LAYERS

User Manual

Index

Program: LAYERS
Programming language: processing 3.3 (Java)

License: WTFPL

User license

Acknowledgments

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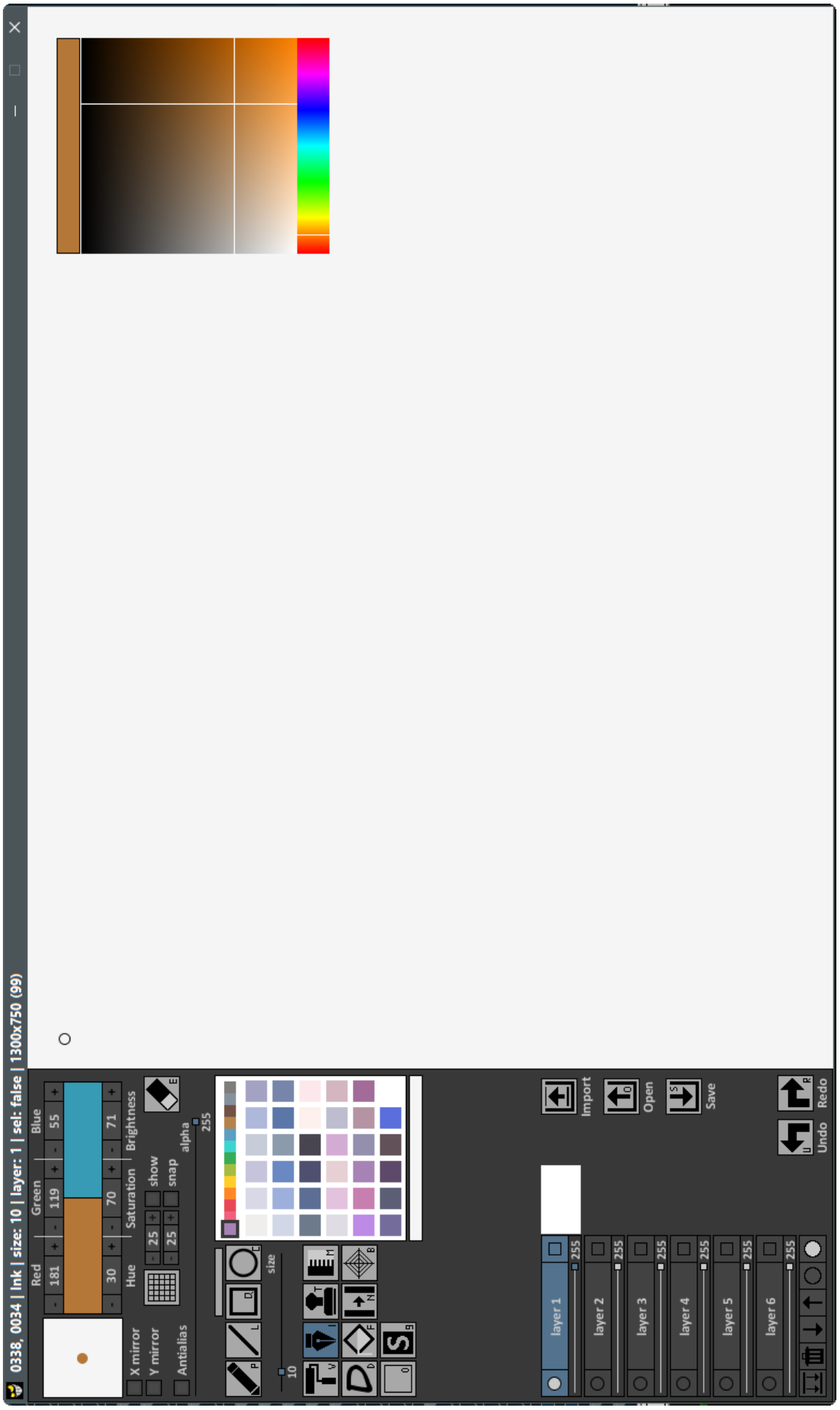
Anonymous, Bird, Bollinger, Chrisir, GoToLoop, jas0501, jeremydouglass, kfrajer, koogs, Lord_of_the_Galaxy, neilcsmith_net, phyllo, prince_polka, quark, Shiffman, TfGuy44, ...
and all the Processing of staff.


0338, 0034 | Ink | size: 10 | layer: 1 | sel: false | 1300x750 (99)
Red
Green
Blue
Hue
Saturation
Brightness
alpha
show
snap
X mirror
Y mirror
Antialias
size
Import
Open
Save
Undo
Redo
layer 1
layer 2
layer 3
layer 4
layer 5
layer 6

Graphic interface

Brief overview of available controls in the interface of the program:

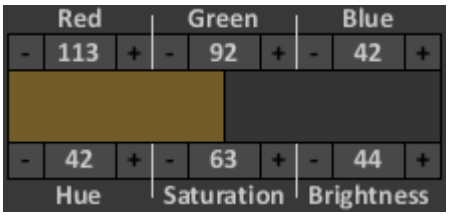
the Information Bar

Show information on some parts of the program.

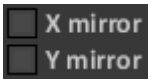
Menu

The program menu is located on the left side and can be activated / deactivated with the "tab" key.
This menu includes the following tools:

Features of the active tool (type, size and color)



controlo colors through RGB (Red, Green, Blue) and HSB (Hue, Saturation, Brightness)

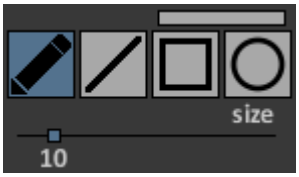


Control to draw with the symmetry axis X and / or Y

Control for the grill

Tool to erase (Cancellina)

Tool antialiasing and alpha channel of the active color

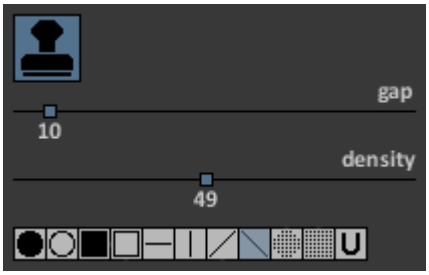


Basic tools for drawing (Pen, Line, Quadrilateral, Circle)

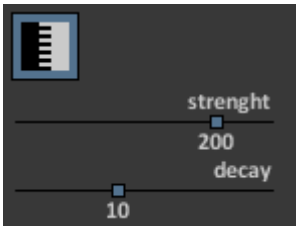
Tool uniform color (paint)

Ink Tool (Ink)

Tool to fill enclosed areas with color



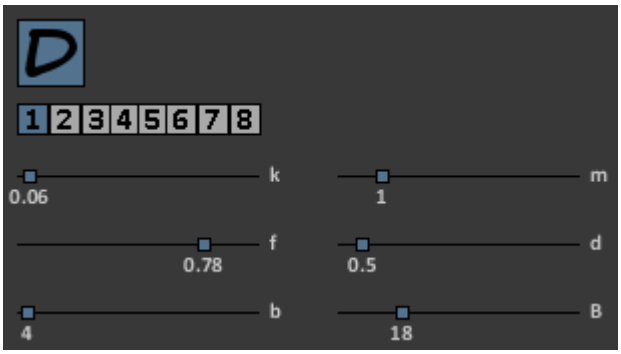
Stamp Tool



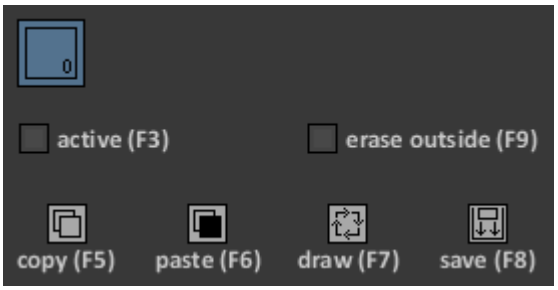
Mixer Tool (Smudge)

Clone Tool

Spider Web Tool (Web)



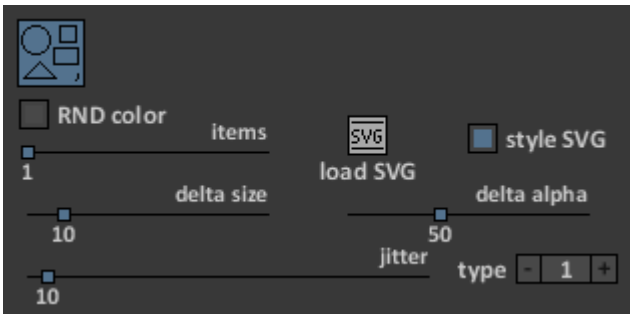
DynaDraw Tool



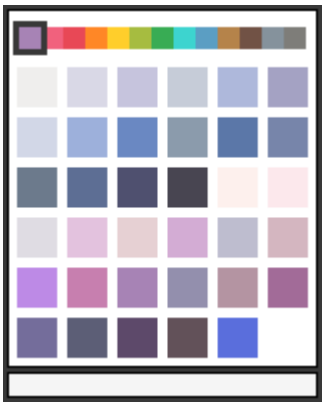
Selection Tool (Selection)

Stencil Tool

Confetti Tool



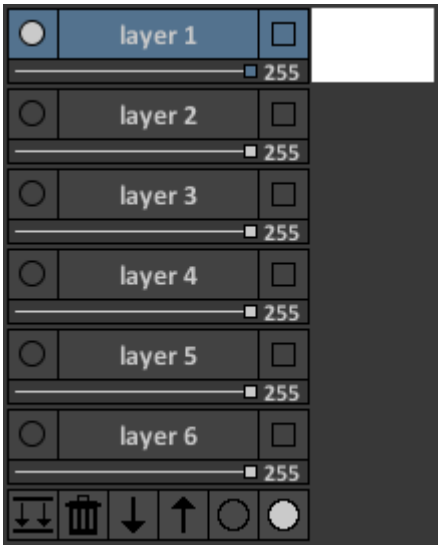
Forms Tool (Shape)



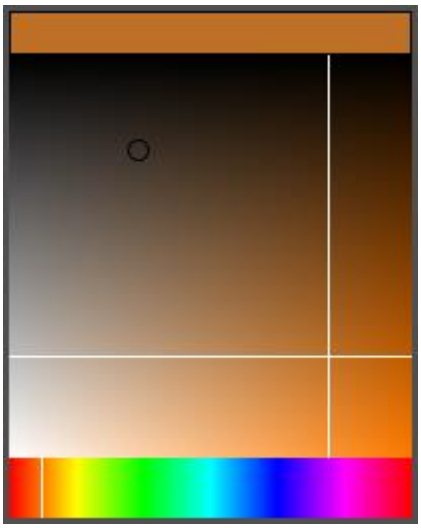
Palette for choosing colors

Controls for Cancel or Restore the drawing actions (10)

Controls to open and save drawings

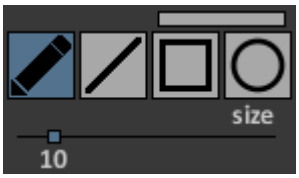


Controls for the drawing levels

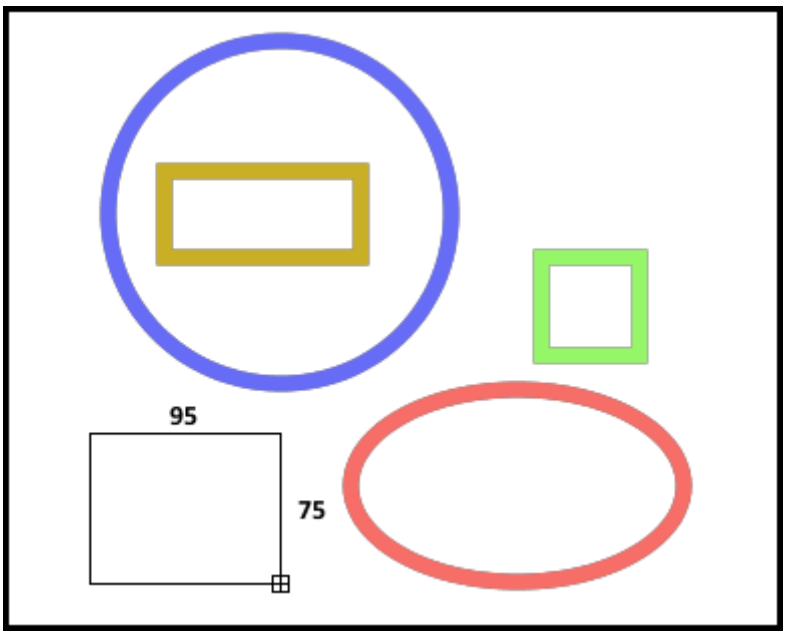


Checking for color change HSB

The basic tools for drawing



The tools available are: Brush (Pencil "P"), the line (Liner, "L"), the Quadrilateral (Quad "Q") and Circle (Circle "C").
The thickness of the lines is given by the "size" parameter that is modifiable by its slider.
The button  It serves to constrain the Quadrilateral and Circle tools to draw squares and circles (instead of rectangles and ellipses); This button is activated / deactivated by pressing the "K" button.



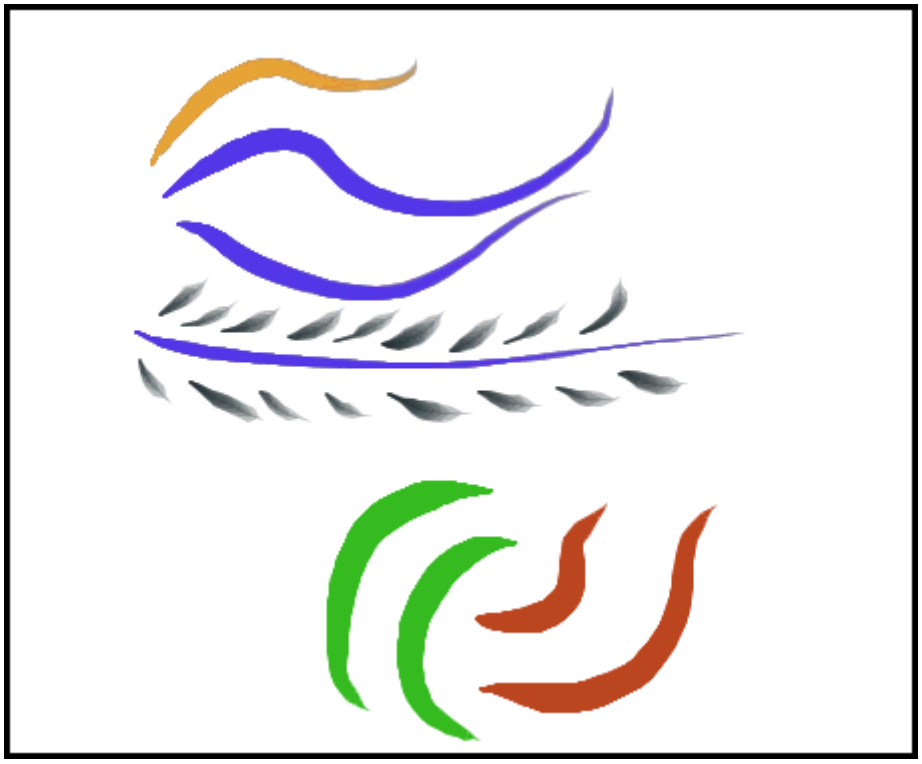
While drawing the Line, Circle Quadrilateral and report information about their dimensions (height, width, radius, length and angle).
Also with these tools can be designed with snap objects to the grid (see the relative use of the grid section).

