

# Python for Visual Designers

CooperType, Fall 2022

The screenshot shows a web browser window for the URL [www.drawbot.com/content/download.html](http://www.drawbot.com/content/download.html). The main content features a large, bold title "DrawBot". Below the title is a navigation bar with links for "DrawBot 3.126", "Forum", "Download", and "Index". A search bar is also present in the navigation bar. To the left of the main content area, there is a sidebar with links to "Shapes", "Colors", "Canvas", "Text", "Images", "Variables", "Quick Reference", "DrawBot App", "Download" (which is highlighted with a red oval), "DrawBot Icon", "Courseware", "History", and "Credits". To the right of the main content area, there are links for "Table of Contents", "Download", "Older Downloads", and "License". The main content area also includes sections for "Older Downloads" and "License". The "Download DrawBot" link is circled in red.

www.drawbot.com/content/download.html

# DrawBot

DrawBot 3.126 Forum Download Index

search

Shapes  
Colors  
Canvas  
Text  
Images  
Variables  
Quick Reference  
DrawBot App  
Download  
DrawBot Icon  
Courseware  
History  
Credits

Older Downloads

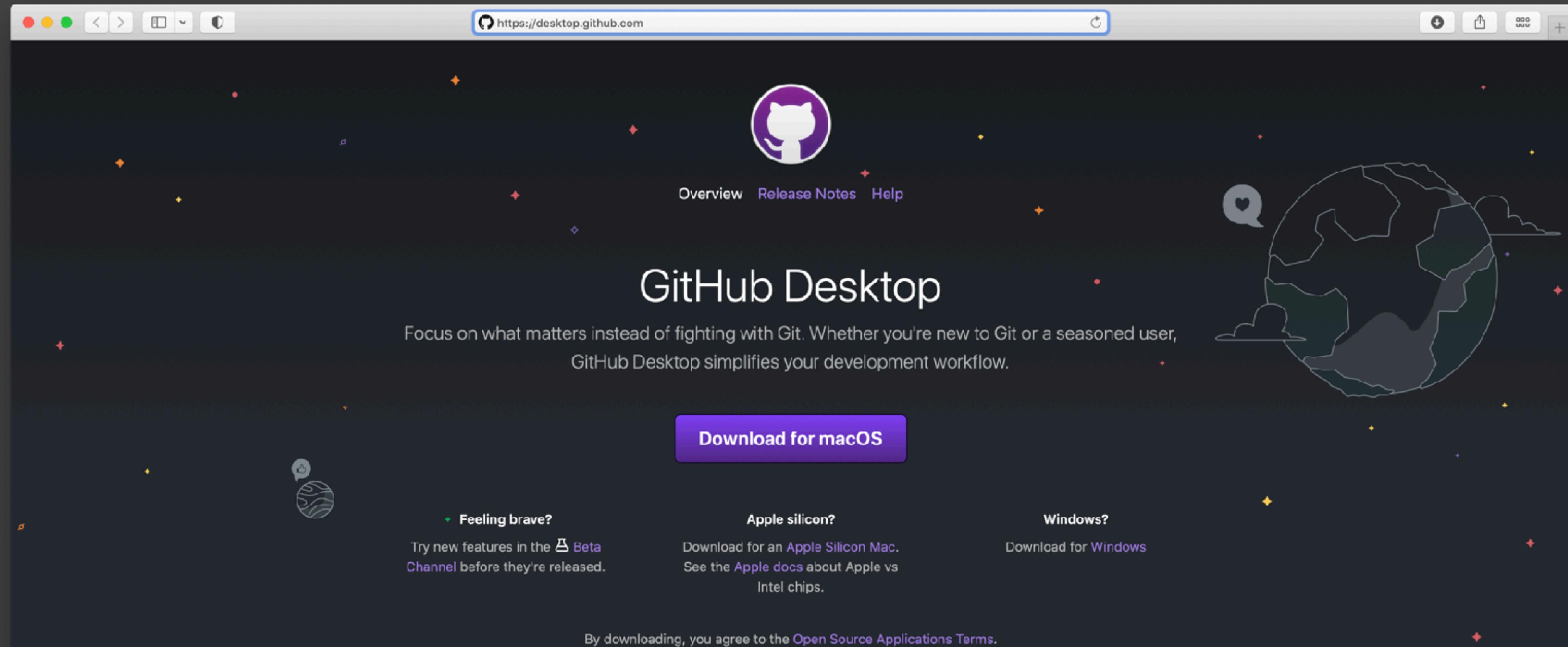
Version History  
Very Old Version History

License

The BSD License  
Copyright (c) 2003-2019 Just van Rossum, Erik van Blokland, Frederik Berlaen

All rights reserved.  
Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

# desktop.github.com



The screenshot shows the GitHub Desktop landing page at <https://desktop.github.com>. The page has a dark background with a purple GitHub logo at the top. Below the logo, there are links for "Overview", "Release Notes", and "Help". The main title "GitHub Desktop" is prominently displayed in large white font. A subtitle below it reads: "Focus on what matters instead of fighting with Git. Whether you're new to Git or a seasoned user, GitHub Desktop simplifies your development workflow." To the right of the text is a stylized globe icon with a heart and a speech bubble. A large purple button labeled "Download for macOS" is centered below the subtitle. Below the download button, there are three sections: "Feeling brave?", "Apple silicon?", and "Windows?". Each section contains a link to download the software for that specific platform.

https://desktop.github.com

Overview Release Notes Help

# GitHub Desktop

Focus on what matters instead of fighting with Git. Whether you're new to Git or a seasoned user, GitHub Desktop simplifies your development workflow.

Download for macOS

Feeling brave?

Try new features in the **Beta Channel** before they're released.

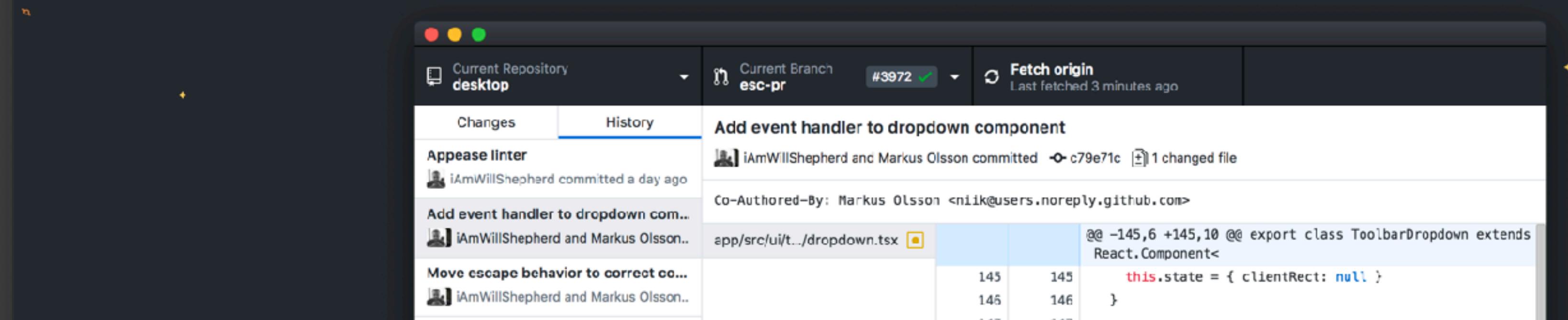
Apple silicon?

Download for an Apple Silicon Mac. See the [Apple docs about Apple vs Intel chips](#).

Windows?

Download for Windows

By downloading, you agree to the [Open Source Applications Terms](#).



Intros!

