net/wiki/> - **WIKI Les Portes Logiques**

Adresse : http://lesporteslogiques.net/wiki/ressource/code/processing/atelier_typo?rev=1662653061

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