The Paint tool

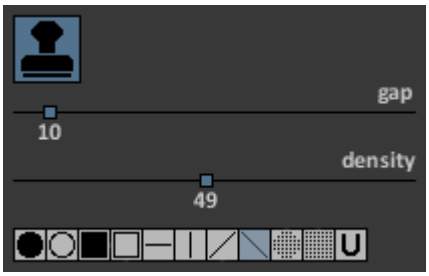
This tool allows you to deposit uniformly color (going over the same area, the color does not change). The color can be transparent (alpha), but only compared to the levels.
It can be activated with the "V" button.
Note: *With this tool the Anti-alias is ignored and the brush size ("size") must be greater than one.*

The Ink tool (Ink)

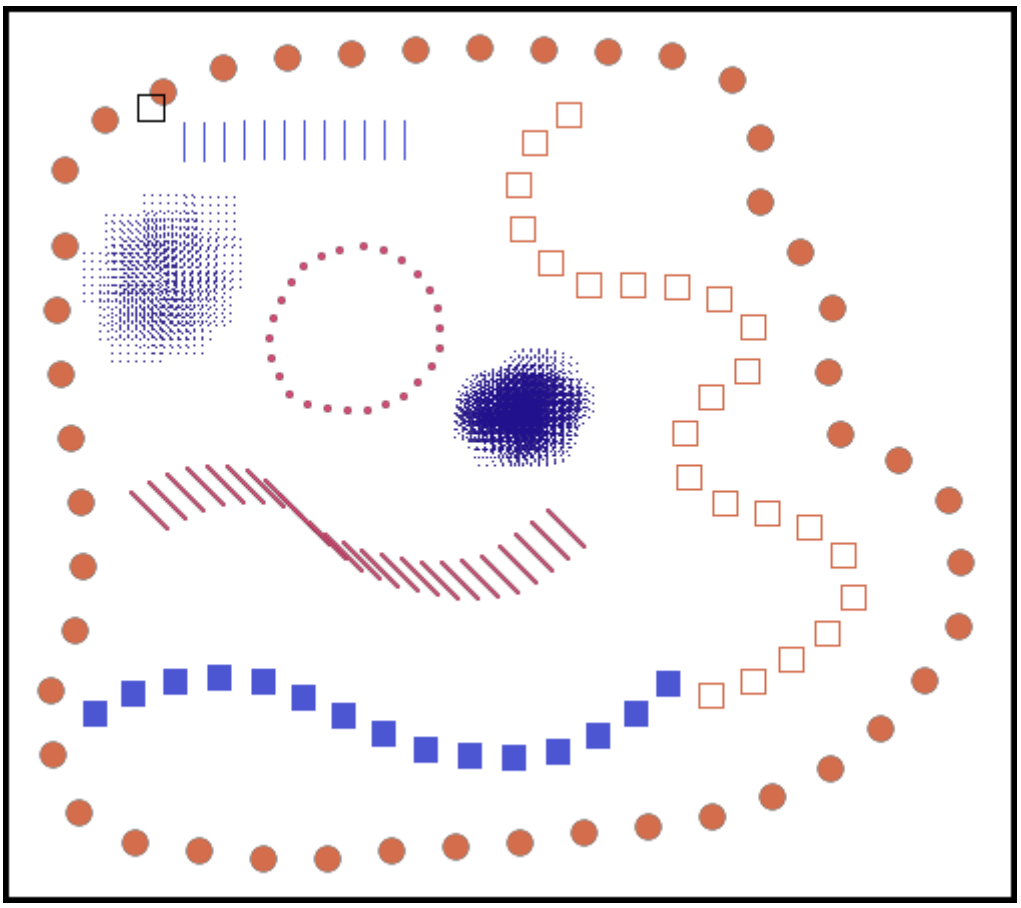
This tool simulates an ink pen. The section can also be used as a simple brush. It can be activated with the "I" button.



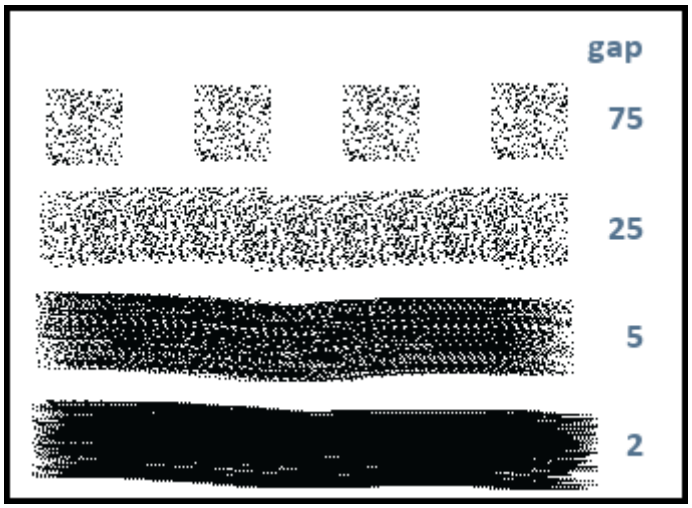
The Stamp tool (Stamp)



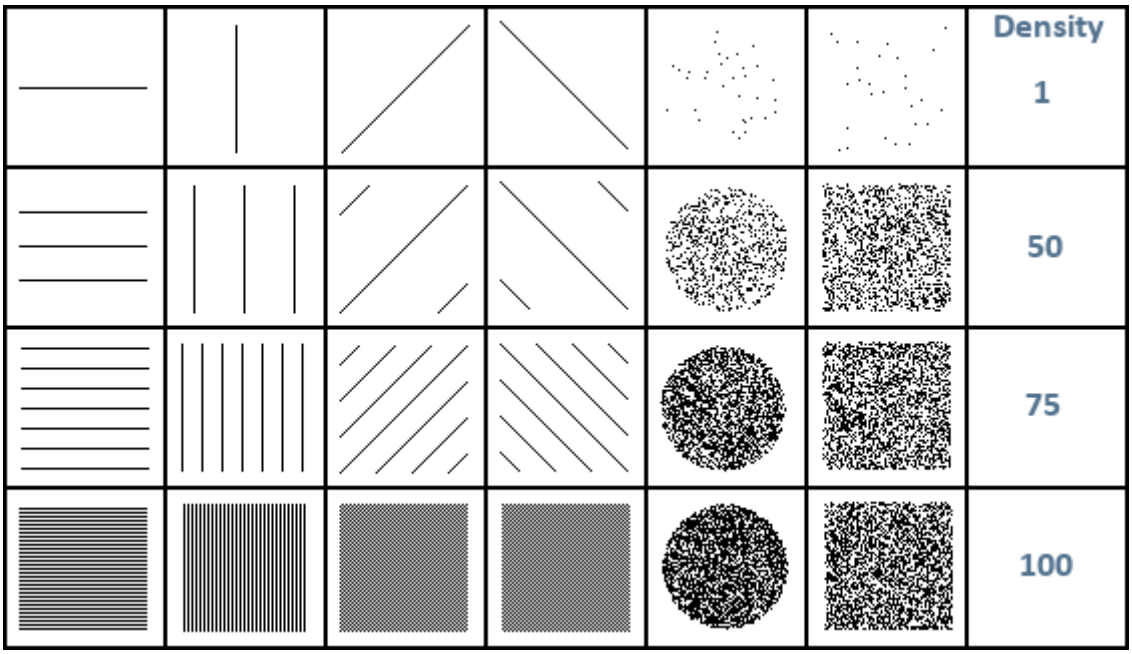
This tool allows you to draw the "" selected stamp (there are 10 stamps + a user stamp) at a constant distance (slider "gap").



Note: *Decreasing the value of the distance ("gap") the instrument assumes an increasingly continuous tract.*



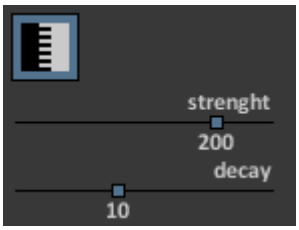
The "Density" slider controls the density of the symbols of stamps 5,6,7,8, 9 and 10:



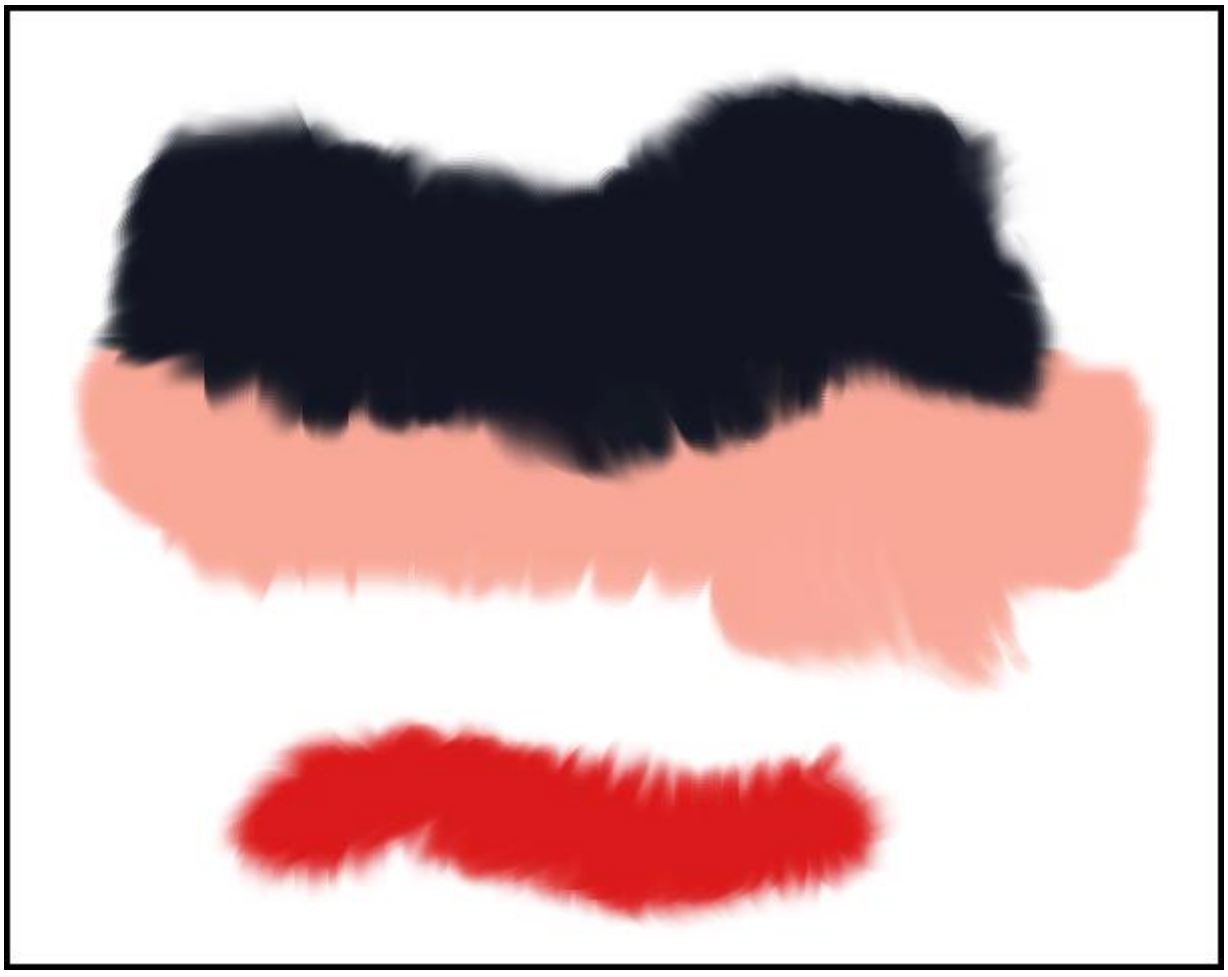
The user stamp U It becomes active when you press the right mouse button on the drawing area: the area clicked becomes the new user stamp.

Note: *This stamp NOT change color or size.*
This tool can be activated with the "T" button.

The Mixer tool (Smudge)

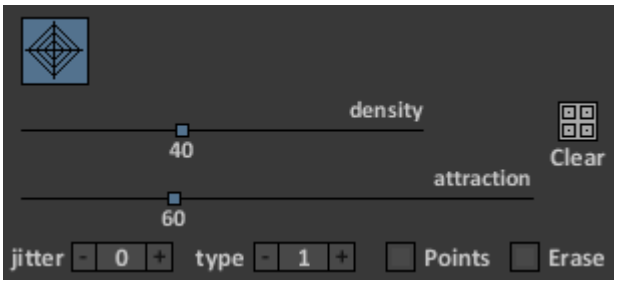


This tool allows you to smooth out the colors of the design. When you click on a colored area of the design capture tool that area and repeats when you mouse increasingly diminishing its transparency. The repetition occurs in a linear fashion (not dependent on the speed of the mouse).
The "strength" slider (from 0 to 255) controls the initial transparency (alpha value) of the catch area: with a strength equal to 255 the area is captured without transparency, with strength equal to 0 the zone is completely transparent.
The slider "decay" (from 0 to 25) controls the rate of decay of transparency, that is, as it decreases the transparency of each repetition area (linear).

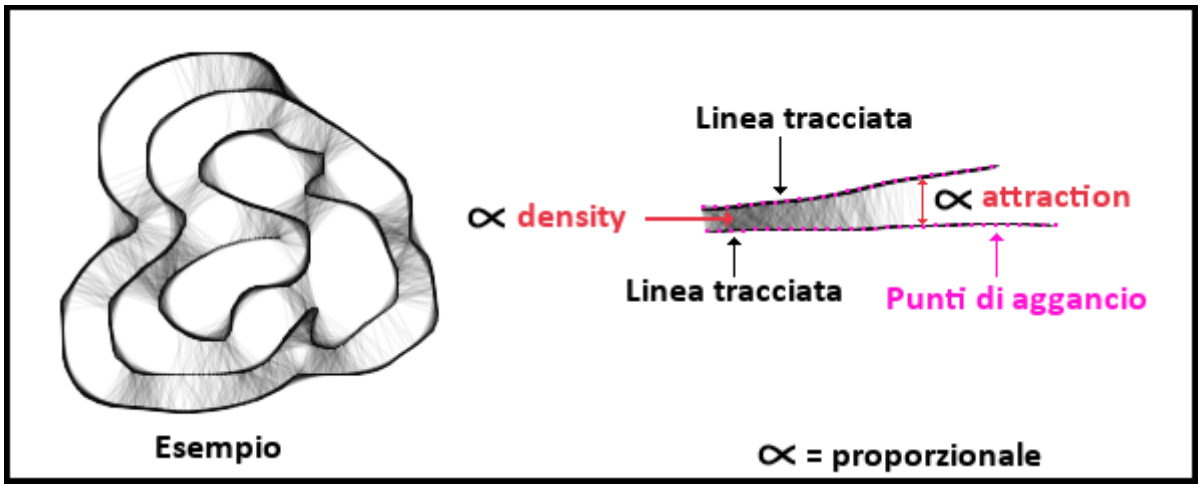


Note: *When using this tool in the transparent areas of the layer must activate the antialiasing, otherwise you get unwanted effects.*
To understand how well it is necessary to do some exercise ...
This tool can be activated with the "M" button.