# slack!

**#general, #show-tell, #tech-support**

# Syllabus!

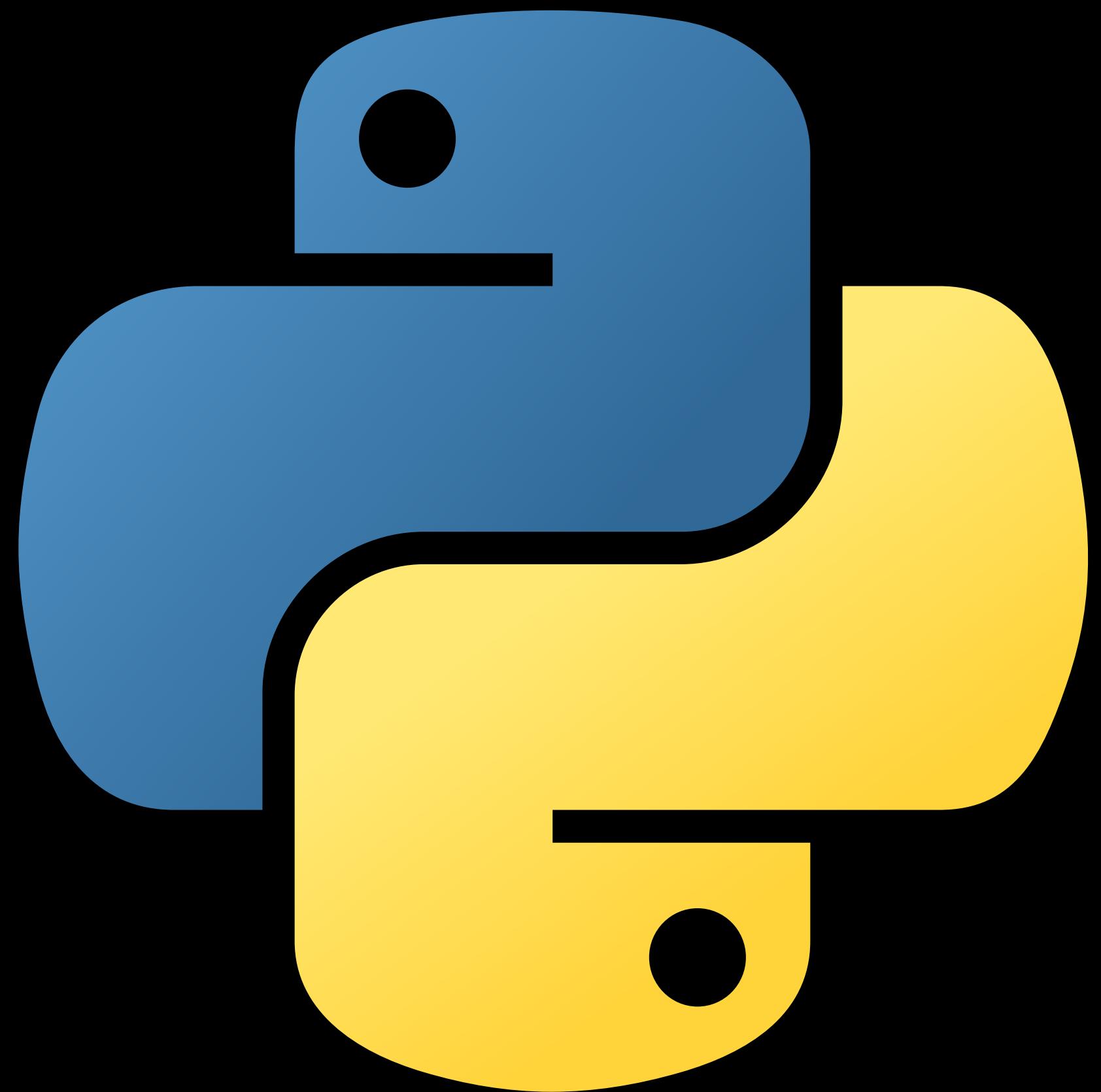
Github or Dropbox

**zine!**

**Sessions!**

- 1. Loops & Shapes**
- 2. Object Types & Canvas**
- 3. Text & Image**
- 4. Layout** 

*Daylight Saving  
Time Ends*
- 5. Animation**
- 6. Follow-up session**



Python



Drawbot

Python is a high-level, general-purpose programming language that emphasizes readability with the use of significant indentation. Its object-oriented approach aims to help programmers write clear code for small- and large-scale projects.



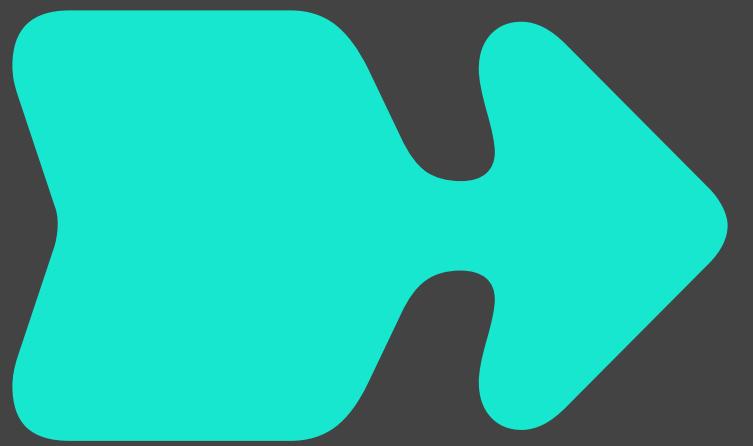
The image shows a terminal window titled "Untitled 5" with the command "# \* <". In the first line, the command "import this" is entered. Below it, the text of the Zen of Python by Tim Peters is displayed. The text consists of 19 numbered principles, each starting with a bolded word or phrase followed by a statement.

```
1 import this

The Zen of Python, by Tim Peters

Beautiful is better than ugly.
Explicit is better than implicit.
Simple is better than complex.
Complex is better than complicated.
Flat is better than nested.
Sparse is better than dense.
Readability counts.
Special cases aren't special enough to break the rules.
Although practicality beats purity.
Errors should never pass silently.
Unless explicitly silenced.
In the face of ambiguity, refuse the temptation to guess.
There should be one-- and preferably only one --obvious way to do it.
Although that way may not be obvious at first unless you're Dutch.
Now is better than never.
Although never is often better than *right* now.
If the implementation is hard to explain, it's a bad idea.
If the implementation is easy to explain, it may be a good idea.
Namespaces are one honking great idea -- let's do more of those!
```

**DrawBot is a powerful,  
free application for  
MacOS that invites you  
to write simple Python  
scripts to generate two-  
dimensional graphics.**



**Drawbot is not  
Processing/p5.js**

**Nuts &  
Bolts**

The Big  
Questions

How do the tools  
you use manifest  
themselves in the  
things you create?

# Adobe InDesign CC 2020

Adobe InDesign 2020

\*miramonte-djr-indd.indd @ 54% [GPU Preview]

72 0 72 144 216 288 360 432 504 576 648 720 792 864 936 1008 1080 1152 1224 1296

POMFRET Specimens djr.com | 2

# BARRANCA STOPBACK PAPERLIKE SUFFICING MOONTIDE BILSKIRNIR

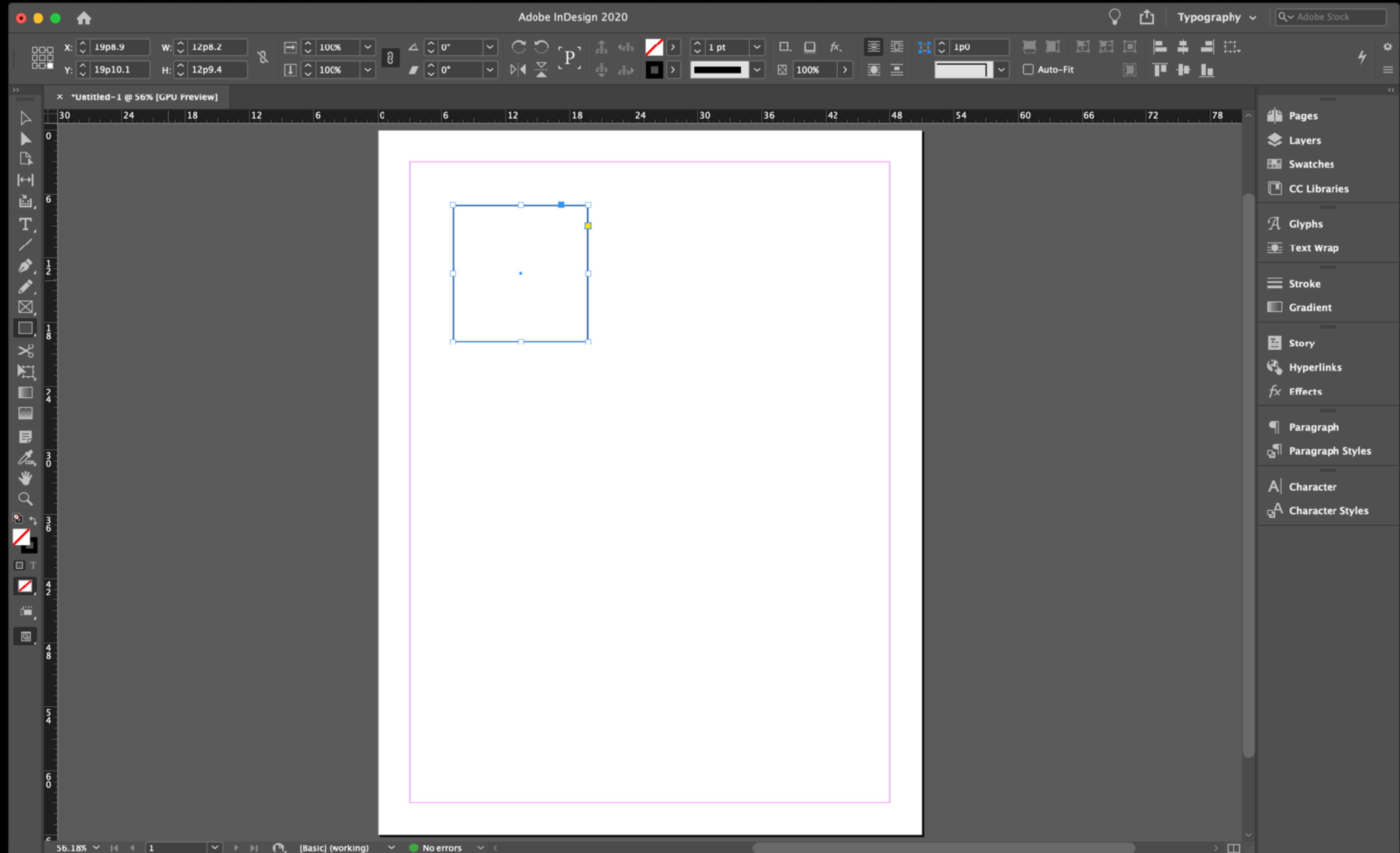
POMFRET Specimens djr.com | 3

## Pomfret

Pomfret is a set of titling capitals with Arts & Crafts flair started in 2018 and released in 2020. After years of encouragement from Roger Black, I began the design as an homage to the work of Bertram Goodhue, famous as the architect of the Nebraska State Capitol as well as the typeface Cheltenham. The skeletons of the letters were initially inspired by the tightly-spaced capitals (especially the restrained R and K) found on his cover for The Knight Errant. Pomfret moves beyond its source material, adopting a more contemporary finish with discretionary ligatures, razor-thin hairlines, and restrained, bracketed serifs.

