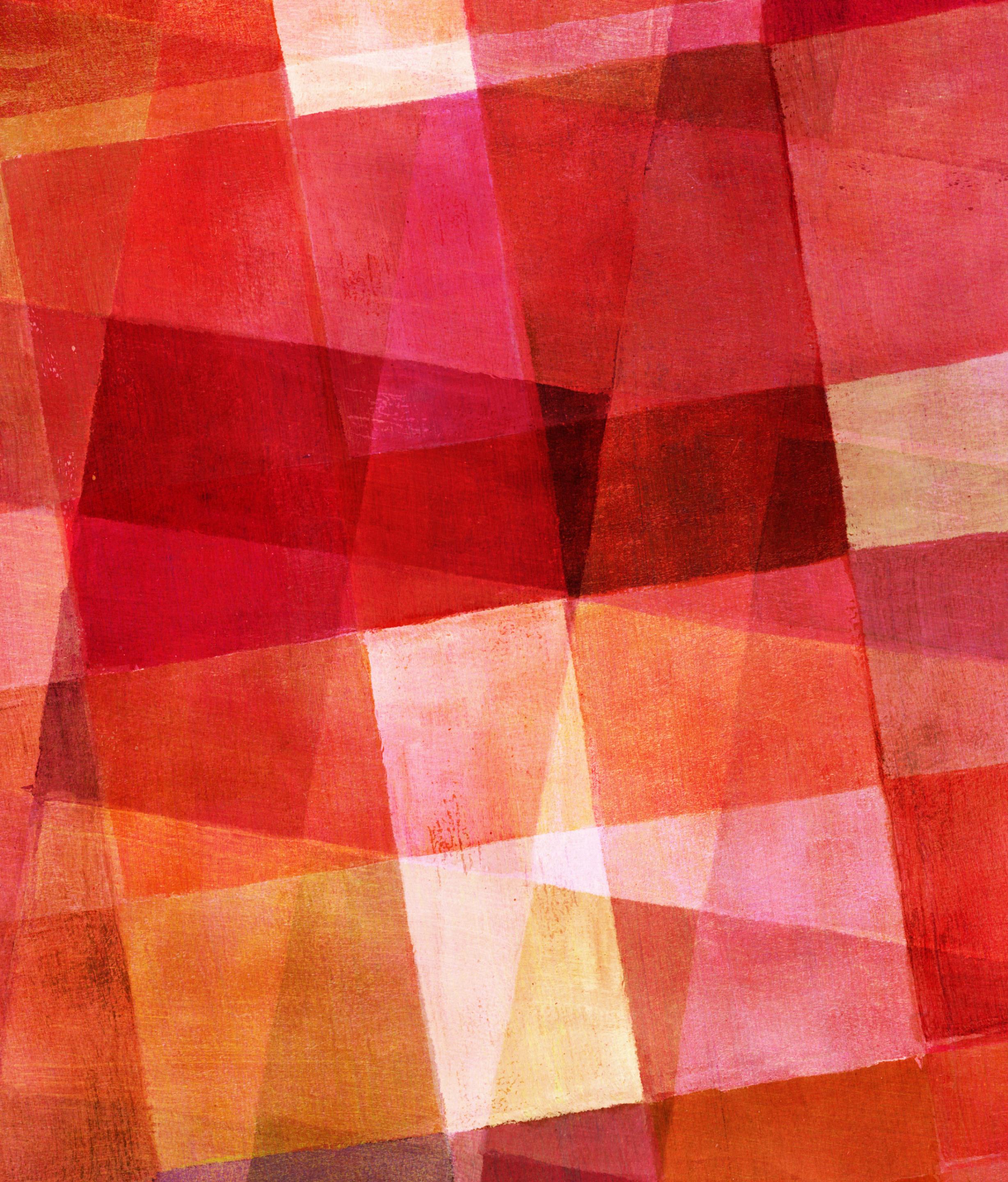




PYTHON (FOR KIDS)