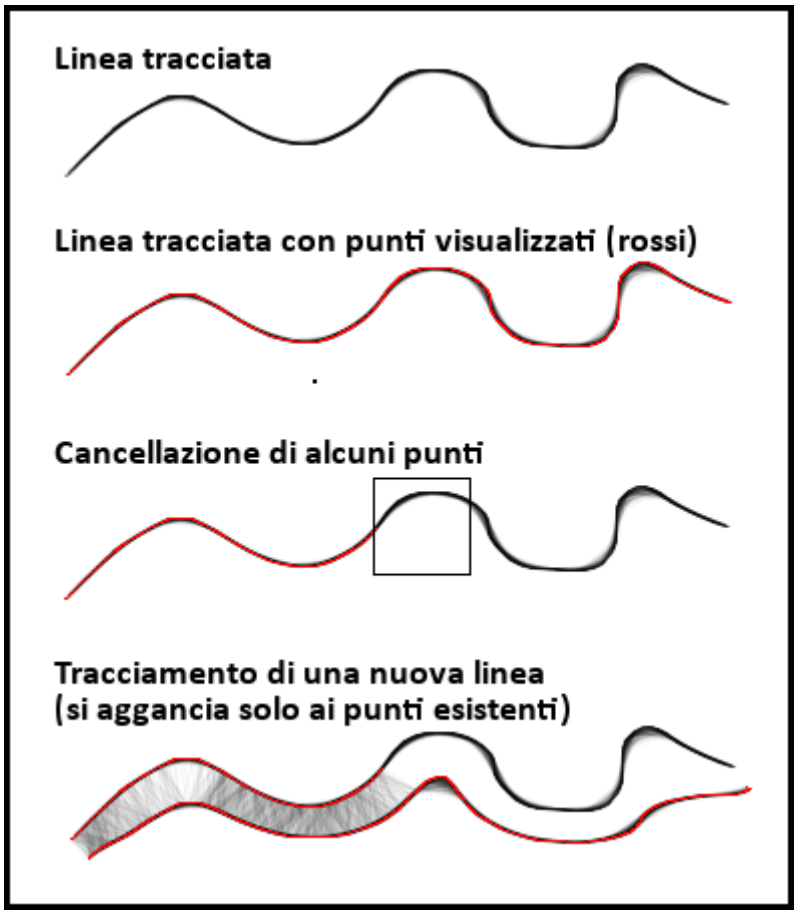
The Spider Web tool (Web)



This tool creates a kind of spider web by drawing lines that hook at points previously marked. The spider web of lines are drawn with a density proportional to the value of the slider "density" only if they are located at a distance from the points proportional to the value of the slider "atttraction".



To view the points you have to activate the "Points" button.
The "Clear" button clears all the plotted points (so the traced lines later with this tool does not engage in points ... eliminated).
To delete the points with the mouse, you activate the "Erase" button. When you remove the points may be useful to activate the zoom and / or decrease the transparency of the level.



When cancellail design with Cancellina tool or delete the contents of the entire level points are NOT deleted (you must use the procedure set out above).

The "jitter" parameter adds random values while tracking.

The "type" parameter allows you to specify the type of brush:

0	Linea semplice	
1	Linea web	
2	Rettangolo web	
3	Cerchio web	
4	Bezier Web	

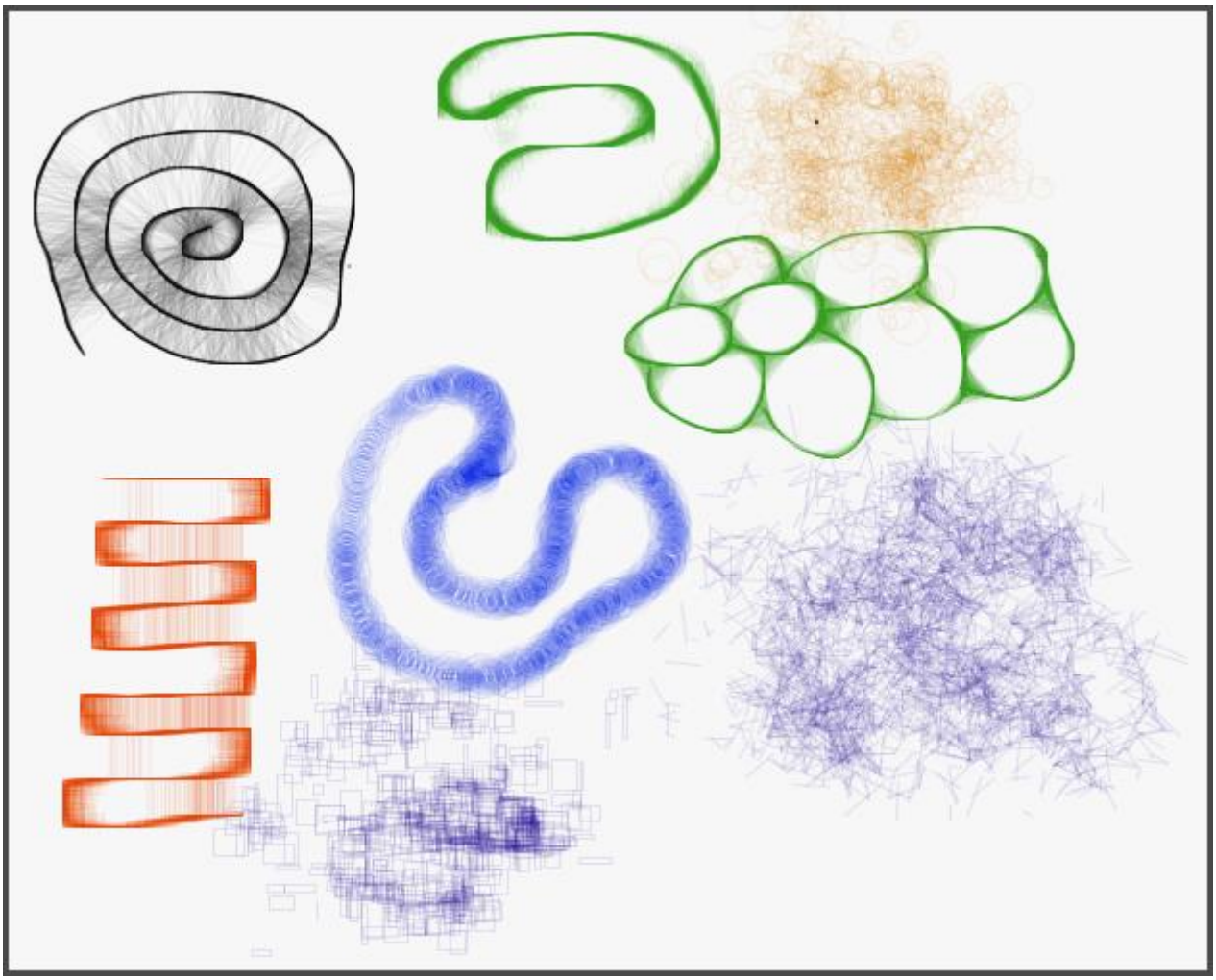
This tool can be activated with the "B" button.

Note: *when you select the tool are set some basic parameters:*

- *brush size ("Size") = 1*

- *transparency of the brush ("Alpha") = 10*
- *antialiasing enabled =*

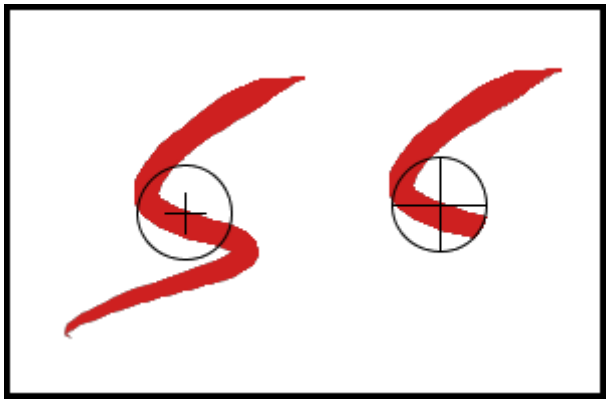
Note: *viewing and deleting points is that it can slow down your computer.*
Note: *this tool can use the symmetry X and Y.*



The Clone tool

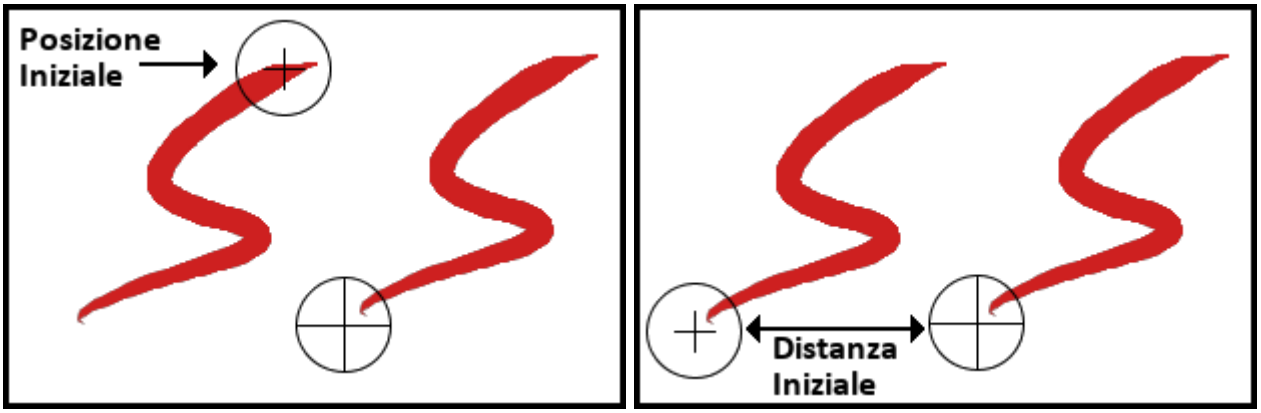
This tool allows you to copy parts of the design in another area.
To use Occor:

1) **press the right mouse button to select the start point to copy**
2) **press the left mouse button and drag the mouse to start the copying process**



To the left of the mouse clones and right mouse designs

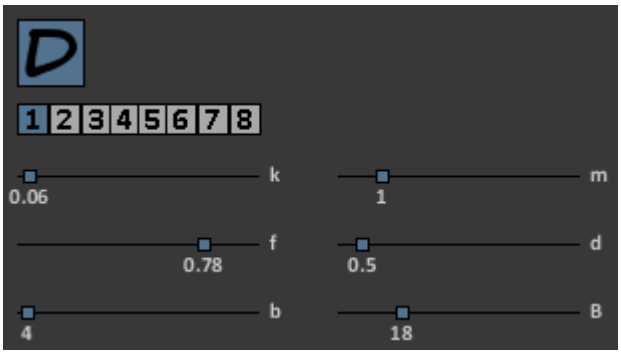
The "Aligned" button allows you to change the behavior of the clone mouse position (that clones the area).



Aligned Aligned turned off

At the end of the copy process (when you release the mouse) If Aligned is activated clone mouse remains the same distance from the mouse that draws if Aligned is off the clone mouse returns to the initial position (the one you initially selected with the right button) .
The Aligned button must be activated to copy objects at the same distance; when we want to copy a zone in any part of the design Aligned button should be disabled.
This tool does NOT use the Antialias. It can be activated with the "N" button.

The tool DynaDraw



This tool allows you to simulate a large number of different brushes varying the parameters.
Designed in 1989 by Paul Haeberli:
"The program implements a dynamic drawing technique Dynadraw That Applies a simple filter to mouse positions. Here the brush is modeled as a physical object with mass, velocity and friction. The mouse pulls on the brush with a synthetic rubber band. By changing the amount of friction and mass, various kinds of strokes can be made. This kind of dynamic filtering makes it easy to create smooth, consistent calligraphic strokes. "
The Dynadraw tool implements a dynamic design technique that applies a simple filter to the mouse position. The brush is seen as a physical object with mass, velocity and friction. The mouse pulls the brush by means of a spring (elastic) on a rough surface. By changing the values of friction, mass and elasticity are obtained many traits of a different type.
Moreover, another parameter controls the thickness of the stretch that is based on the speed of the mouse.
The parameters are:

k	constant Hook	Stiffness of the spring
m	Mass	Brush Massa
f	Clutch	Surface Friction (damping)
d	ductus (speed / thickness)	thickness variation in relation to the speed of the mouse
b	minimum thickness	Minimum line width
B	maximum thickness	Maximum thickness of the stretch

The brush size of this tool depends only on the parameters "b" and "B" (not by the "size" slider value).

A parity of the other parameters:

- Increasing the time constant of the spring is more rigid Hook
- Increasing the clutch decreases the friction of the surface
- Increasing the mass of the brush moves more slowly
- Increasing the ductus thickness decreases more with the mouse speed

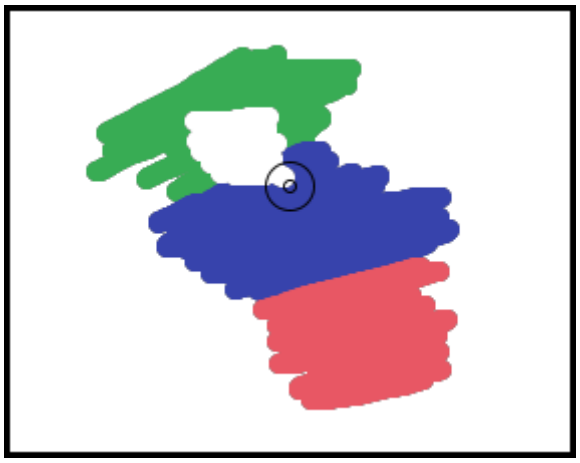
The "1" .. "8" buttons select preset brushes:

1	Default	**5**	Blob
2	Tracking	**6**	Writing
3	Random Art	**7**	scribble
4	Brush	**8**	Random (random)

Based on these initial values you try to change a parameter at a time to see and understand the effects of this versatile instrument. You can also press the keyboard key "8" to get every time a random brush.
This tool can be activated with the "D" key.

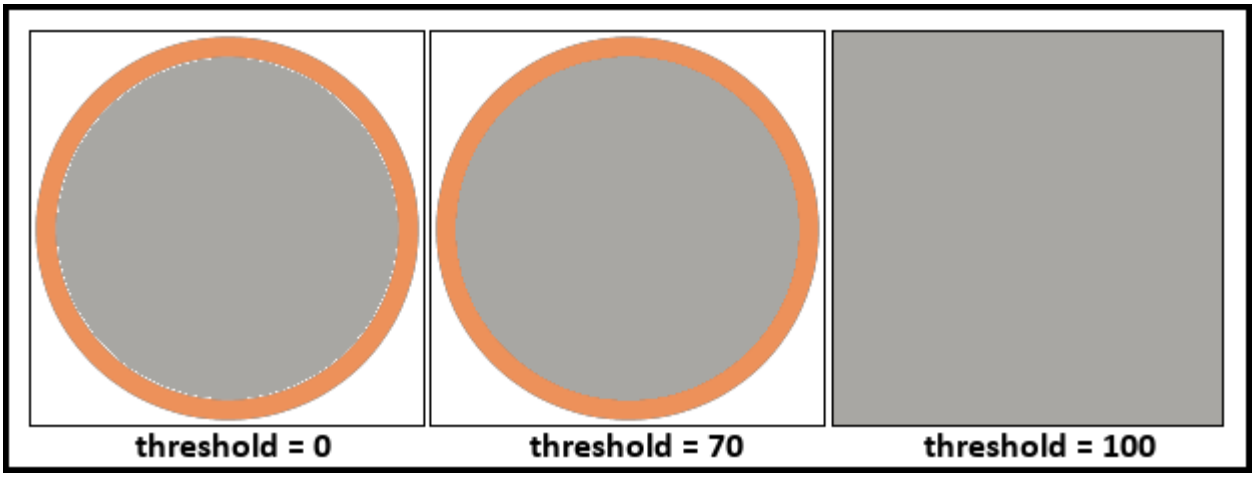
The Cancellina tool (Eraser)

This tool allows you to erase what we drew on the active layer.
The cancellation is without taking into account the value of alpha (complete erasure). It is also possible to cancel the symmetry with the X and / or Y active. You can activate the "E" key.