Pages Layers Swatches CC Libraries Glyphs Text Wrap Stroke Gradient Story Hyperlinks Effects Paragraph Paragraph Styles Character Styles

When do interfaces  
help? When do they  
just get in the way?





```
28... VerticalLayoutConstraints="FlexibleDimension FixedDimension FlexibleDimension"
... GradientFillStart="0 0" GradientFillLength="0" GradientFillAngle="0" GradientStrokeStart="0 0"
... GradientStrokeLength="0" GradientStrokeAngle="0" ItemLayer="ucb" Locked="false"
... LocalDisplaySetting="Default" GradientFillHiliteLength="0" GradientFillHiliteAngle="0"
... GradientStrokeHiliteLength="0" GradientStrokeHiliteAngle="0"
... AppliedObjectStyle="ObjectStyle[1D, [Normal Graphics Frame], Transform="1 0 0 1 0 0"
... ParentInterfaceChangeCount="" TargetInterfaceChangeCount="" LastUpdatedInterfaceChangeCount="">
29    <Properties>
30        <PathGeometry>
31            <GeometryPathType PathOpen="false">
32                <PathPointArray>
33                    <PathPointType Anchor="85.2 -310.8" LeftDirection="85.2 -310.8"
... RightDirection="85.2 -310.8" />
34                    <PathPointType Anchor="85.2 -158.4" LeftDirection="85.2 -158.4"
... RightDirection="85.2 -158.4" />
35                    <PathPointType Anchor="236.40000000000003 -158.4"
... LeftDirection="236.40000000000003 -158.4" RightDirection="236.40000000000003 -158.4" />
36                    <PathPointType Anchor="236.40000000000003 -310.8"
... LeftDirection="236.40000000000003 -310.8" RightDirection="236.40000000000003 -310.8" />
37                </PathPointArray>
38            </GeometryPathType>
39        </PathGeometry>
40    </Properties>
41    <FrameFittingOption AutoFit="false" LeftCrop="0" TopCrop="0" RightCrop="0"
... BottomCrop="0" FittingOnEmptyFrame="None" FittingAlignment="CenterAnchor" />
42        <ObjectExportOption AltTextSourceType="SourceXMLStructure"
... ActualTextSourceType="SourceXMLStructure" CustomAltText="$ID/" CustomActualText="$ID/"
... ApplyTagType="TagFromStructure" ImageConversionType="JPEG" ImageExportResolution="Ppi300"
... GIFOptionsPalette="AdaptivePalette" GIFOptionsInterlaced="true" JPEGOptionsQuality="High"
... JPEGOptionsFormat="BaselineEncoding" ImageAlignment="AlignLeft" ImageSpaceBefore="0"
```

```
rect( 85,  
      236,  
      200,  
      100)
```

```
010101000101011  
101010101011100  
010101000101011  
101010101011100  
010101000101011  
101010101011100  
010101000101011  
101010101011100
```



```
PathOpen="false">  
    <PathPointArray>  
        <PathPointType  
            Anchor="85.2 -310.8"  
            LeftDirection="85.2  
            -310.8"  
            RightDirection="85.2  
            -310.8" />  
        <PathPointType  
            Anchor="85.2 -158.4"  
            LeftDirection="85.2  
            -158.4"  
            RightDirection="85.2  
            -158.4" />  
        <PathPointType  
            Anchor="236.40000000000003  
            000003 -158.4"  
            LeftDirection="236.4  
            000000000003  
            -158.4"  
            RightDirection="236.  
            40000000000003  
            -158.4" />  
        <PathPointType  
            Anchor="236.40000000000003  
            000003 -310.8"  
            LeftDirection="236.4  
            000000000003  
            -310.8"  
            RightDirection="236.  
            40000000000003  
            -310.8" />  
    </PathPointArray>
```



```
rect( 85,  
      236,  
      200,  
      100)
```



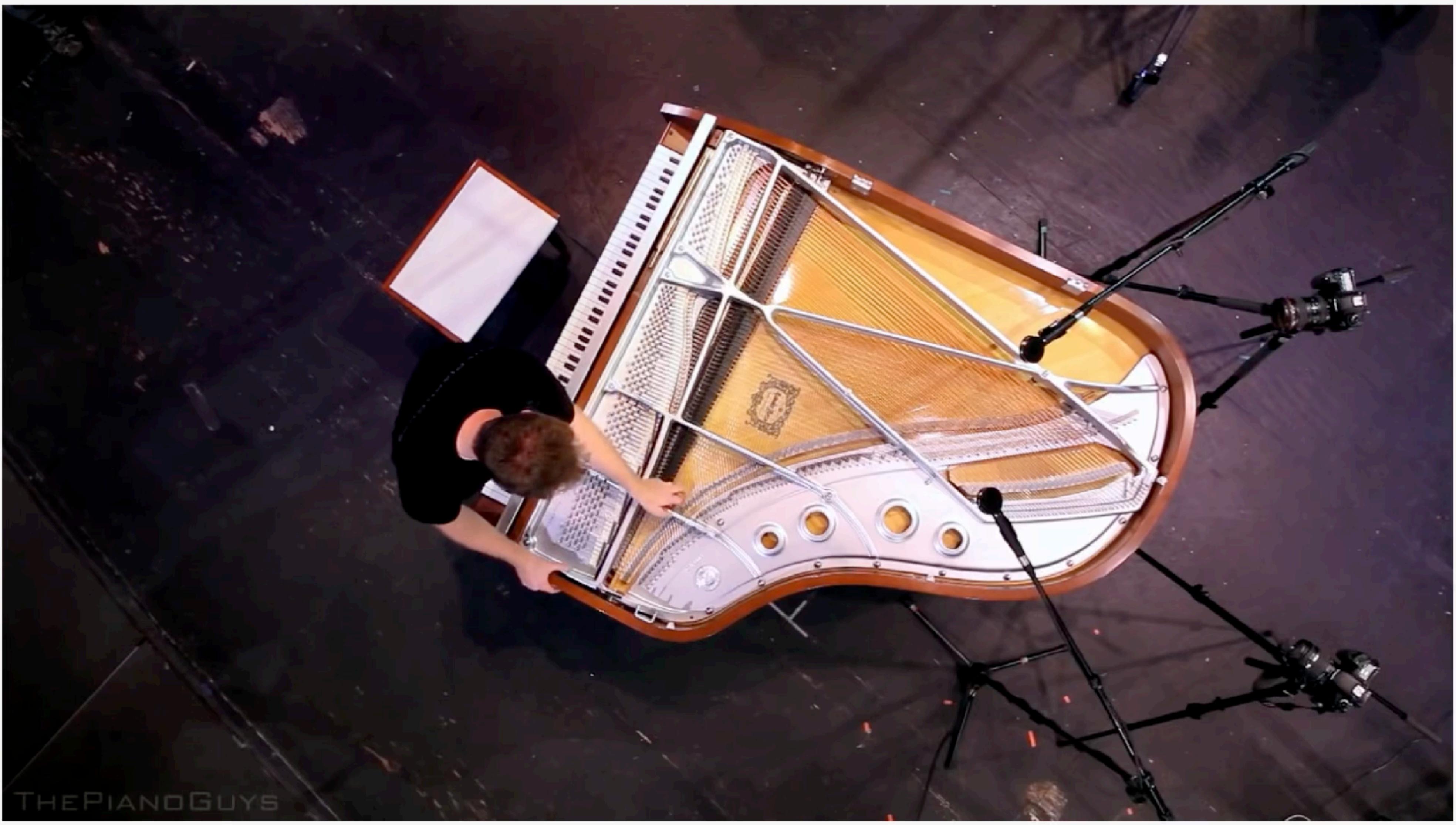
# our class











THEPIANO GUYS

#thepianoguys #pianocello

One Direction - What Makes You Beautiful (5 Piano Guys, 1 piano) - The Piano Guys

78,858,706 views • Jul 18, 2012

754K

DISLIKE

SHARE

CLIP

SAVE

...