Aman Giuliani, Software Developer @ Google

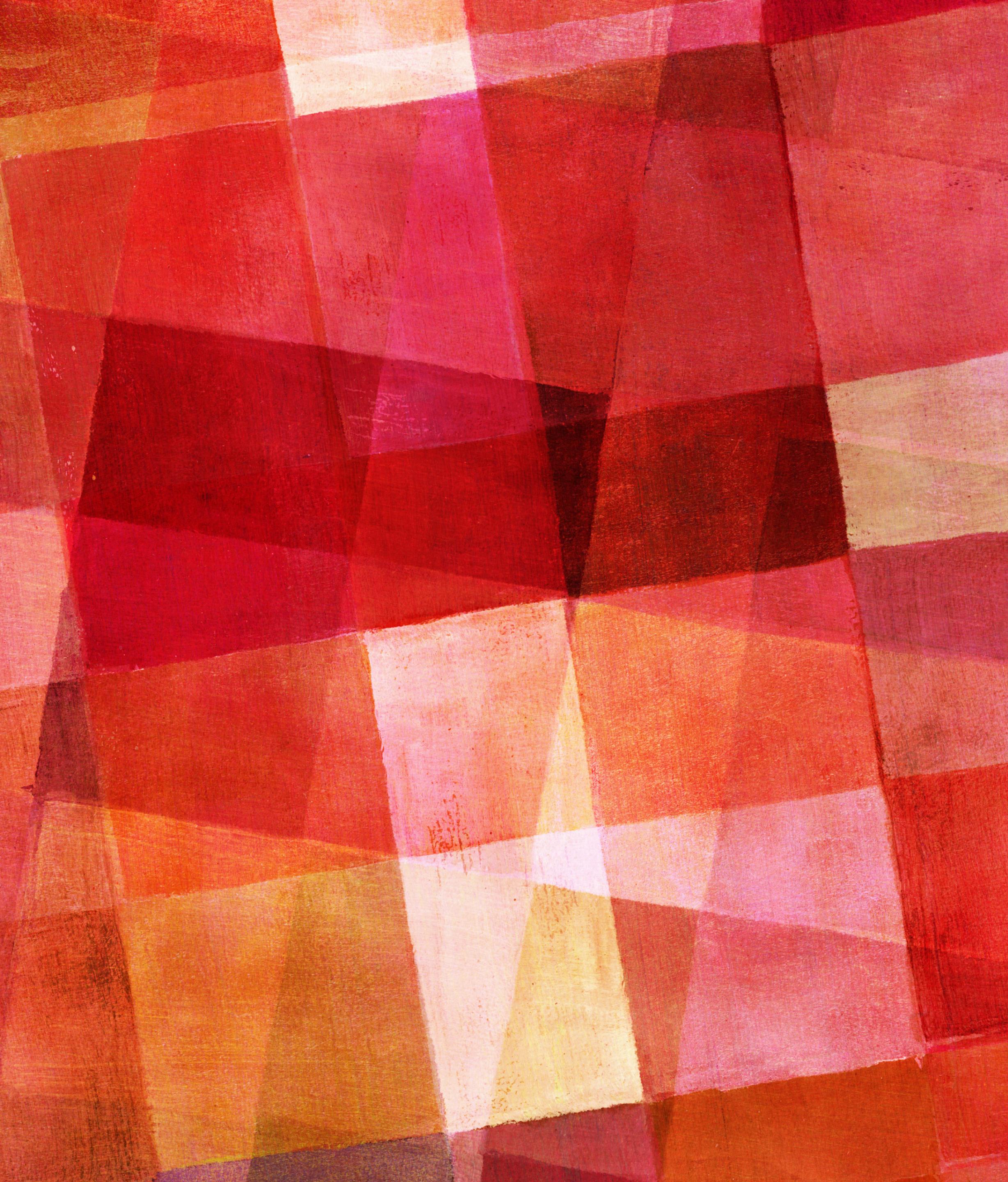


What are we covering today

- Whats is Programming ?
- Python setup
- Printing things in python
- Storing in variable
- Python Building Blocks - Data Type

What is programming ?

- It's the language with which we talk to computers.
- At core the computer understands 0 and 1s
- Programming languages allow us to write english like instructions to get things done from computers.
- Just like English, programming language as rules.
- Python is just one of these languages.



PYTHON SETUP

- Go to
- [https://
colab.research.google.com/
notebooks](https://colab.research.google.com/notebooks)
- Check if you have something called scratchbook.
- You can create a new one for your HWs
- We will practice in this, lets see a demo.