The Fill tool (Filler)

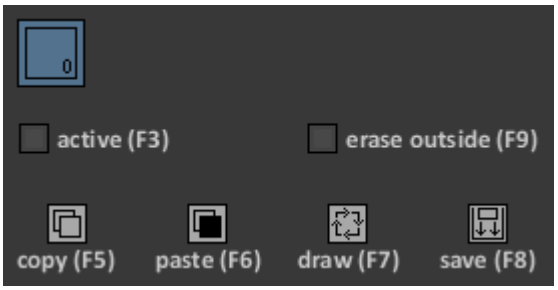
This tool allows to fill in the areas closed with the active color simply by clicking in their interior. It can be selected using the "F" key.
The "threshold" value (tolerance) defines how similar must be the colors of the pixels to be filled. With a low tolerance they are filled pixels with color values very similar to those of the selected pixel. With a high value of the pixels are filled with a wider color gamut. If the value is zero, it is filled only the pixels of the same color as the one clicked.
The operation is better explained in the following figure:



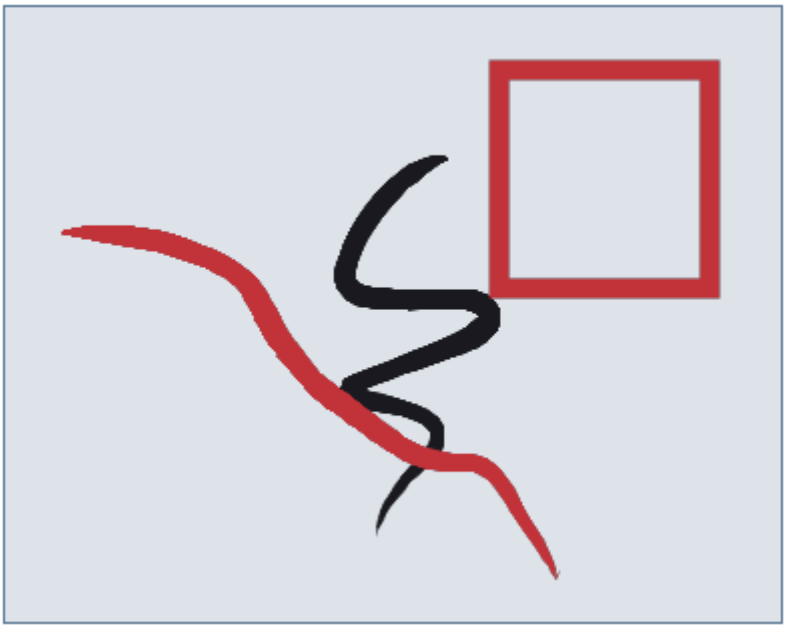
In the first case (threshold = 0) the filling of the circle is not accurate.
In the second case (threshold = 70) the result is satisfactory.
In the latter case (threshold = 100) the top of the tolerance value has allowed to fill also the orange circle and therefore the entire working area.
Note: The result of the filling depends both on the tolerance values (threshold) both from the colors that are used.

The "erase" key is used to fill the area with the transparent color (ie, delete the existing area color).

The Selection Tool (Select)



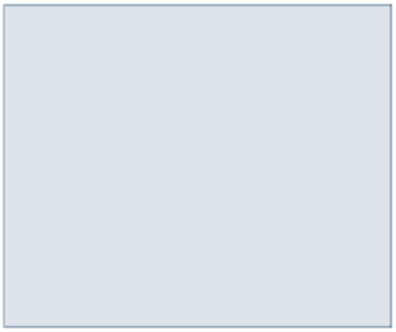
This tool allows you to select a rectangular / square area of the drawing.
To draw the area is also possible to use the coupling (snap) to the grid.



After you create a selection, you can:

1) **cancel** that is located inside or outside the selection with the BACKSPACE key
2) **Draw** ONLY with any tool within the selection
3) **Copy** the selected zone (F5) to then paste the zone into another part (F6)
4) **Tracing** the outline dela selected zone (F7)
5) **Save** the selected area (F8)
6) **Create** a stencil (see Stencil tool)

If there is no selection, then it is copied / saved the entire layer (useful to duplicate a whole layer).



1) Cancellation (Backspace)

2) design of new elements

The selection can be enabled (displayed) / off (hidden) with the "F3" function key.
The selection can be moved using the arrow keys.
This tool can be selected by pressing the '0' button.

The Stencil Tool

This tool allows the use of image files such as stencils.
The stencil is the default icon of the Processing language:


stencil Picture


Drawing over the stencil


Deactivation of the stencil

The stencil image can be moved using the arrow keys.

The stencil can be activated (displayed) / off (hidden) with the "F4" function key.

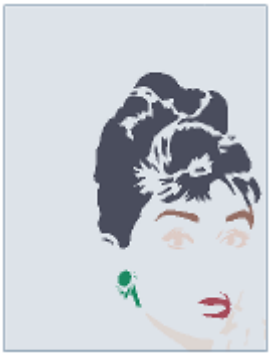
This button allows you to load an image file to use as a stencil

This button allows you to create a stencil from the selected zone

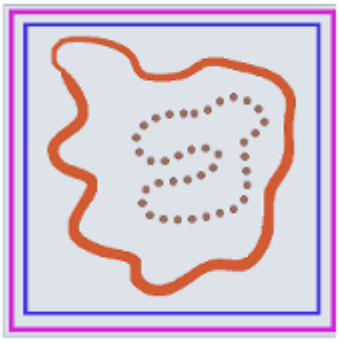
This button allows the positioning of the stencil at the center from the drawing

This button reverses the stencil (transparent pixels → Active Color)

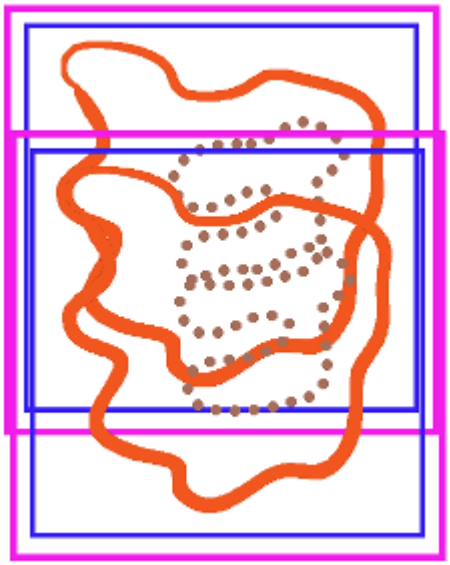
Using a stencil with the selection: is drawn only the inner part of the selection and to the stencil:



Creating a stencil from a selection:

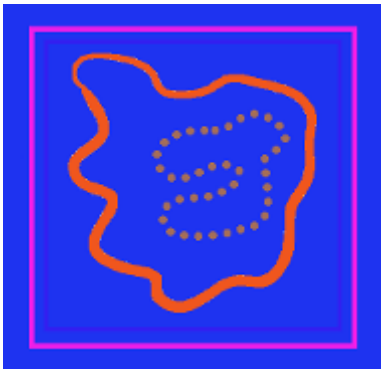


1) design 2) Select the zone and press "create"



3) Design and visible TEMPLATES

4) Erase the drawing (Backspace) to display only the stencil



5) Draw (blue) over the stencil

6) Final design after turning off the stencil (F4)

This tool can be selected by pressing the '9' button.

Note: *the stencil is filled ONLY in the transparent areas (not in the black areas or white)*

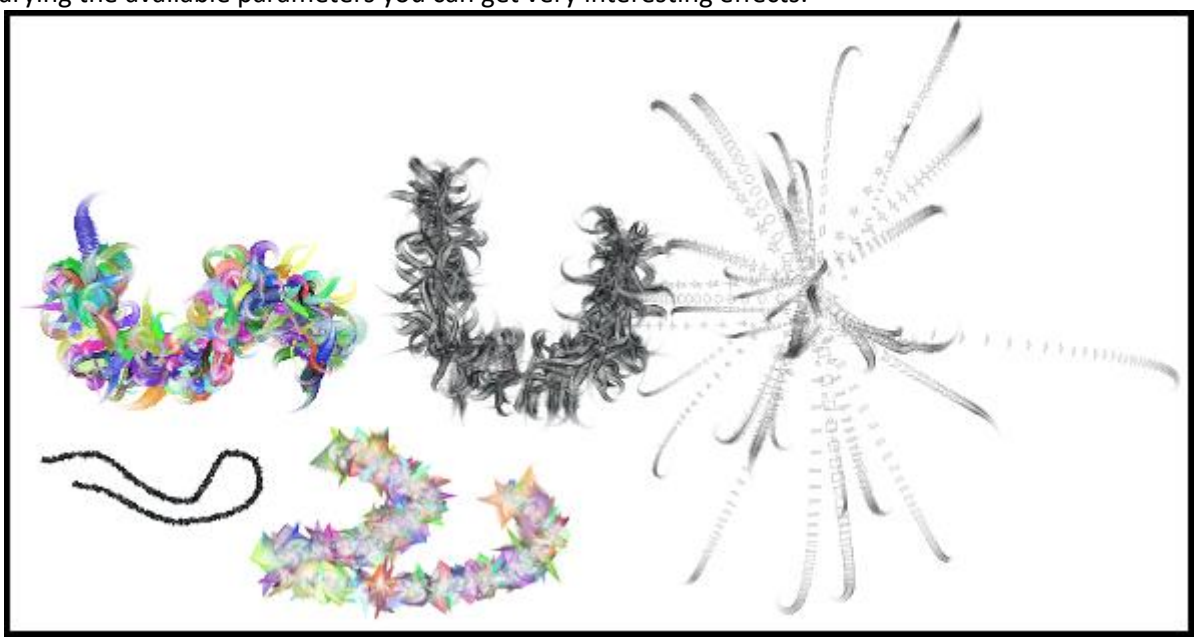
Note: *the stencil can be color filled only with the Stencil tool.*

The Confetti Tool

This tool allows you to draw objects that "explode" and leave a random track.

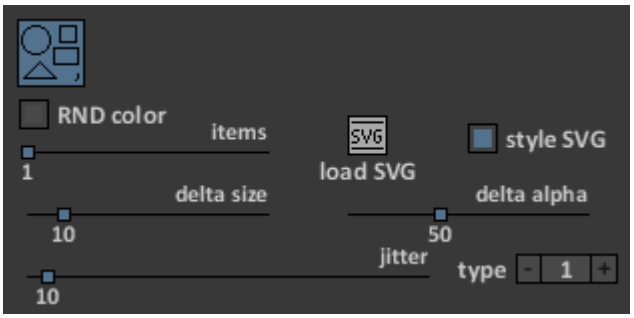
Drawing with default values

By varying the available parameters you can get very interesting effects:



Note: *this tool can slow down your computer during the drawing.*
This tool can be selected by pressing the ';' button.

Shape Tool



This tool allows you to use as a brush tip of the predefined geometric objects or any vector SVG files (which can be imported by the user).
Objects can also be positioned in a random manner.

The parameters are as follows:
type: Type of the object (1 = rectangles, squares = 2, 3 = ellipses, circles = 4, 5 = SVG file)
RND color The objects have a random color.
items: Number of objects to be drawn for every mouse move.
delta size: Change the brush size of your current size.
delta alpha: Change in the color alpha value starting with the current value of alpha.
jitter: Change in the location of the objects while tracking compared to the mouse movement.
load SVG: It allows you to open and use an SVG to draw.
style SVG If active uses the SVG file style for viewing, otherwise use the style defined by the program.

This tool can be selected by pressing the ',' button.

Changing the size of the brush

The size of the brush can be changed (from 1 to 64 pixels) in four ways:

1. Using the "size" slider menu: 

2. Using "[" key and "]"
3. Pressing the CONTROL key and dragging the mouse drawing in Neighborhood (Control + Drag).
4. By pressing the ALT key and dragging the mouse drawing in Neighborhood (Alt + drag).

Choosing colors

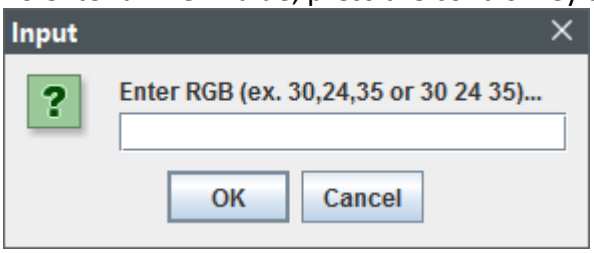
To choose the colors we have four methods available, let's see them in the order.

The RGB / HSB instrument

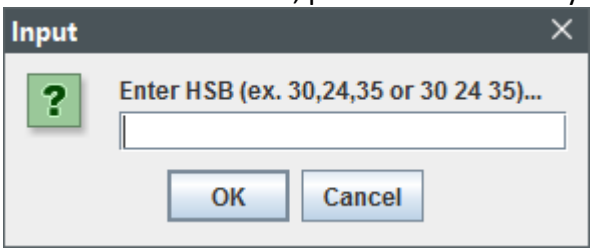
At the top you can change the RGB (Red-Red Green-Green, Blue-blue) color (0 to 255).
At the bottom are the modified values HSB (Hue-Hue, Saturation-Saturation, Brightness-brightness) of the color (from 0 to 360 H, S from 0 to 100 and B from 0 to 100).
Various numbers are changed by clicking on the appropriate buttons "+" and "-" in this way:

Click simple: +/- 1
Click with the CONTROL key held down: +/- 10
Click with the CONTROL key held down: +/- 10

During the modification of values only change the active color.
If you are not satisfied with the new color you can select the old color by clicking on it.
In addition, the control also allows the choice of a color using the direct input of RGB or HSB values.
To enter an RGB value, press the control key and click on the Active Color:

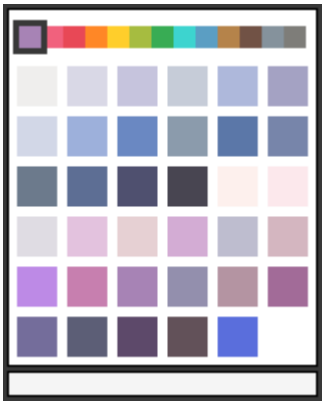


To insert an HSB value, press the control key and click on the Old color:



The RGB and HSB values must be separated by commas "," or "" spaces.

The Tool Palette



This tool consists of three parts:

This is the bar for the selection of the blades and is used to select one of the 13 palette associated with the corresponding colors. By selecting a palette you do not change the active color. The palette also run by pressing the arrow keys left and right (Left Arrow and Right Arrow).

This is the active palette that lets you choose the color by clicking one of the colors represented.

This is the button that allows you to change the background color (background) with the active color. Pressing the background color will become active.

The HSB tool

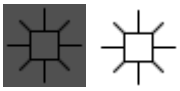
This tool allows you to change the HSB values visually. The lower part makes it possible to change the hue (Hue) of the color, while the upper part allows to change the color saturation (Saturation)

color (vertical axis) and luminance (Brightness) color (horizontal axis). Finally at the top it is shown the active color.
To choose a color eistono two ways:

1) **Click the right mouse button**
2) **Press the SHIFT key and click with the left mouse button** (In this case you can also click and drag the mouse over the control).

By pressing the SHIFT key and clicking the right mouse button you can move and reposition the control to another part of the screen.
This tool can be shown / hidden by pressing the Space bar ("").