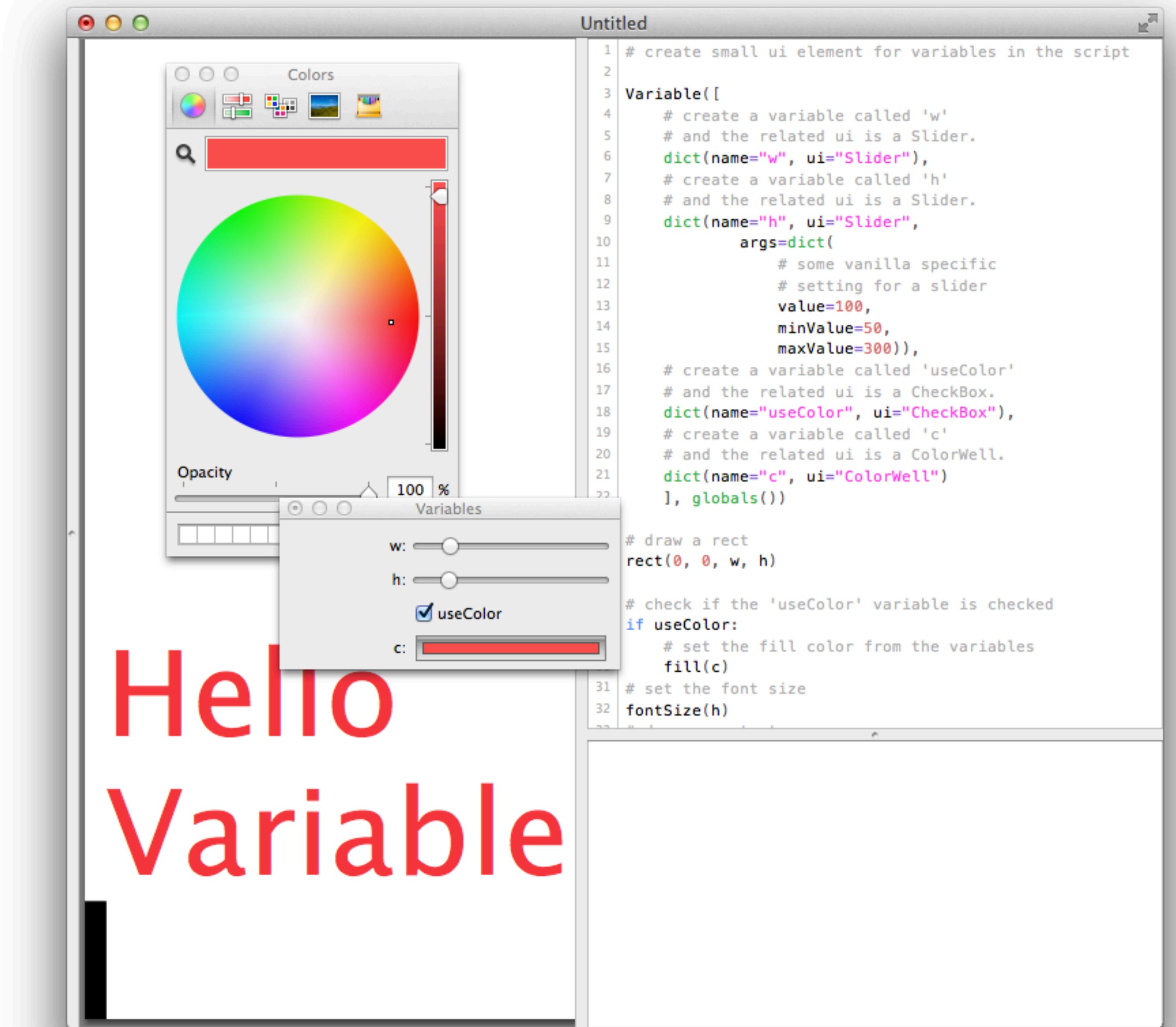


The Piano Guys

7.02M subscribers

SUBSCRIBE







**Mezerg**  
@mezerg\_

WATERMELON 🍉 🍉  
Using the [@Playtronica](#)



2:32 PM · Sep 2, 2020 · [Twitter for iPhone](#)

```
euler1.arnoldc *
```

```
40    ENOUGH TALK
41    BULLSHIT
42    GET YOUR ASS TO MARS modulo5
43        DO IT NOW modulo n 5
44    GET TO THE CHOPPER divisibleBy5
45        HERE IS MY INVITATION modulo5
46    YOU ARE NOT YOU YOU ARE ME 0
47    ENOUGH TALK
48    BECAUSE I'M GOING TO SAY PLEASE divisibleBy5
49        GET TO THE CHOPPER sum
50            HERE IS MY INVITATION sum
51            GET UP n
52    ENOUGH TALK
53        YOU HAVE NO RESPECT FOR LOGIC
54        YOU HAVE NO RESPECT FOR LOGIC
55    CHILL
56    TALK TO THE HAND "sum:"
57    TALK TO THE HAND sum
58    YOU HAVE BEEN TERMINATED
59
60    LISTEN TO ME VERY CAREFULLY modulo
61    I NEED YOUR CLOTHES YOUR BOOTS AND YOUR MOTORCYCLE dividend
62    I NEED YOUR CLOTHES YOUR BOOTS AND YOUR MOTORCYCLE divisor
63    GIVE THESE PEOPLE AIR
64        HEY CHRISTMAS TREE quotient
65        YOU SET US UP 0
66        HEY CHRISTMAS TREE remainder
67        YOU SET US UP 0
68        HEY CHRISTMAS TREE product
69        YOU SET US UP 0
70    GET TO THE CHOPPER quotient
71        HERE IS MY INVITATION dividend
72        HE HAD TO SPLIT divisor
73    ENOUGH TALK
74    GET TO THE CHOPPER product
75        HERE IS MY INVITATION divisor
76        YOU'RE FIRED quotient
77    ENOUGH TALK
78    GET TO THE CHOPPER remainder
79        HERE IS MY INVITATION dividend
80        GET DOWN product
81    ENOUGH TALK
82    I'LL BE BACK remainder
83    HASTA LA VISTA, BABY
84
```

HAI 1.2  
CAN HAS STDIO?  
PLZ OPEN FILE "LOLCATS.TXT"?  
AWSUM THX

VISIBLE FILE  
O NOES  
INVISIBLE "ERROR!"