LETS WRITE SOMETHING

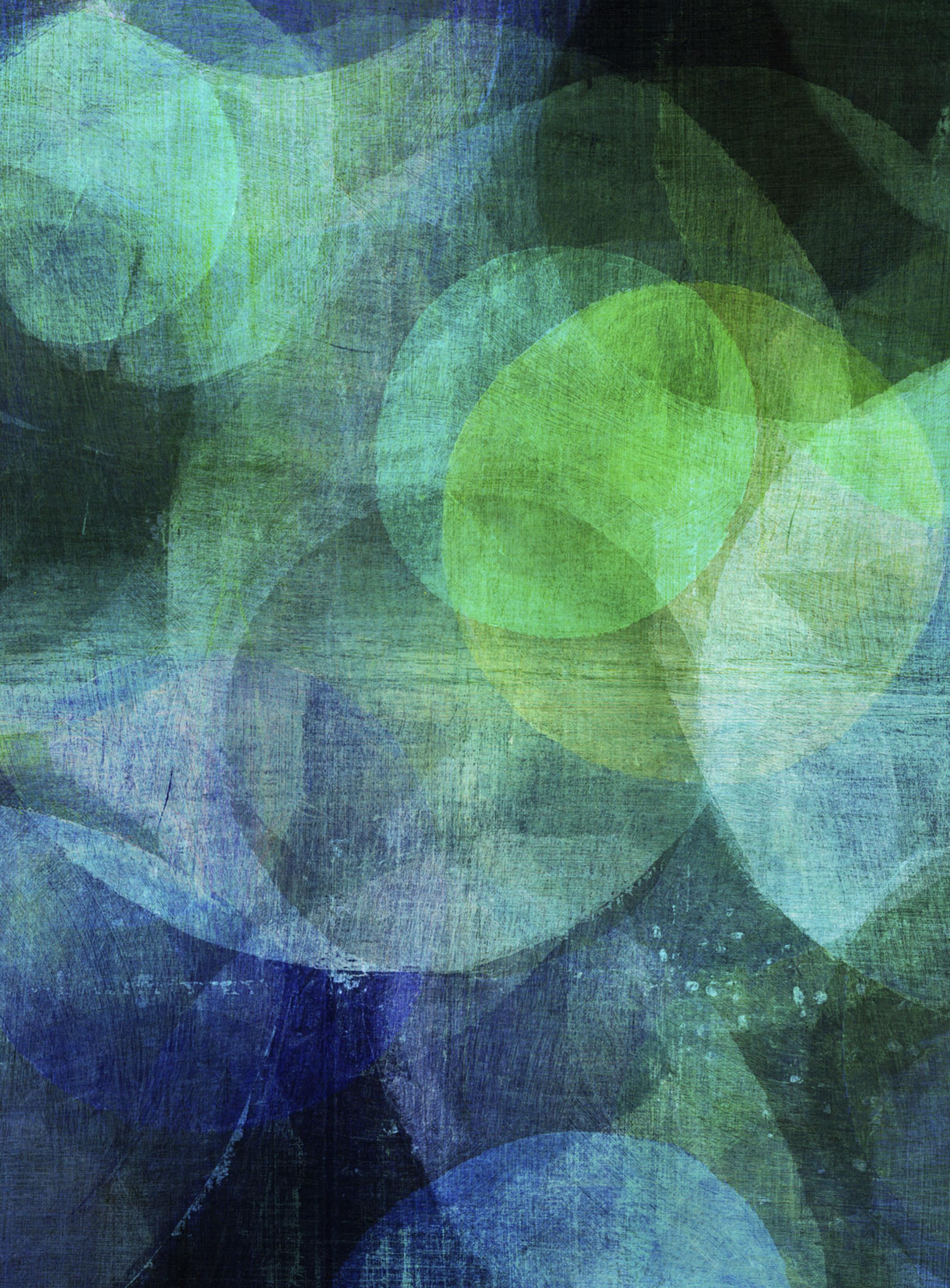
- Printing is like writing something the computer screen.
- We will refer to blocks in python as commands.
- The command to write something something on computer screen is simply called “**print**”
- Lets try it out
 - Go to cola and do a +
 - print (“Text to be printed”) and run it
 - Let’s print our names, print (“ Hi ! My name is Aman ”)

