

## Shapes

Point

*point(x, y);*

Line

*line(x1, y1, x2, y2);*

Rectangle

*rect(x, y, width, height);*

Triangle

*triangle(x1, y1, x2, y2, x3, y3);*

Ellipse

*ellipse(x, y, width, height);*

Arc

*arc(x, y, width, height, start, stop);*

Box

*box(width, height, depth);*

Sphere

*sphere(radius);*

# Basics

**Commenting**

*//* **Single Line**

*/\* \*/* **Multiple Line**

**First Loop**

***void setup(){***

***}***

**Continuous Loop**

***void draw(){***

***}***

**For Loop Example**

***for(int i = 0; i < 10; i++){***

***}***

**If Example**

***if(x <= 5){***

 ***//do this***

***}***

# Text

**Text Font Size**

*textSize(Font Size);*

**Text Font Example**

*f = createFont("SourceCodePro-Regular.ttf", 24);*

*textFont(f);*

**Write Text**

***Text(“String”, x, y);***

## Object Orientated Programming

Class Structure

*Class Classname {*

 *//Class Variables*

 *Var\_type Var\_name;*

 *//Constructor*

 *Classname(Temp Variables) {*

 */\*Assign value to variable*

 *From temporary variable\*/*

 *Var\_name = Temp\_Var;*

*}*

*//Class Functions*

*Return\_type func1(/\*External Inputs\*/) {*

*}*

*}*

Declare Objects

*Classname object1;*

Initialize Objects

*object1 = new Classname(Temp Values);*

Call Object Functions

*object1.func1(/\*Other Inputs\*/);*

# Handy

**Frame Rate**

*frameRate(fps);*

**Canvas Height and Width**

*height; width;*

**Random Number**

*random(low, high);*

# Main Variable Types

**null – Returns nothing**

**int – 32,767 to -32,768**

**float – Floating point**

**String – Array of Characters**

# IO

**Loading in Text File**

*String lines[] = loadStrings("data.txt"); //Load lines of text*

*for(int i = 0; i < lines.length; i++){ //Cycle through each line*

*String pieces[] = split(lines[i], '\t'); //Split each line into words*

**Loading in Image File**

***PImage img; //Declare variable of PImage type***

***img = loadImage("myImage.jpg"); //Load the image into the program***

***image(img, x, y, width, height); //Place the image***

**Writing to Text File**

***PrintWriter output = createWriter("DataOut.txt"); //Create output file***

***output.println(DataToWrite); //Write to file***

***output.close(); //Close write file***

**Print to Console**

***println(“string”);***

## Interactivity

**Keyboard**

**If (key == ‘alphanumeric’) {**

 **/\*functionality\*/**

**}**

**Special keys**

**Alphanumeric = ‘a-z’ and ‘0-9’**

**If (key == CODED) {**

 **If (keycode == ‘see below’) {**

 **/\*Functionality\*/**

**}**

**}**

**Keycodes include: ALT, CONTROL, SHIFT, UP, DOWN, LEFT, RIGHT**

**Mouse Position X and Y**

*mouseX; mouseY;*

**Mouse Positions at previous frame**

*pmouseX; pmouseY;*

**Button Mouse Click (Returns Boolean)**

*If (mousePressed == TRUE) {*

 */\*functionality\*/*

*}*

# Coordinates and Canvas

**Set Canvas Size in Pixels**

*size(width, height);*

**Coordinates**

**Align Text**

*textAlign(horizontal, vertical);*

*horizontal*: LEFT or RIGHT or CENTER

*vertical*: TOP or BOTTOM or CENTER

**Align Ellipse**

*ellipseMode(what mode);*

*what mode*: RADIUS or CENTER

**Align Rectangle**

*rectMode(what mode);*

*what mode*: CORNER or CENTER

x

0,0

y

# Logic Statements

Operation(logic) {

//Operations: if, while, else

}

**and – &&**

**or – ||**

# Colours

Red, green, blue and alpha (transparency) channels that range from 0 to 255

**Background Colour**

*background(R, G, B);*

**Fill Colour**

***fill(R, G, B);***

**Remove Fill (Fully Transparent)**

***noFill();***

**Border/Line Colour**

***stroke(R, G, B);***

**Remover Borders**

***noStroke();***

# Chris Tacon and James Brooks

Processing 3 Cheat Sheet