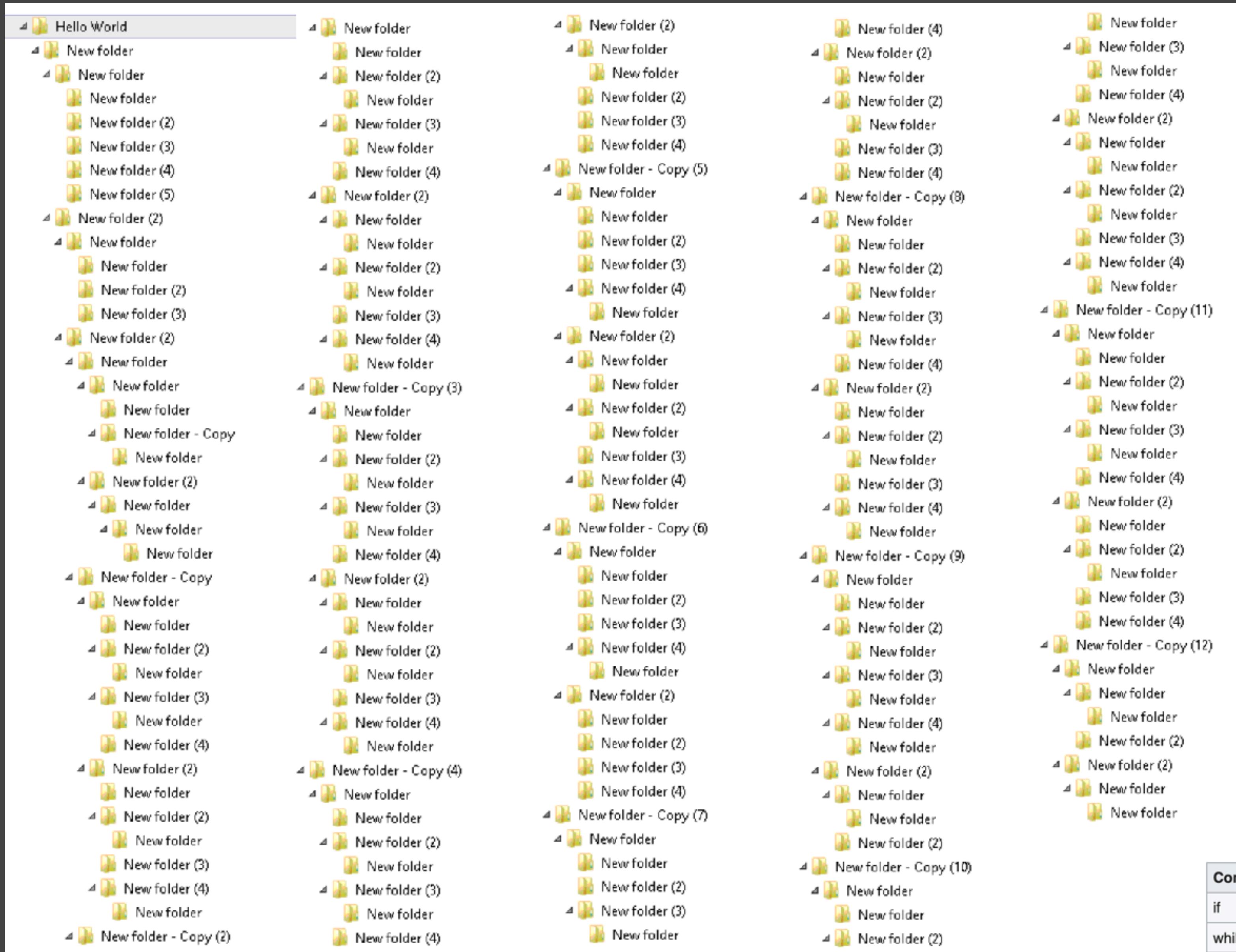
KTHXBYE

HAI 1.0  
CAN HAS STDIO?  
I HAS A VAR  
IM IN YR LOOP

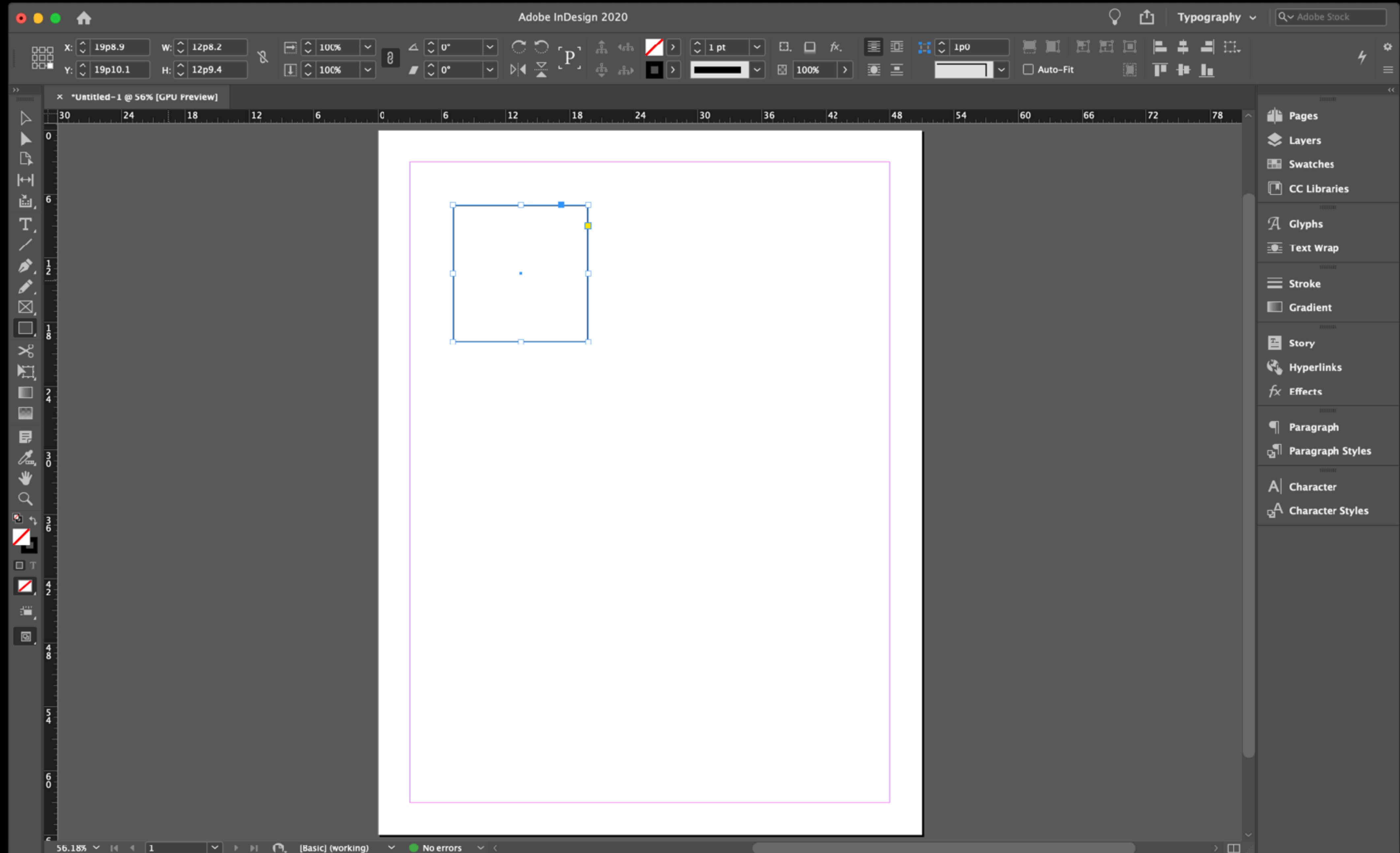
UP VAR!!1  
VISIBLE VAR

IZ VAR BIGGER THAN 10? KTHX  
IM OUTTA YR LOOP

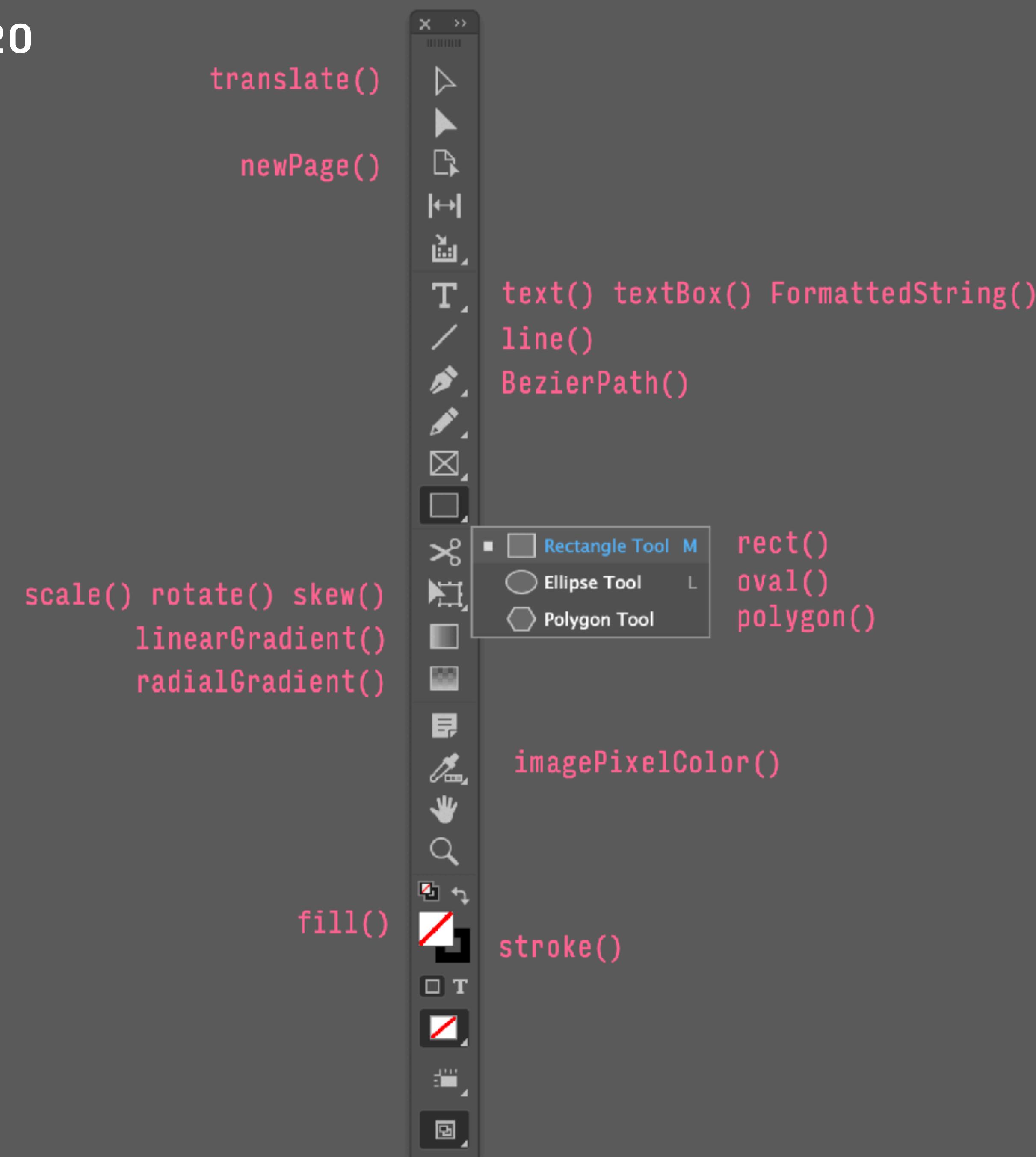
KTHXBYE



Command	# of Folders	Details
if	0 folders	Second sub-folder holds expression, third holds list of commands
while	1 folder	Second sub-folder holds expression, third holds list of commands
declare	2 folders	Second sub-folder holds type, third holds var name (in number of folders)
let	3 folders	Second holds var name (in number of folders), third holds expression
print	4 folders	Second sub-folder holds expression
input	5 folders	Second sub-folder holds var name