The tool CatturaColore



This is when the mouse pointer is active CatturaColore tool.
This tool is activated by holding down the SHIFT key and allows you to capture a color clicking on any part of the drawing area. If we click with the left mouse button capture color from all levels and from the background color, but if we click the right mouse button capture the color only from the active layer.
Note: *because the layers are transparent, clicking on a transparent pixels we get black.*

Creating a transition between two colors palette

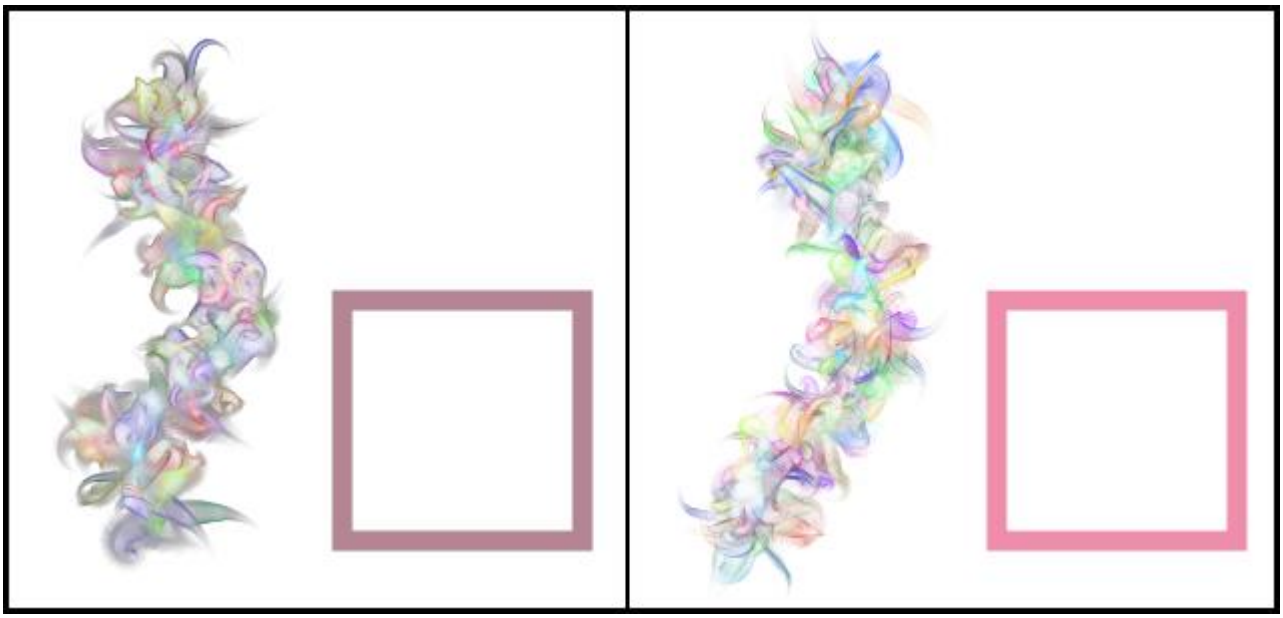
Pressing the "J" button is drawn (the active layer and starting from the position of the mouse) a palette of eleven colors of the active color and ends with the old color.

The Alpha channel and antialiasing

The Alfa channel represents the transparency of the active color. The value for the alpha channel varies from 1 to 255 and can be modified in two ways:

1. With the "alpha" slider
2. With the "+" and "-" keys (for fine adjustment)

The "antialias" button ("A" key) is used to draw the color correctly when the alpha channel has a value less than 255 (see figure below).



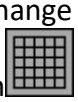
Antialiasing disabled antialiasing enabled

Note: *when using the Brush tool (Pencil) with alpha channel used for the latter low values (4-30).*

Note: *not all of the tools they use antialiasing.*

Using the rack

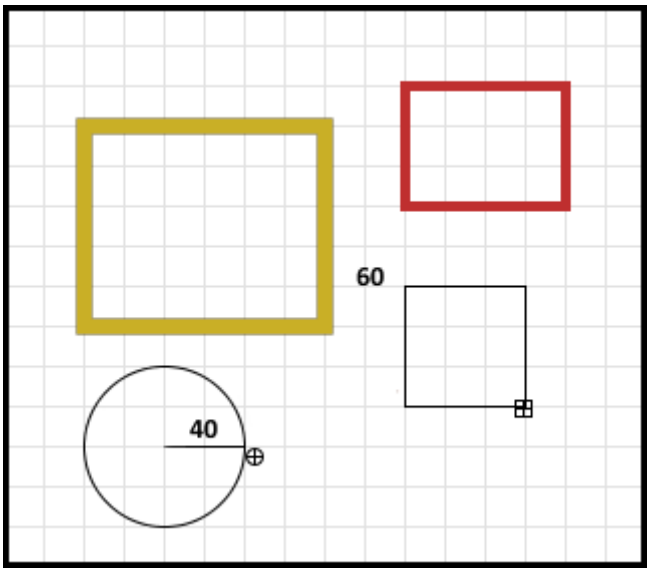
To use the grid we have available the following control:

The show (button "W") button displays the working area grid with spacing parameters X and Y selected. The displayed grid is changed if we change the X and Y values When we found the definitive values, then we can press the button  to draw the grid on the active layer.

Note:*not draw the grid display, but only after you have drawn the grid on a level. The display is used to adjust the grid values and, when satisfied, draw it on a level.*

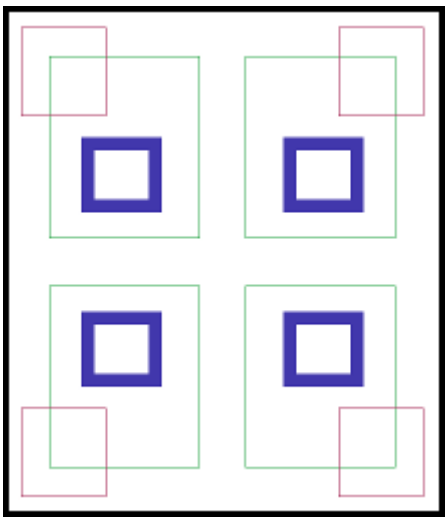
Note: *the values of X and Y, respectively, must be a multiple of the width and height of the window.*

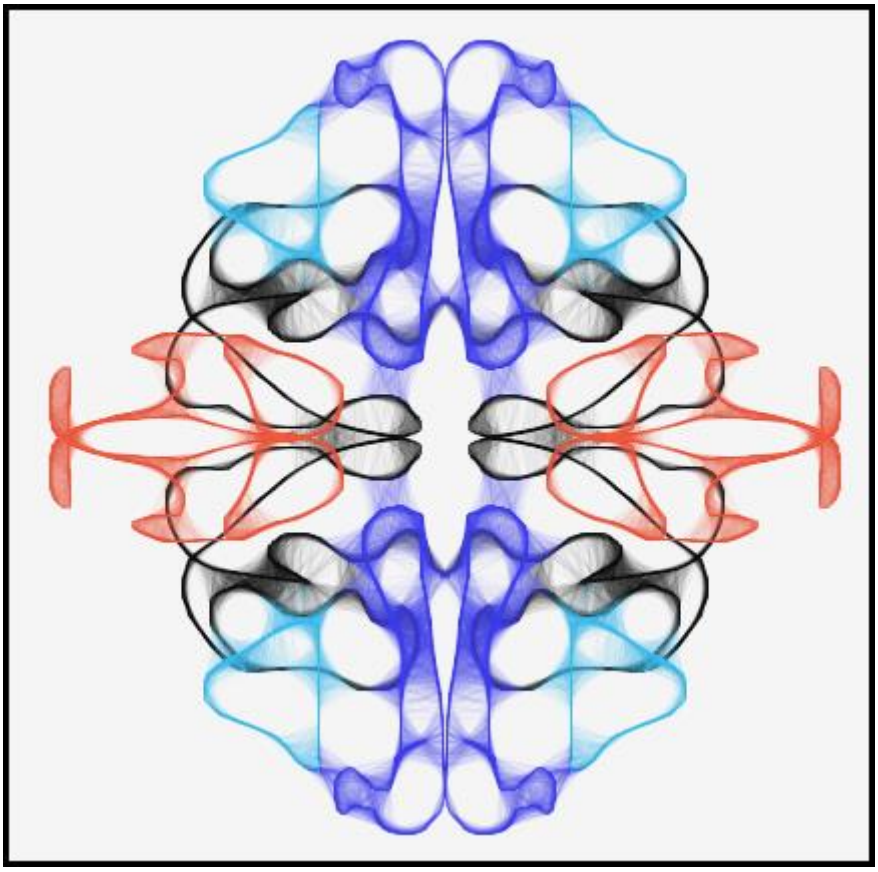
Finally, we can press the "Snap" button ("G" key) to draw lines, rectangles and circles snap to grid points (for more information see the section on using the drawing tools).



Using the X and Y symmetry (X, Y mirror)

With the Paint Brush (Pencil "P"), Line (Liner, "L"), Quadrilateral (Quad "Q"), Circle (Circle "C"), Spider Web (Web "B") and paint (paint "V") we can draw symmetrically with respect to the axis X and / or Y axis simply by activating the "mirror buttons X" and "Y mirror". In this way, what we draw is automatically repeated in a symmetrical manner (see the following figures):

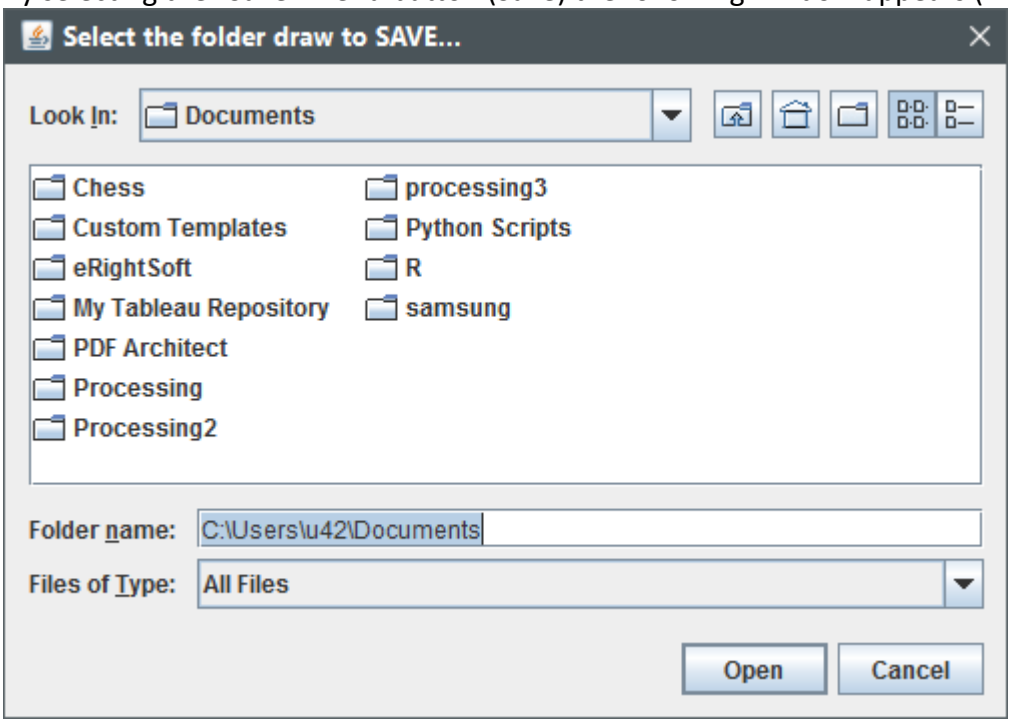




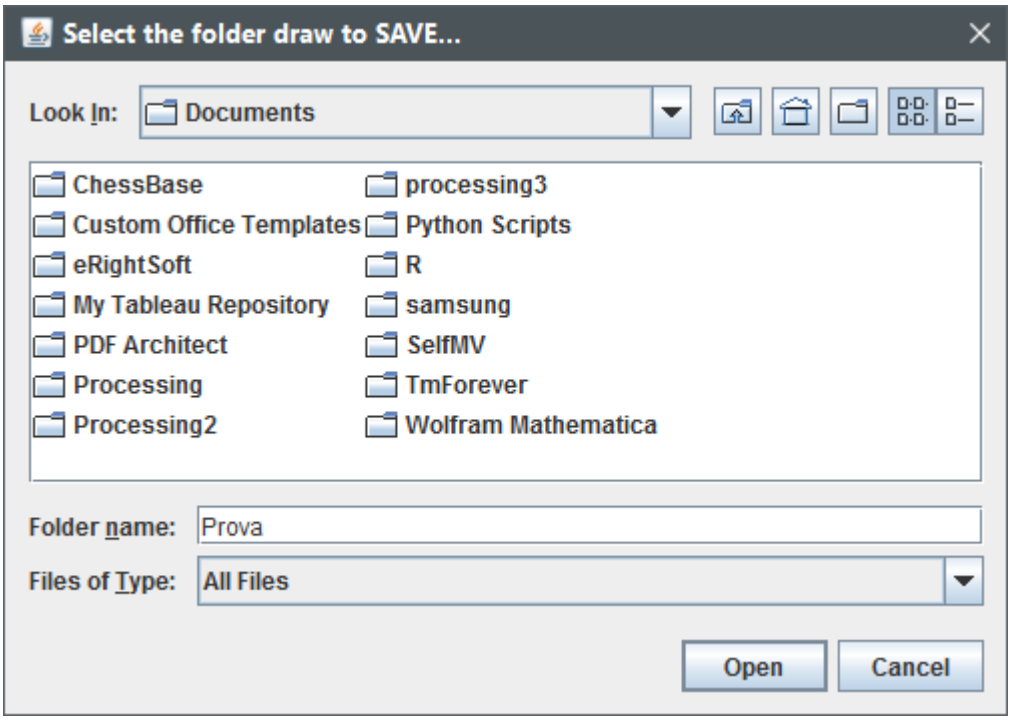
To activate / disativare symmetry it is possible to use the "X" and "Y" keys.

Save and open drawings

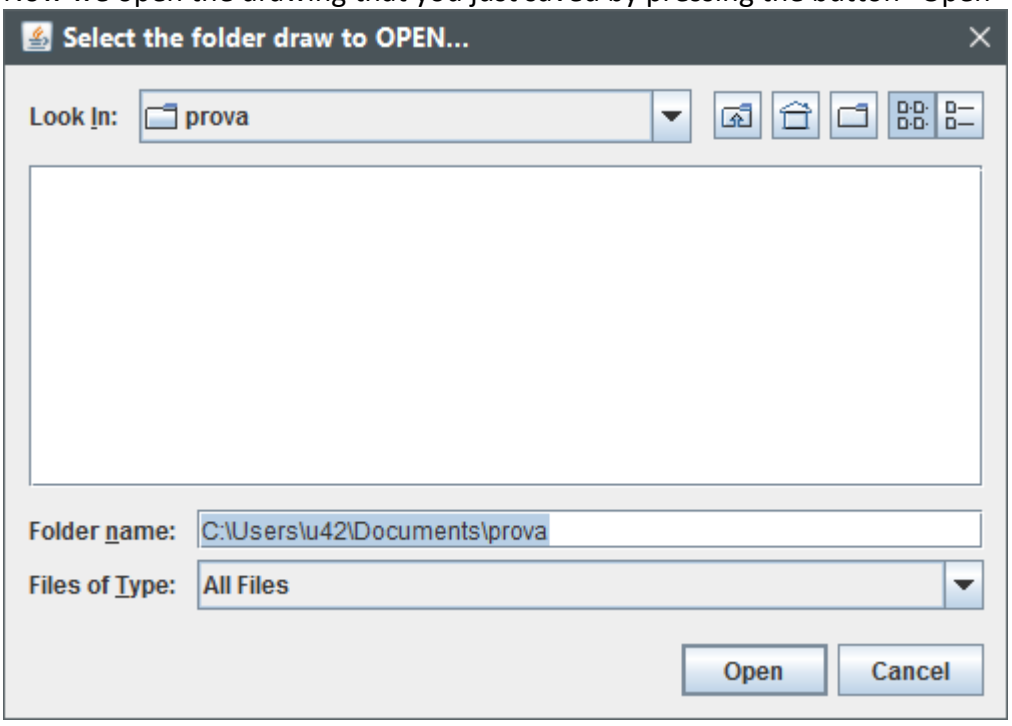
The saving and opening of the drawings is carried out with the "Open" buttons (Open) and "Save" (Save ") or by pressing the" O "keys and" S ", respectively.
Unlike other programs, each drawing is saved to a directory (folder) in the folder are saved all the necessary files. To open a drawing simply select the appropriate folder.
By selecting the "Save" menu button (Save) the following window appears (windows Inglese):



Now you just write a name for our design (eg. Test) and press the "Open" button in this window (which should be "Save" ☺) ...