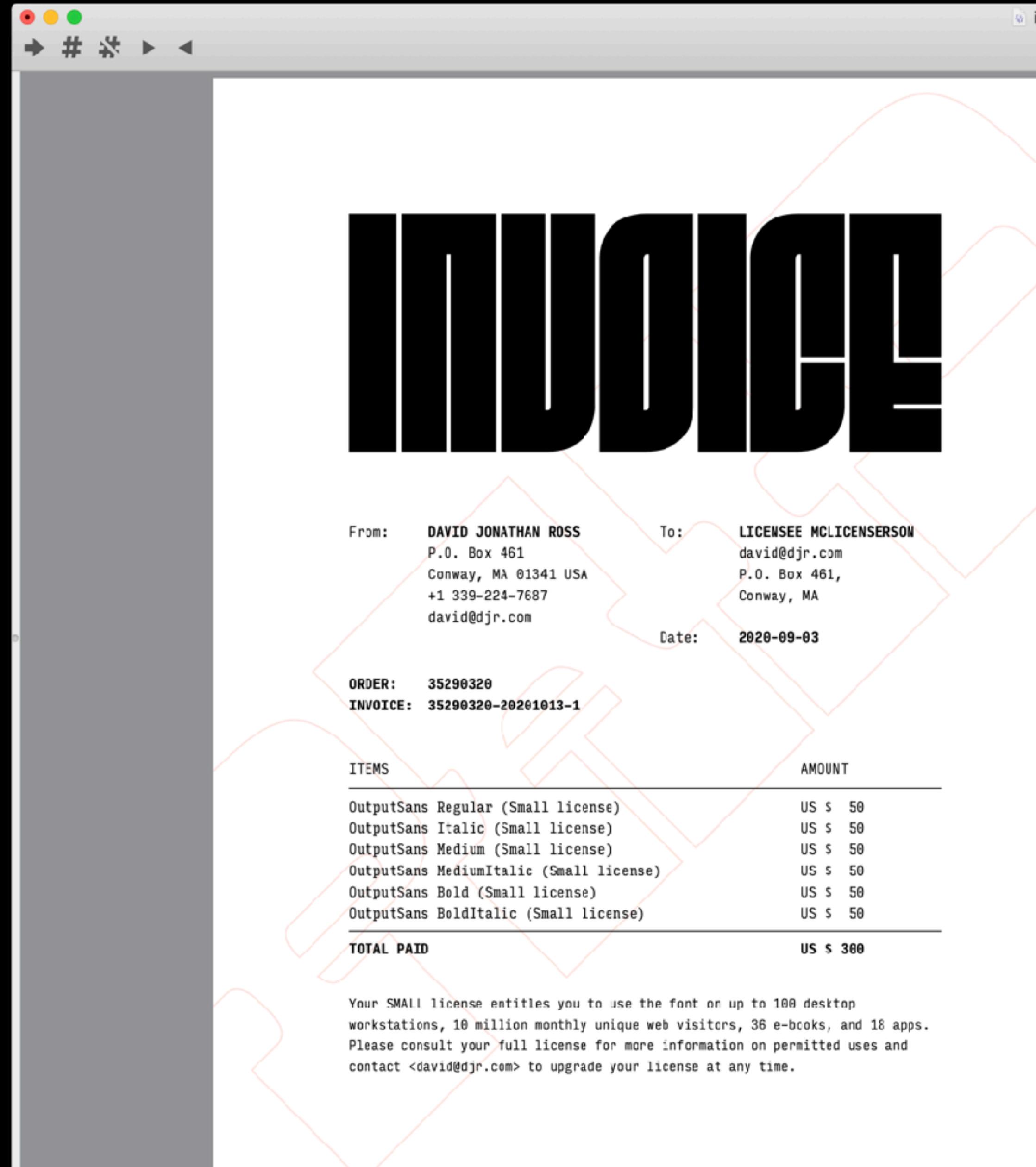
# Adobe InDesign CC 2020



**What place does  
automation have in  
your workflow?**

# Invoices

Yours Truly



```
invoice.py
```

```
Q~ discount
```

```
    *digitDiff + price

    if price == 'None':
        productLine = ''
    productLine += '\r'
    productInfo.append(productLine,
font=textFont)

if data.get('discount'):
    productInfo.append('Discount: %s\tUS $ - %s\r' %(str(data['discount']['name']),
str(data['discount']['amount-saved'])),
font=inputFont, lineHeight=textLineHeight*2)

if paid:
    OutputSans-Regular
    OutputSans-Italic
    OutputSans-Medium
    OutputSans-MediumItalic
    OutputSans-Bold
    OutputSans-BoldItalic
```

Lowlands Festival 2018

Hansje van Halem, Just van Rossum



# Lowlands Festival 2018

Hansje van  
Halem, Just  
van Rossum

[hansje.net](http://hansje.net)



# Typographics 2015



# Typographics 2018





Adidas N3XT L3V3L

Grand Army

Andy Clymer



Gradient Typesetter

Gradient Typesetter 1.1

Left Side Right Side

Weight: 225      Weight: 1,000  
Width: 20      Width: 600

Skew      Size: 100      Leading: 80

Weight/Width Curve

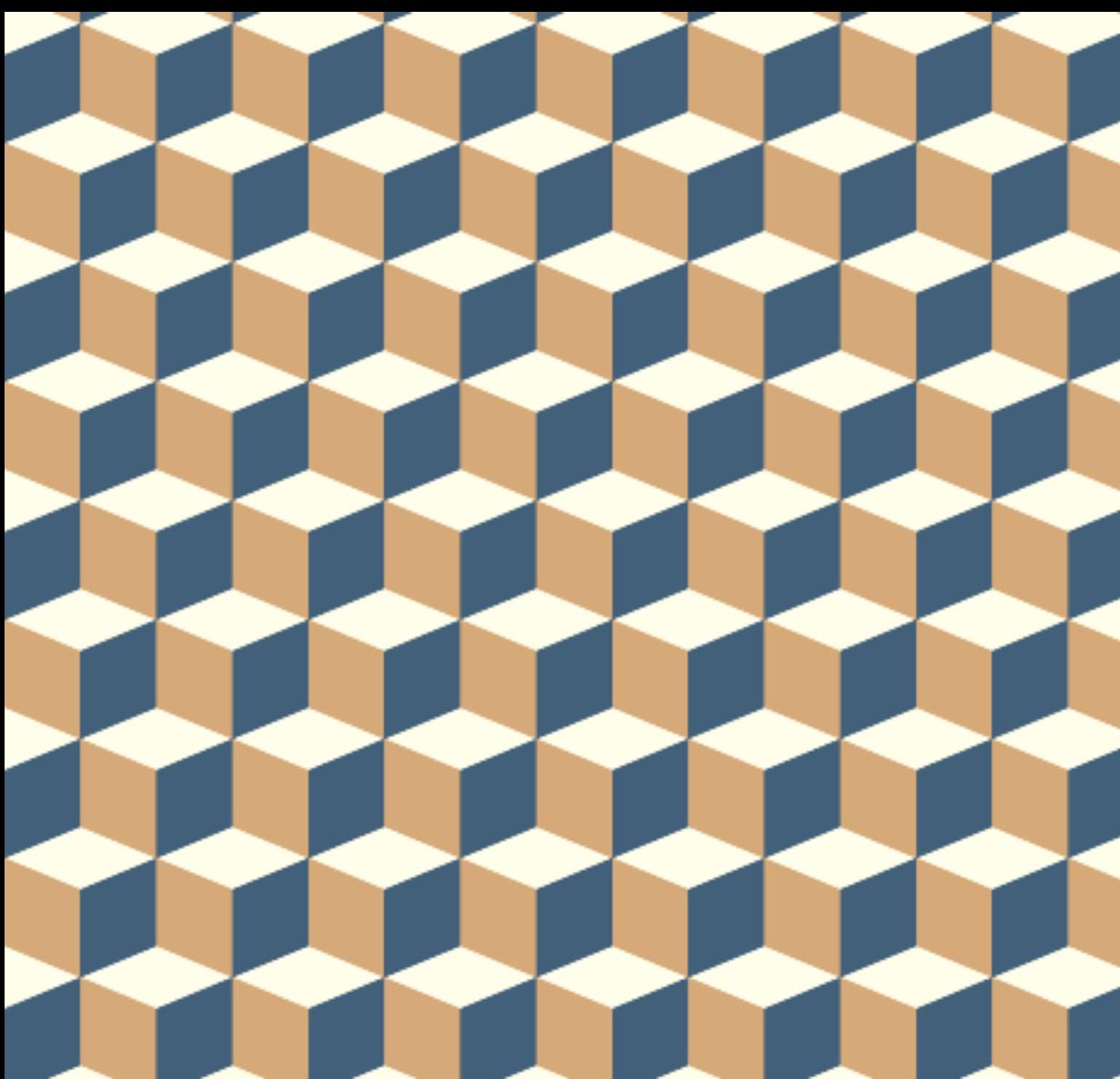
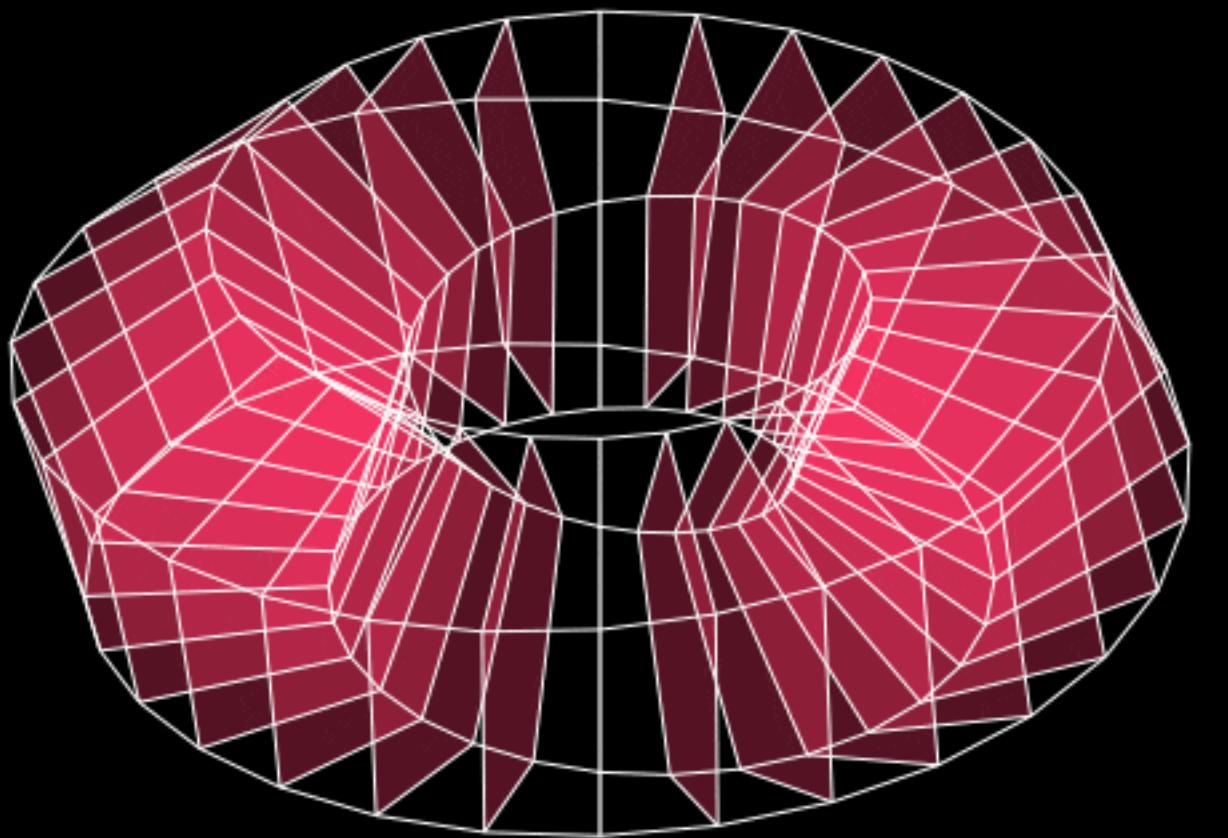
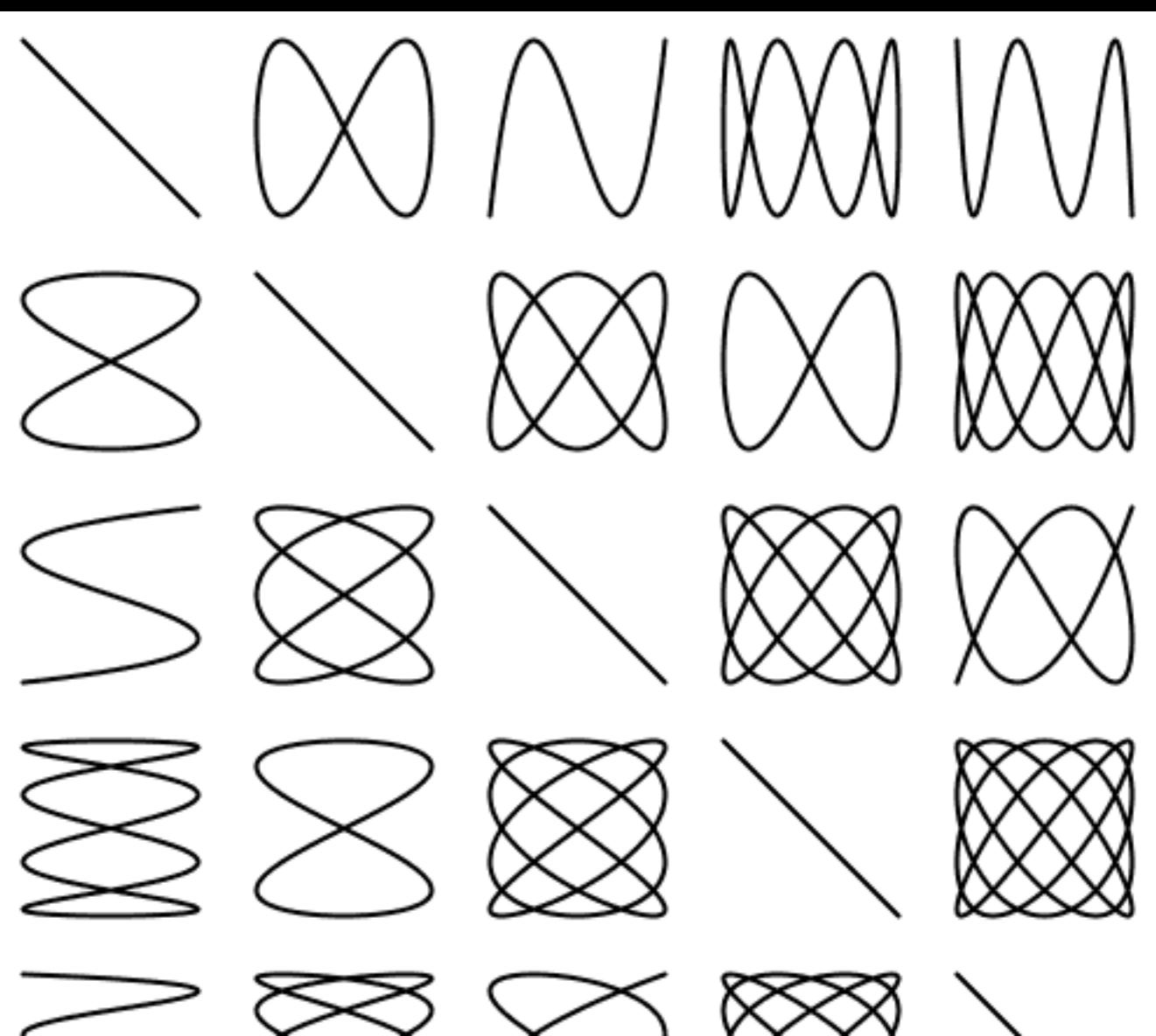
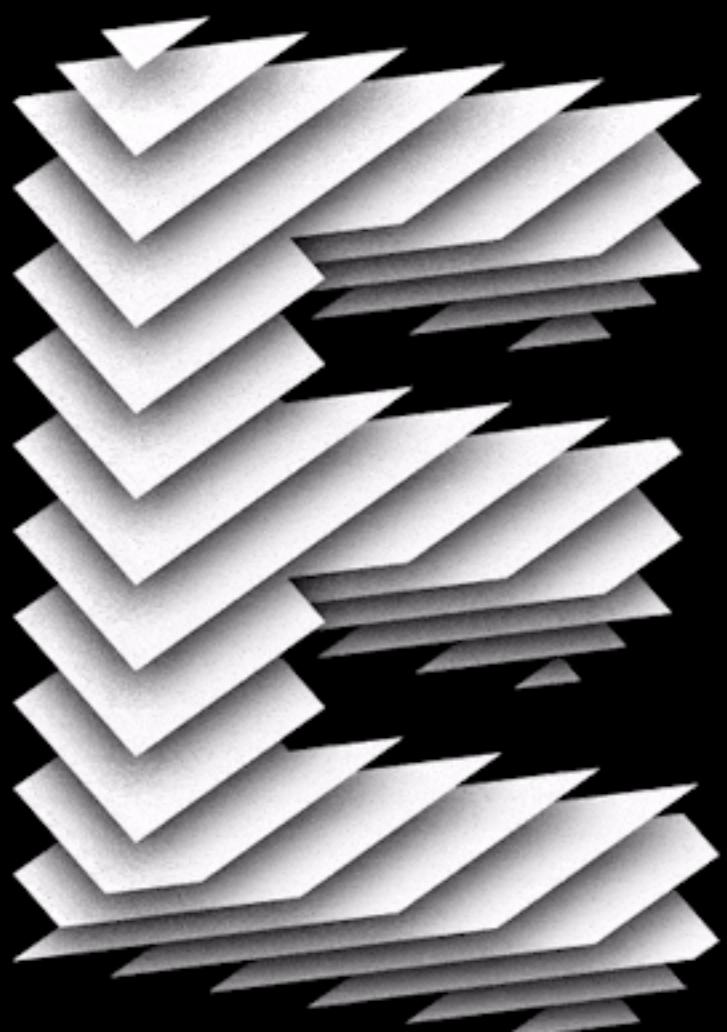
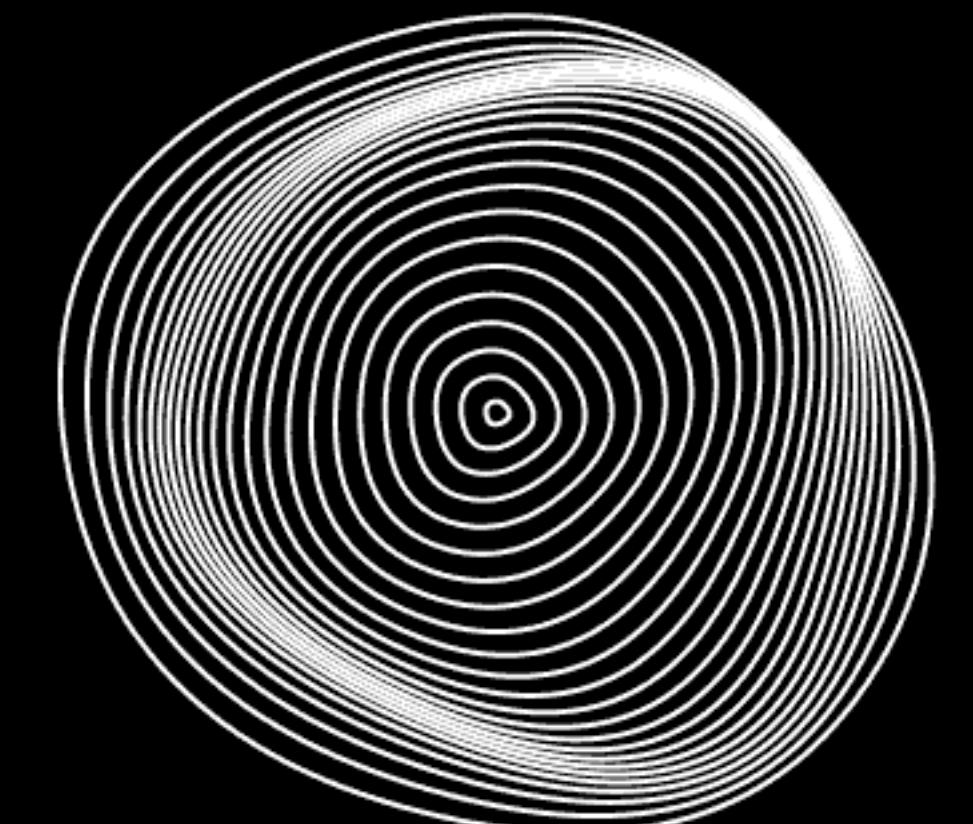
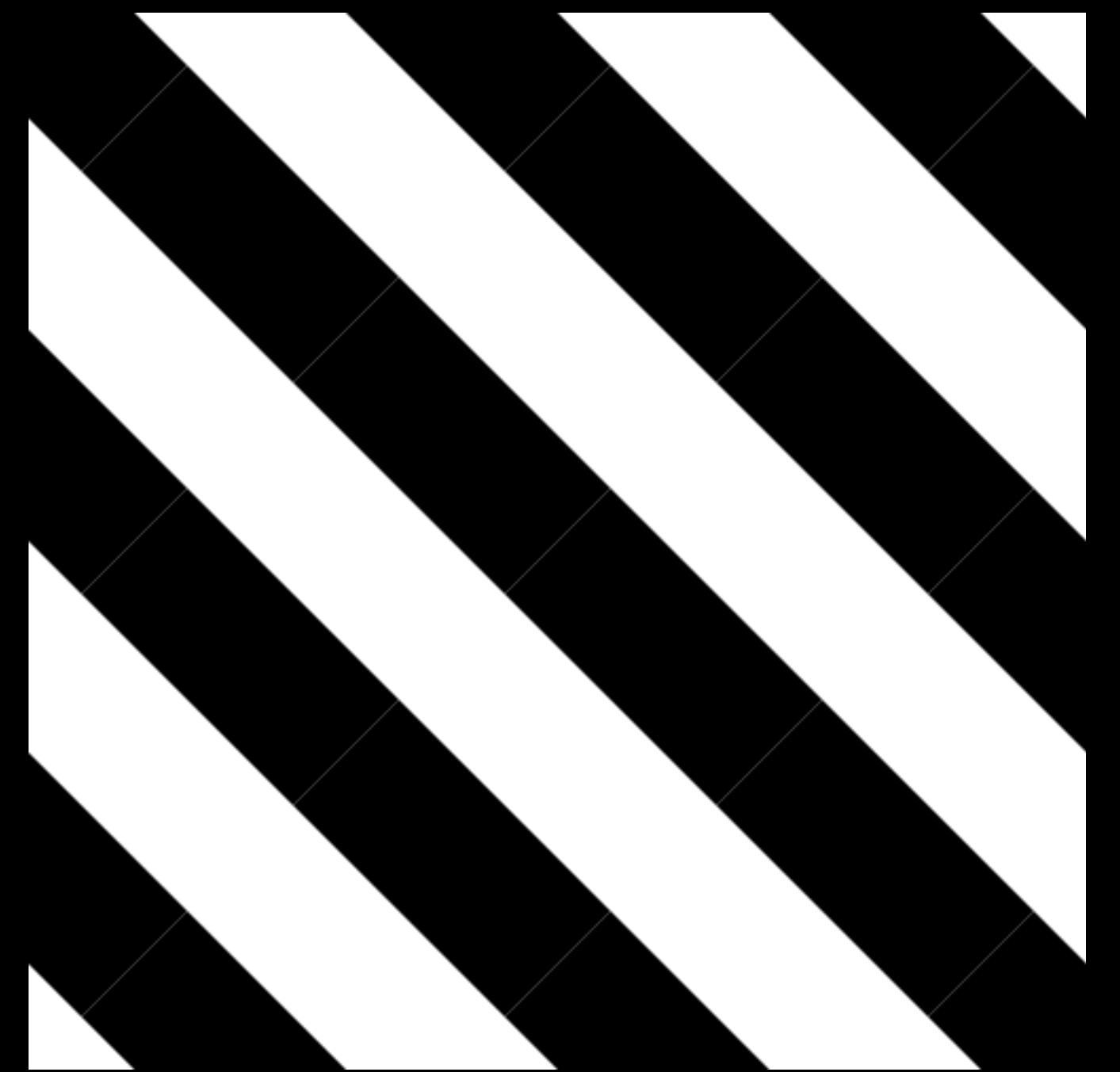
?