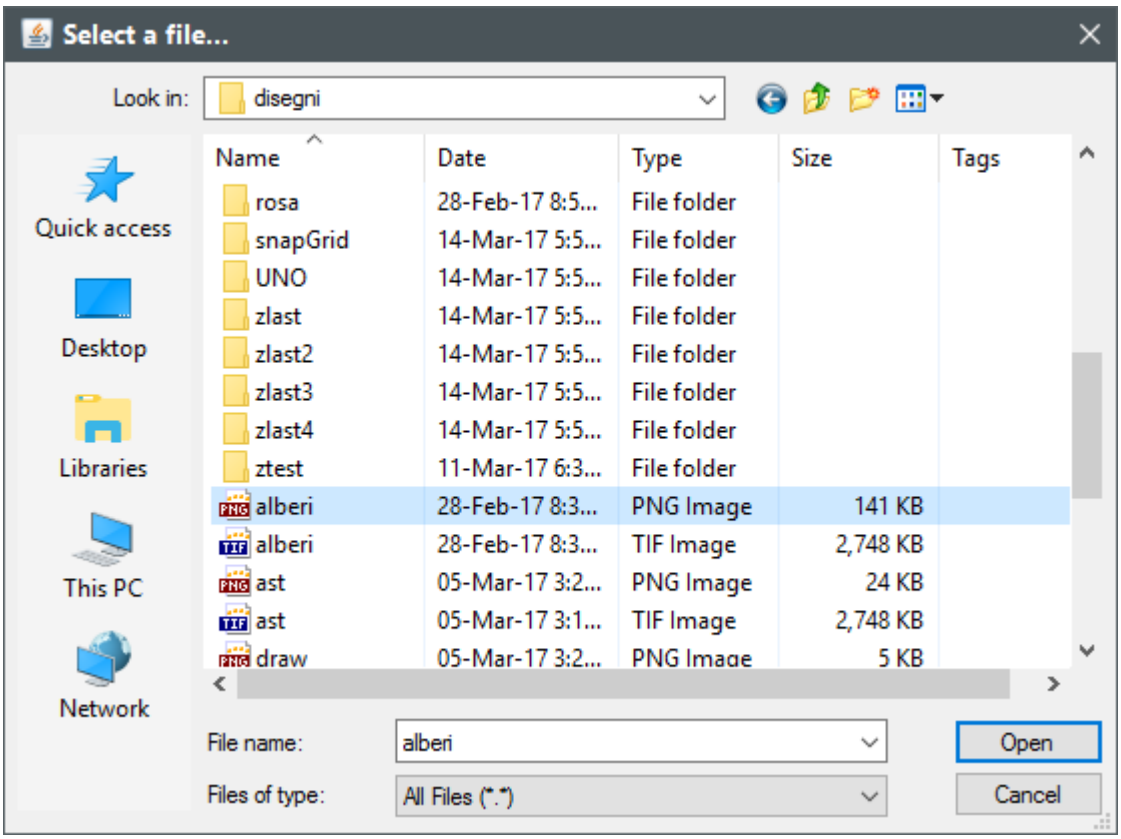
Now we open the drawing that you just saved by pressing the button "Open" menu (Open):



The program remembers the last saved folder, then simply press the "Open" button in this window.

Import image

This button lets you import an image on the active layer. The image can be any of the following file types: BMP, JPG, PNG or TIF.
Pressing it opens the following window that allows you to select the image to be imported:



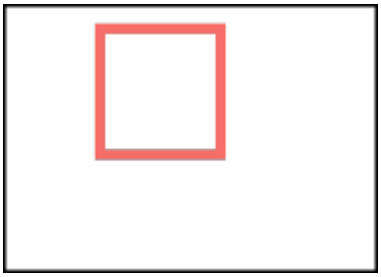
The image is displayed at the center of the workspace.

Note: For a correct use it is necessary that the size (width and height) of the image to be imported is less than or equal to those of your program (the size of the program are displayed at the top of the Information Bar).

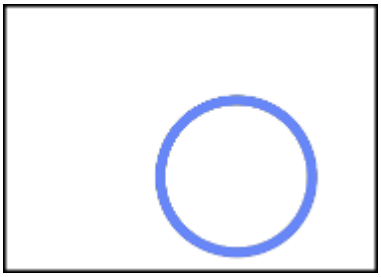
The levels

What are the levels

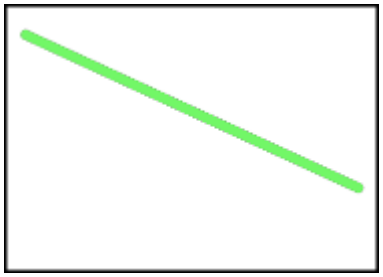
Imagine having the printed sheets, such as those that are used to project the slides) On each sheet can draw something: draw a square on the first, the second circle and the third line:



Sheet 1 (Level 1)

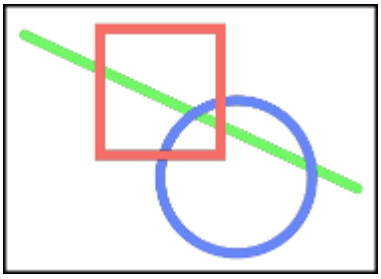


Sheet 2 (Level 2)



Sheet 3 (Level 3)

What if we overlap the three shiny? We will have a single image, given by the sum of the three superimposed sheets:

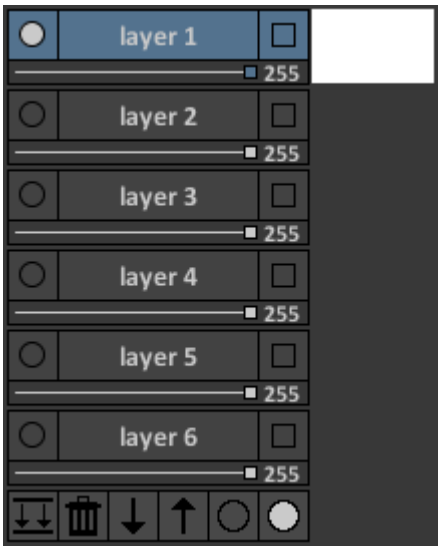


overlapping sheets

Levels allow you to do the same (and more) with our drawing.
Some considerations and layer operations:

- When a layer is drawn completely undetectable by the layers below it (unless this level a certain transparency is not applied).
- When we draw, we can only change the active layer (the other levels are not changed).
- We can apply a transparency value at any level.
- We can re-order levels at will.
- We can make a totally invisible level.
- We can lock a layer so as to avoid accidental changes.
- We can totally erase everything that we have drawn up a level.
- We can combine (merge) two layers into one.

The Levels control



This control allows you to manage the levels of the design.
In particular:

This is the active layer and is colored blue. To focus to a level you have to click on its name (or press 1..6 buttons to activate the relative level).

Button making visible / invisible level.

This is the layer name. Pressing the CONTROL key and clicking on it you can change the name of the layer (layer names must be different).

Button to lock / unlock the level for drawing. When selected you can not change the level (the level needed to protect against accidental errors).

Slider that allows to modify the visibility of the layer from 0 (invisible) to 255 (fully visible).

Icon showing what is drawn on the level.

This series of buttons allow you to perform the following steps:

Melts the active layer with the underlying

Clear all we have drawn in the active layer (key: Backspace)

Move The lower level (key: Down arrow (Arrow Down))

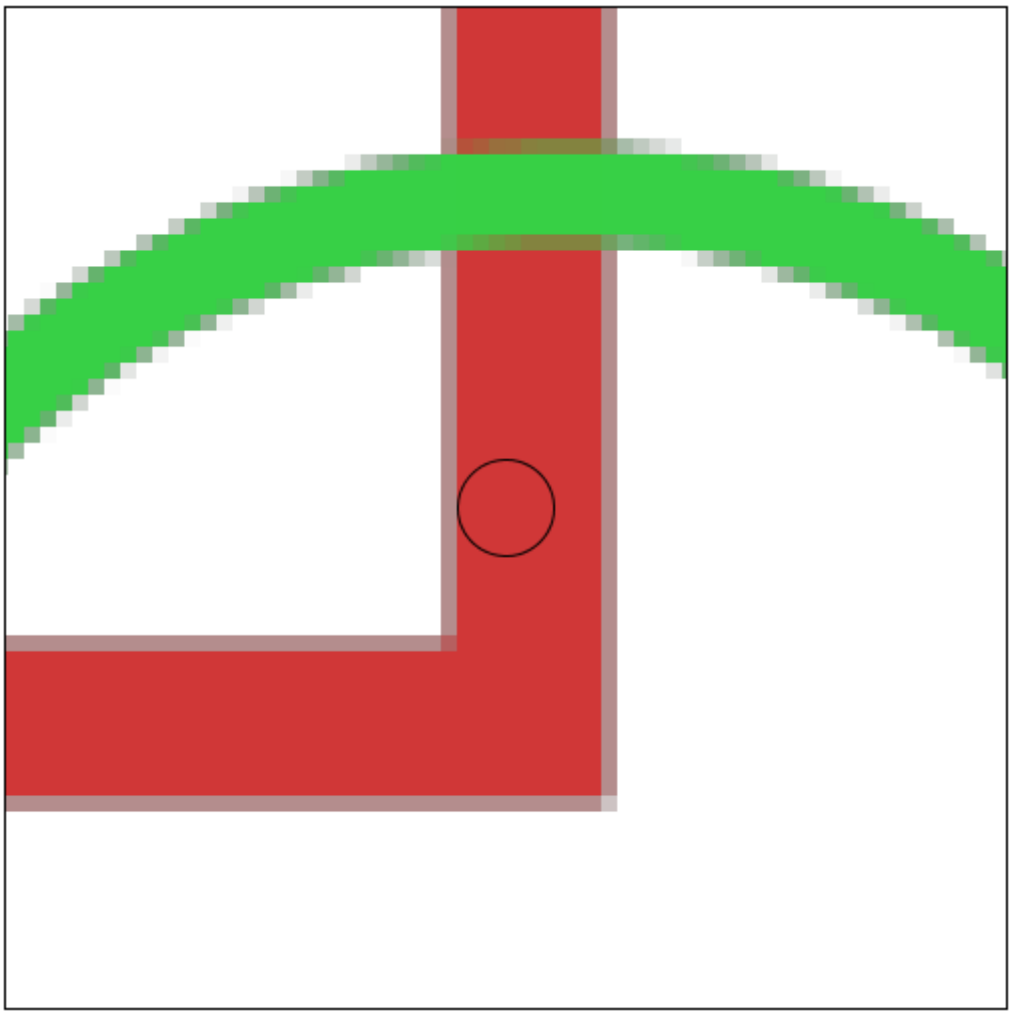
Move The upper level (key: Up Arrow (Up Arrow))

It makes invisible all layers except the active layer

It makes all layers visible

the Zoom

Zooming allows you to enlarge the part of the picture where there is the mouse.



The zoom can be activated / deactivated only by pressing "Z".
We can change the magnification value by pressing the "+" and "-" (only when zoom is activated).
Note: *there is the menu button to zoom.*

Undo and Redo (Undo / Redo)

These buttons allow you to Undo (left button) and Repeat (right button) drawing operations.
All operations that modify a layer are cancellable(Except the opening of a new design). The buttons are active when you are blue.
The number of undo is ten (10).
The key to Cancel (Undo) is "U". The key to repeat (redo) is "R".

The information of the bar

In the upper part of the program window shows the information of the bar:

0674, 0120	Position X and mouse Y
Pencil	active Tool
size: 10	Brush Size
layer: 1	Number of active layer
sel: false	Selection of State
1250x750	Size of the window
(100)	Computer speed (max 100)

The Panic Button

Sometimes it may happen that the program behaves as you would not, this may be due to some setting that we are not able to recover.
In this regard, you can press the panic (F12) button that resets the program with some defaults so you can begin drawing again.

The mouse pointers

The mouse pointer changes shape depending on the tool that you are using or the position of the mouse itself. Let's see the different types of pointers sorted by display priority:

CatturaColore the Pointer tool. (When holding down SHIFT).
Note: *It overwrites all other pointers.*

Menu pointer. Active when the mouse is over the menu area.

Cancellina the Pointer tool (variable size).

Pointer of the Brush, Ink tool, Mixer, Clone, Confetti, Shape (variable size).

Pointer Line and the Selection tool (variable size).

Pointer tool of the Quadrilateral (variable size).

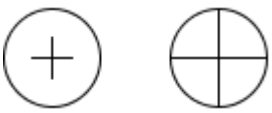
Pointer of the circle tool (variable size).

Pointer of Paint and Stencil tool (variable size).

Pointer tool Stamp and cobweb (variable size).

Filling the Pointer tool (fixed size).

DynaDraw the Pointer tool (variable size).



Clone Draw
Pointers the Clone tool (variable size).

Change color and pinpoint the location of the pointer

At the launch of the program pointers are black. If it is difficult to visualize (for example on a very dark background) you can change their color by pressing the "ESC" button.
This button allows you to interchange the color of the white pointer to black and vice versa.
When we draw with a reduced size of the brush we can be difficulties in identifying its location in the window; to help us find we can press the button "H" (Highlight) that draws a blue circle around it (see figure below).

in the foreground window

Pressing the "F2" key the program will always remain on top of other applications. Press "F2" to disable this function.

Note: *When this function is active, you do NOT see the dialogs (eg. Open, Save, Enter layer name ..., Enter RGB ...) as they remain behind the main program window.*
To close a window of "invisible" dialog press the "ESC" button.

Help

Pressing the function key "F1" will open this manual in PDF format.

final note

To draw smoothly (especially if you have an older computer) you may want to draw with disabled menu (just press Tab to show or hide).
You can use most of the tools using the keyboard and without displaying the menu (for more information see the section on "shortcut keys").

Shortcut keys (shortcuts)

Key	Function
F1	Opens the program manual (PDF)
F2	Program always in the foreground
SPACE	Show / Hide the HSB instrument (color selection)
TAB	Show / Hide the menu (drawing with the hidden menu)
P	Select the Brush tool (Pencil)
THE	Select the Line tool (Liner)
Q	Select the tool Quadrilateral (Quad)
C	Select the Circle tool (Circle)
IS	Select the Cancellina tool (Eraser)
F	Select the Fill tool (Filler)
V	Select the Paint tool (Paint)
THE	Select the Ink tool (Ink)
T	Select the Stamp tool (Stamp)
M	Select the Mixer tool (Smudge)
N	Select the Clone tool (Clone)
B	Select the tool Spider Web (Web)
D	Select the DynaDraw tool ("8" for random brush)
0	Select the Selection tool (Select) F3: Enable / Disable
9	Select the Stencil tool F4: Enable / Disable
;	Select the tool Confetti
,	Select the Shapes tool (Shape)
K	Constrain drawing circles and / or squares
[	Decreases the size of the brush
]	Increase the brush size
+	Increase the value of Alpha or the magnification value (zoomed)
-	Decreases the value of Alpha or the magnification value (zoomed)
TO	Enable / disable antialiasing
W	Show / Hide the Grid (show)
G	Snap to Grid (Snap) (with Circle Quadrilateral and tools)
X	Enable / Disable the symmetrical design of the X axis
Y	Enable / Disable the symmetrical design with respect to the Y axis
Z	Activate / Deactivate Zoom
U	Undo (Undo) (10)
R	Repeat operation (Redo) (10)
SHIFT	Activate CatturaColore tool (required for monitoring HSB)
J	Draw a color palette (from the Active Color Old Color)
←	Select palette of colors previous | Moves selection to the left | Moves left Stencil
→	Select next color palette | Moves selection to the right | Moves Stencil right
Backspace	Delete the contents of the Active Layer
↑	Move up the active level | Move the upper Selection | Moves Stencil top
↓	Move down the active level | Moves down Selection | Moves down Stencil
1..6	Activates the appropriate Level (1 to 6)
.	Show / Hide Layers Control
H	Increase the visibility of the pointer position (Highlight)
ESC	Change the color of the mouse pointer (black / white)
OR	Opens a drawing (Open)
S	Save a picture (Save)
F12	Panic (set default values)

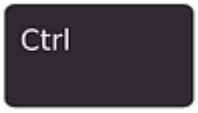
The special keys

The ESC

The function keys (F1..F12)

The TAB key

The SHIFT key



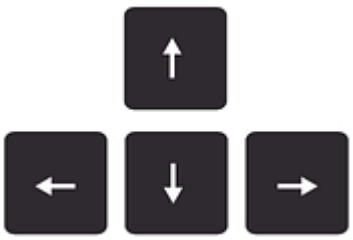
The CONTROL button

The ALT key

The SPACE key ("")

The backspace key

The ENTER key (ENTER or RETURN)



The key ARROW UP, DOWN, LEFT, RIGHT (ARROW UP, DOWN, LEFT, RIGHT)

Installing the program

The program is distributed in a single file: Layers-p55.zip
Inside the zip file contains four folders:

1. **layers** (Source folder)
2. **Layers32** (The 32-bit program folder: Layers.exe);
3. **Layers64** (The 64-bit program folder: Layers.exe);
4. **Manual** (Manual folder in PDF format)

Windows users: simply unzip the zip file to a folder to your liking and create your Desktop (Desktop) a link to Layers.exe program (32 bit or 64 bit).
Mac OSX users: you have to compile the program (see "How to compile the program for your computer").