Save Image

grandarmy.com/projects/n3xt-l3v3l

Daily Drawbot

[dailydrawbot.tumblr.com](http://dailydrawbot.tumblr.com)



Just van Rossum



# Caribbean Mental Health Foundation

## Agyei Archer

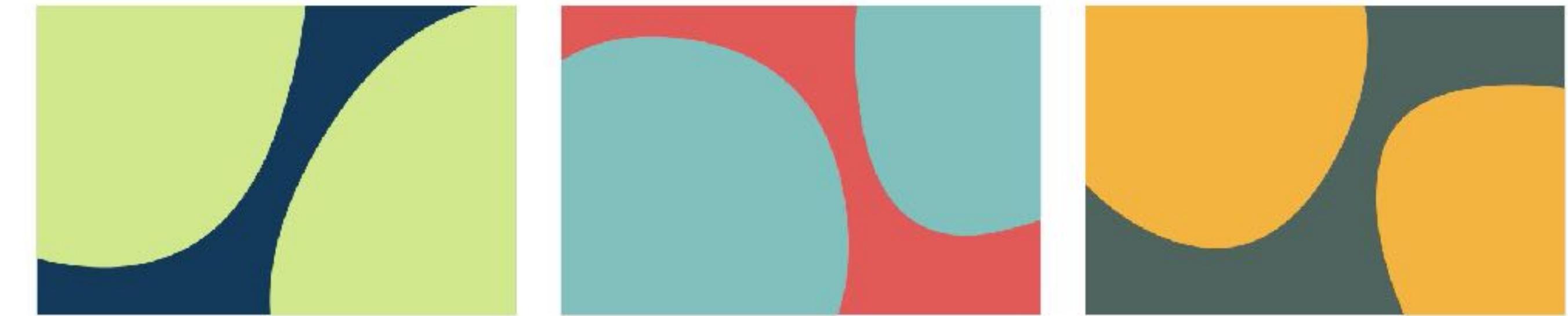


## What's Going On?

ANXIETY



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[CARIBBEANMENTALHEALTH.ORG](http://CARIBBEANMENTALHEALTH.ORG)



**One last thing:**

**Nobody gets  
left behind.**

**Alright, let's get  
coding already!**