How to compile the program for your computer

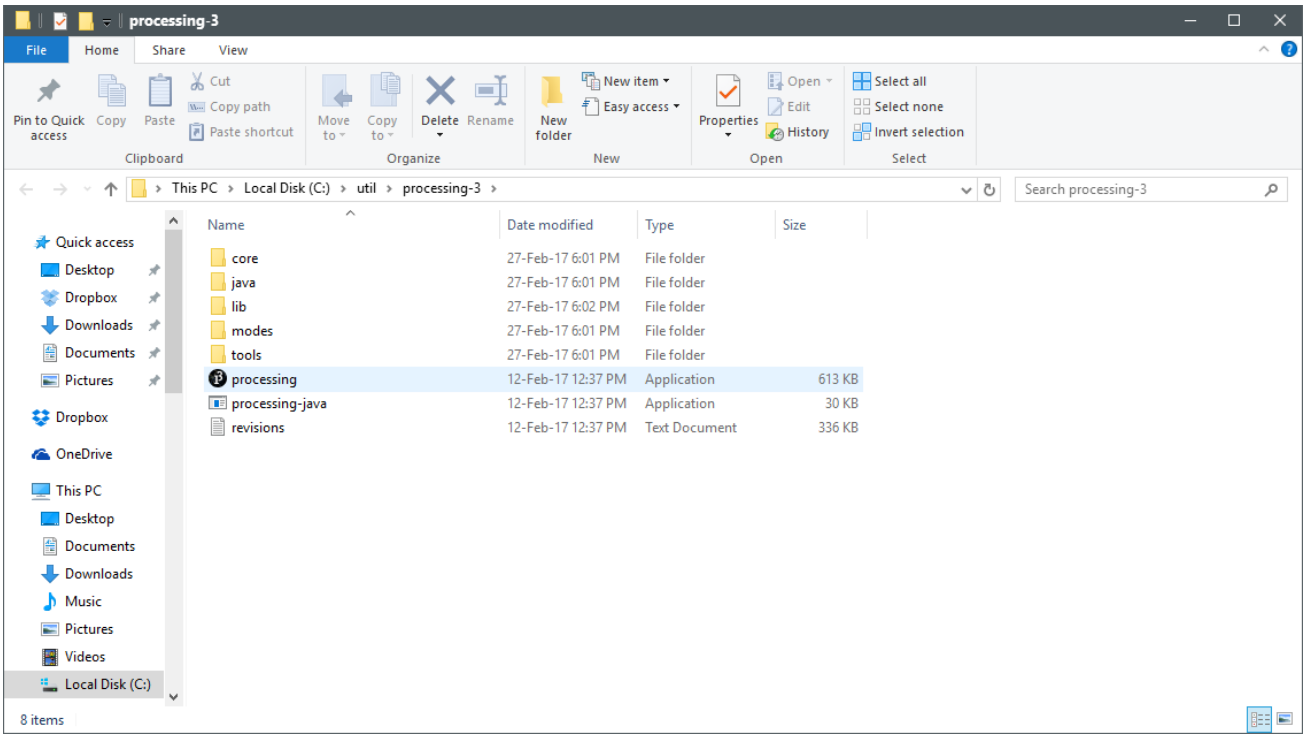
***Note:** The explanations for the Windows operating system, but the operations to be carried out in a Mac OS X or Linux are similar.*

This program is delivered complete with springs, so you can modify it to your liking (if you are a programmer). Also it is distributed only the Windows version, so the Mac OS X or Linux computer owners must complete the program to use it on your system).
Here are the steps to take to adapt the program to the size of your monitor and compile it to create a new version.

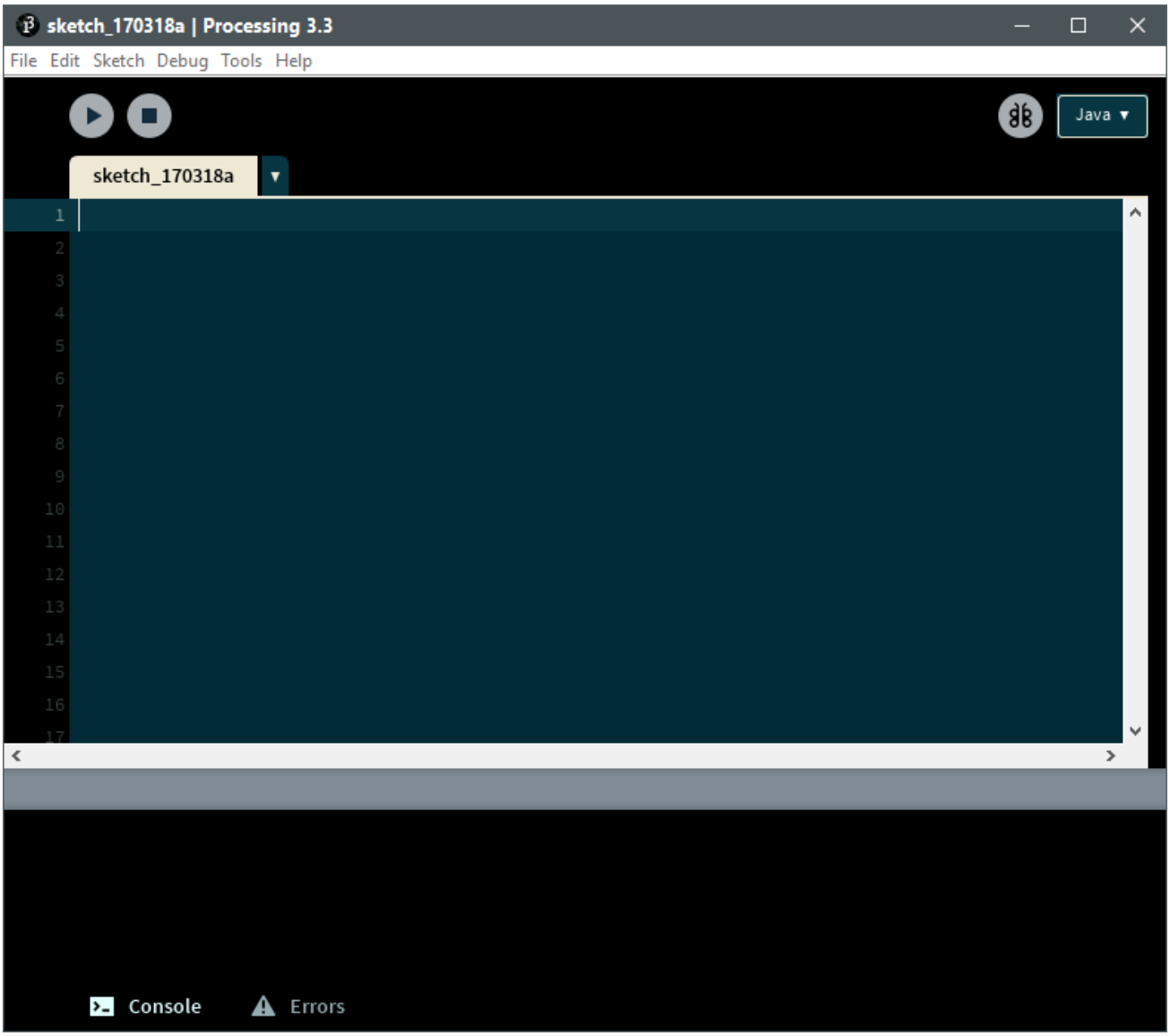
First you need to download and install the Processing program at the following address:https://processing.org/download/

Installation is easy: just unzip the .zip file in the folder of your choice (eg C: \ util \ processing-3 \).

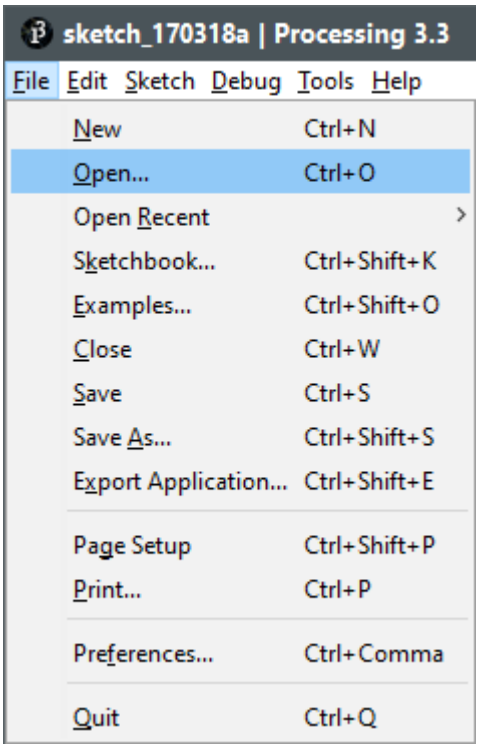
Now you need to run the Processing program (double click on the selected file in the figure):



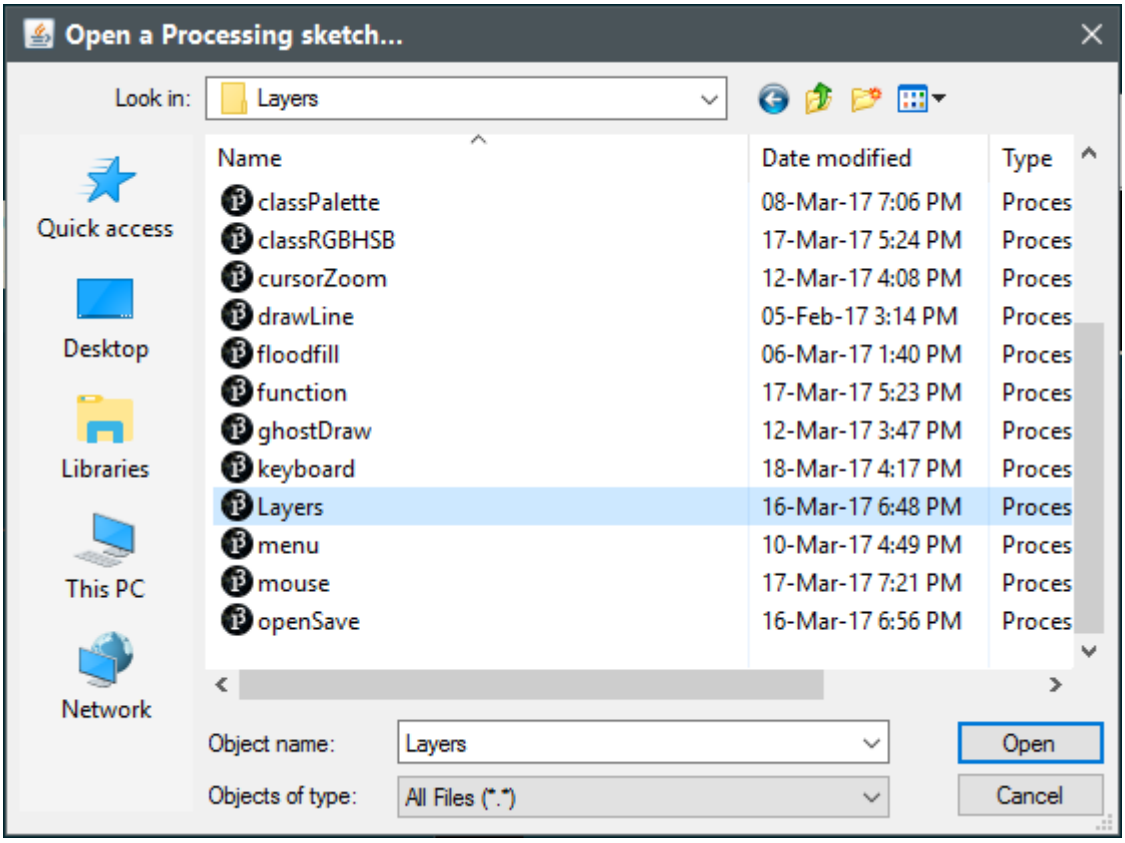
This opens the following window:



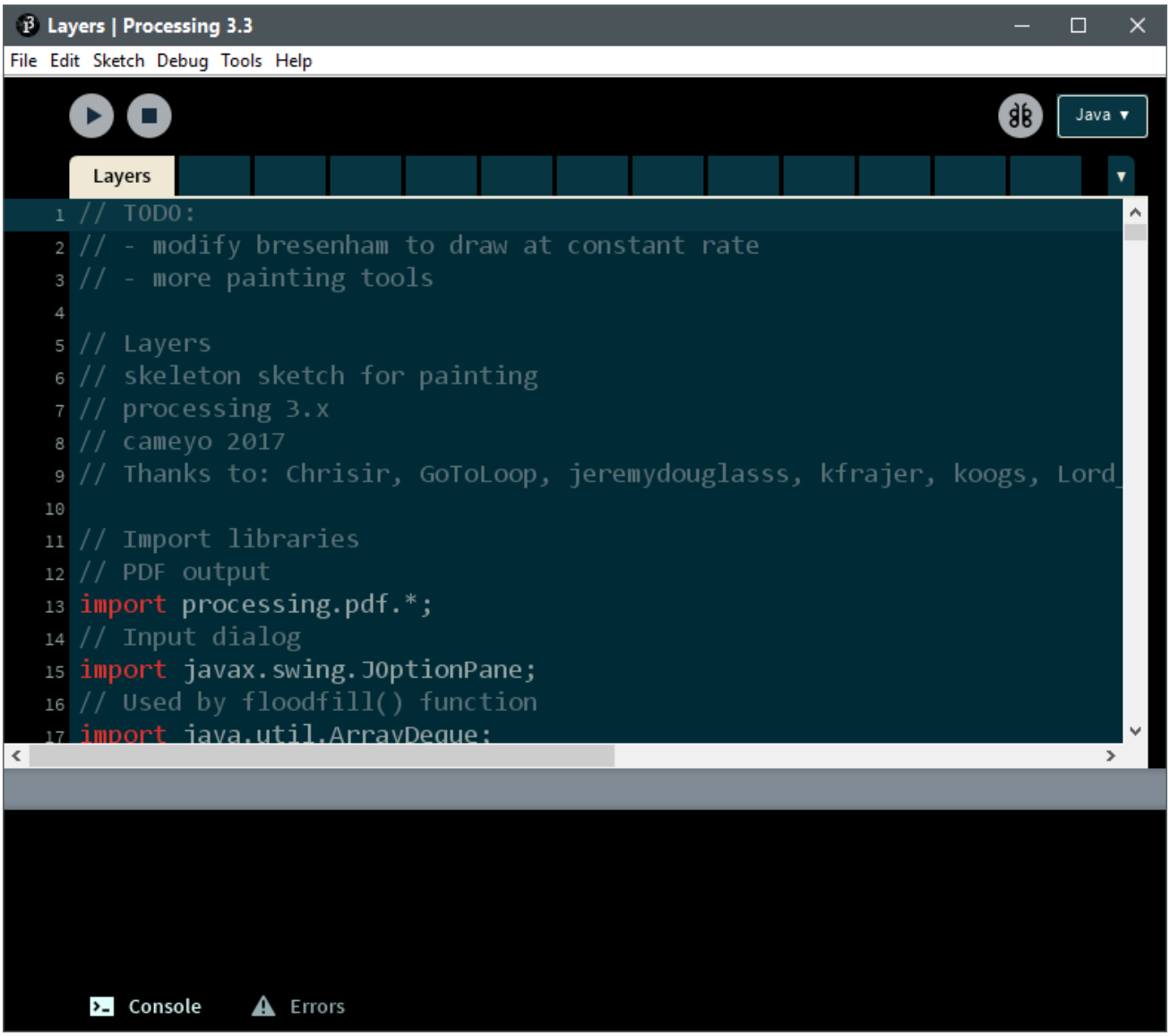
Select the command "Open .." from the "File" menu:



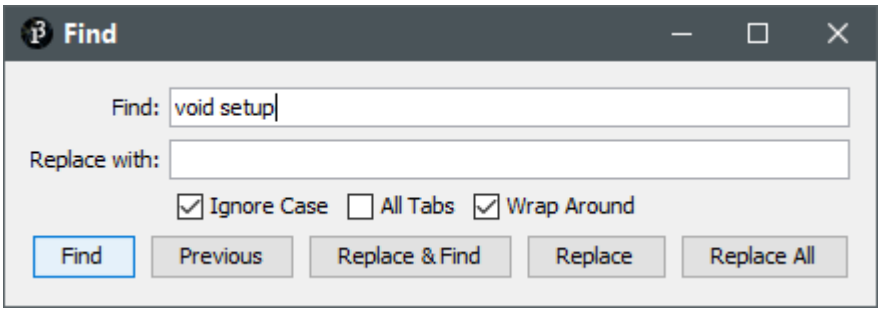
And Layers.pde open the file (found in the source folder where the program is installed Layers):



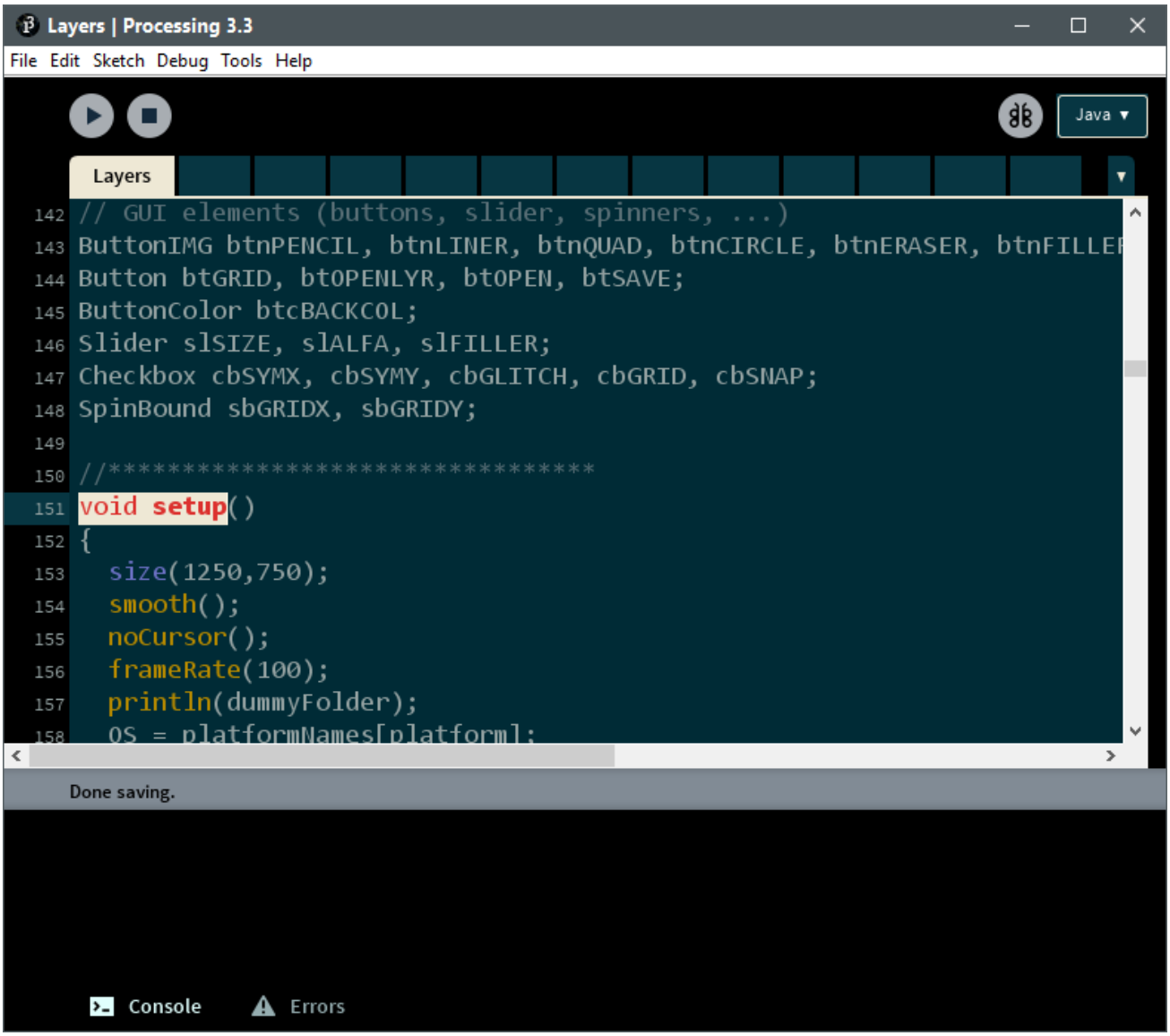
The following window appears:



Press CONTROL-F (or use the Edit -> Find menu) and in the window that appears enter the text "void setup" and press the "Find" button:

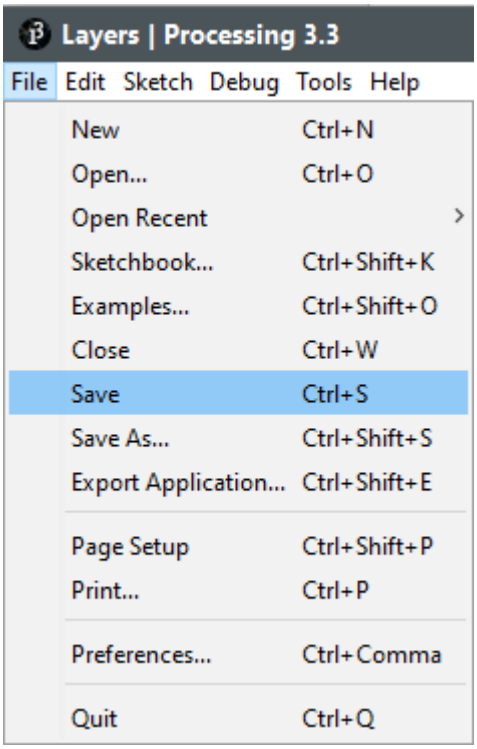


You should have the following situation:

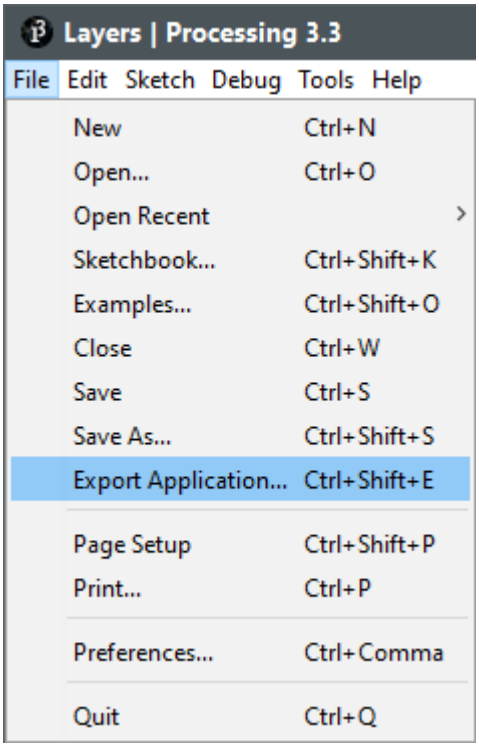


Now you need to change the line: **`size (1250.750);`**
Some examples:
If your monitor has a resolution of 1400x900, then the line should be:**`size (1350.850);`**
If your monitor has a resolution of 1280x800, then the line should be: **`size (1250.750);`**
If your monitor has a resolution of 1920x1400, then the line should be: **`size (1850.1350);`**
Then the two values to be inserted (width and height) should be less than at least 30 pixels with respect to the size of your monitor and should be multiples of 50 (for the grid alignment issues).

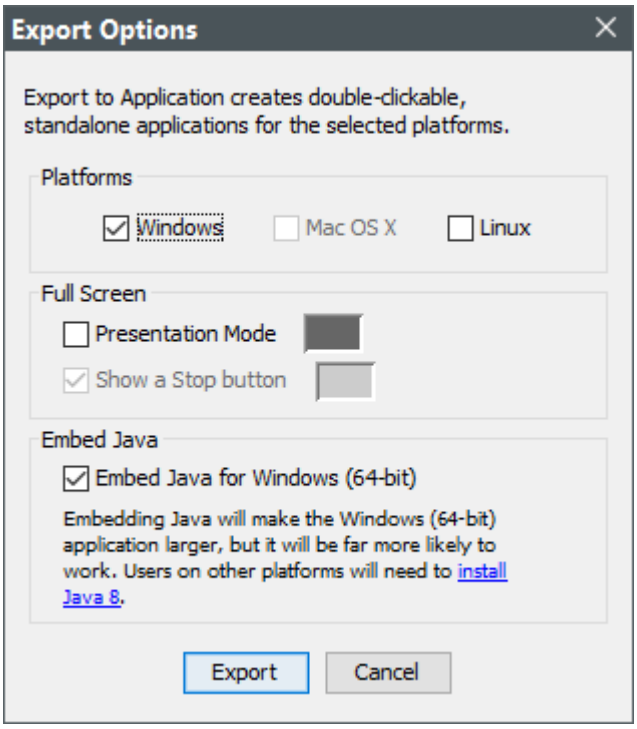
After changing the line, for example:**`size (1350.850);`** *(Remember to add ";" at the end of the line),* you must save the file by pressing CONTROL-S (or use the menu File -> Save):



Now to compile the selected program menu File -> Export Application:

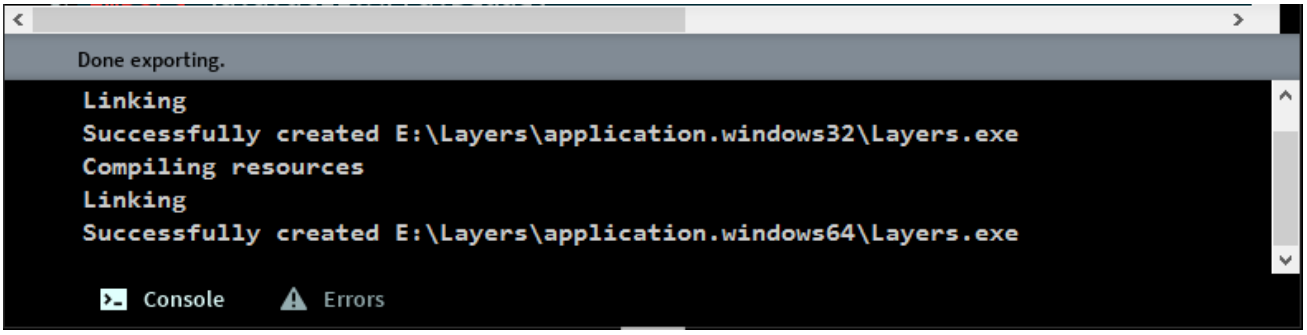


This window appears:

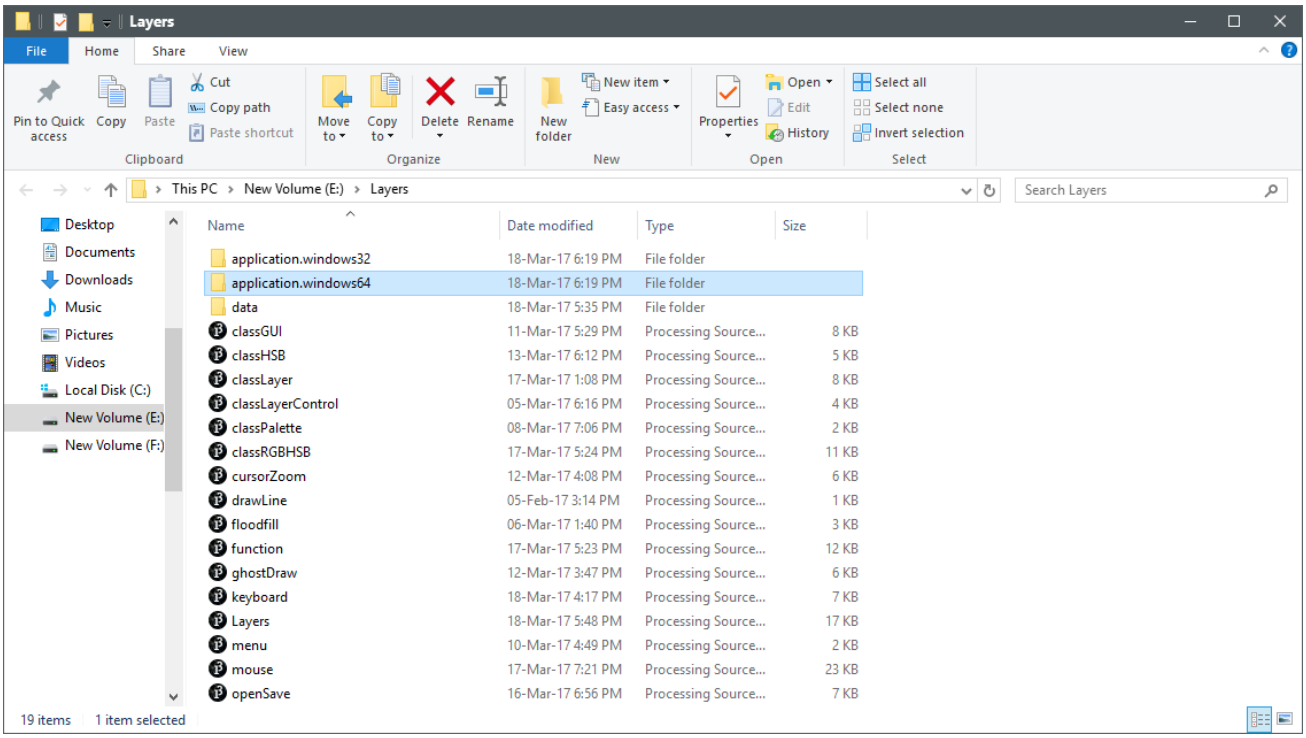


1) Select your system (Windows, Mac OS X or Linux).
2) Do not select "Presentation Mode".
3) Select "Embed Java ..."
4) Finally press the "Export" button.

If there are no errors (otherwise very probably have made some error in the insertion of the line to modify) the following message appears:



It also opens a Device Manager window that displays the location of the newly compiled program:



Inside the application.windows32 and application.windows64 folders are the programs (Layers.exe) for version 32 and 64 bits respectively.

You can rename these folders and move them where you want.

Then create on your desktop (desktop) Layers.exe a link to the program and begin to draw.