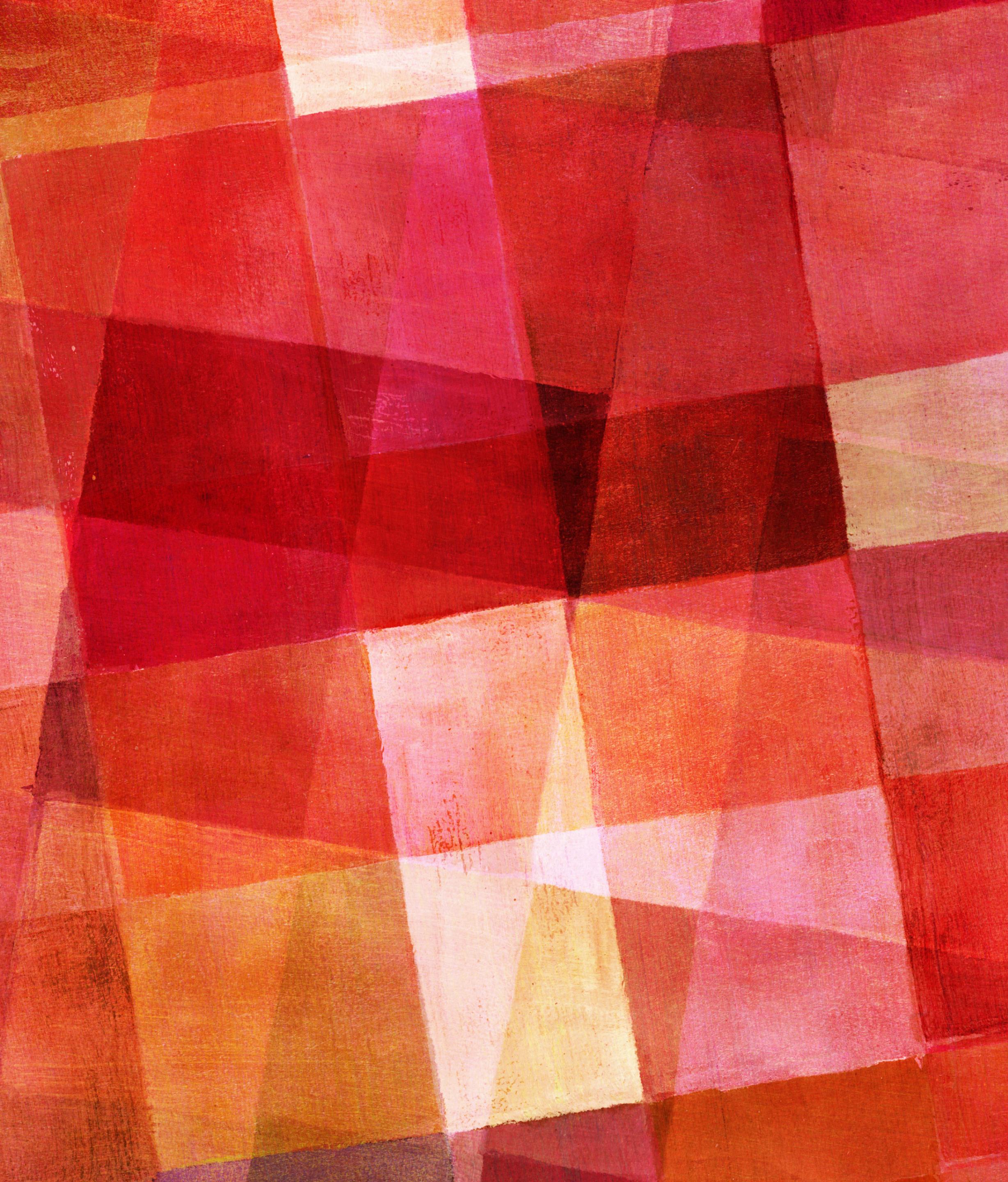
VARIABLES

- Like mathematics variables are something which python holds something in memory.
- Lets see few examples:
 - num = 1
 - my_string = “This is a string”
- Do we know what is store in a variable ?
- Lets print it print (num), print (my_string)

DATA TYPES

Python building blocks





DATA TYPES

- Data types, is how we define data and blocks that we join to make bigger programs.

- Lets look at two of the basic ones today:
 - Strings
 - Numbers

STRINGS

- Anything that is enclosed in “” or “ ” is defined as string.
- “String” <— is a string my_string variable defined before holds a string !!
- Lets define another string:
 - hello_str = “Hello”
- You can access a character in a string by using [] and putting the number in it !
 - Lets see.
 - Type print (hello_str[0]) now try it with 1, 4.
 - What happens if you put 5 ? How about -1?
- You can also select a part of the string by specifying a start and an end number like so:
 - Print hello_str[0:3]

Hello
0 1 2 3 4
-5 -4 -3 -2 -1

STRING FUNCTIONS

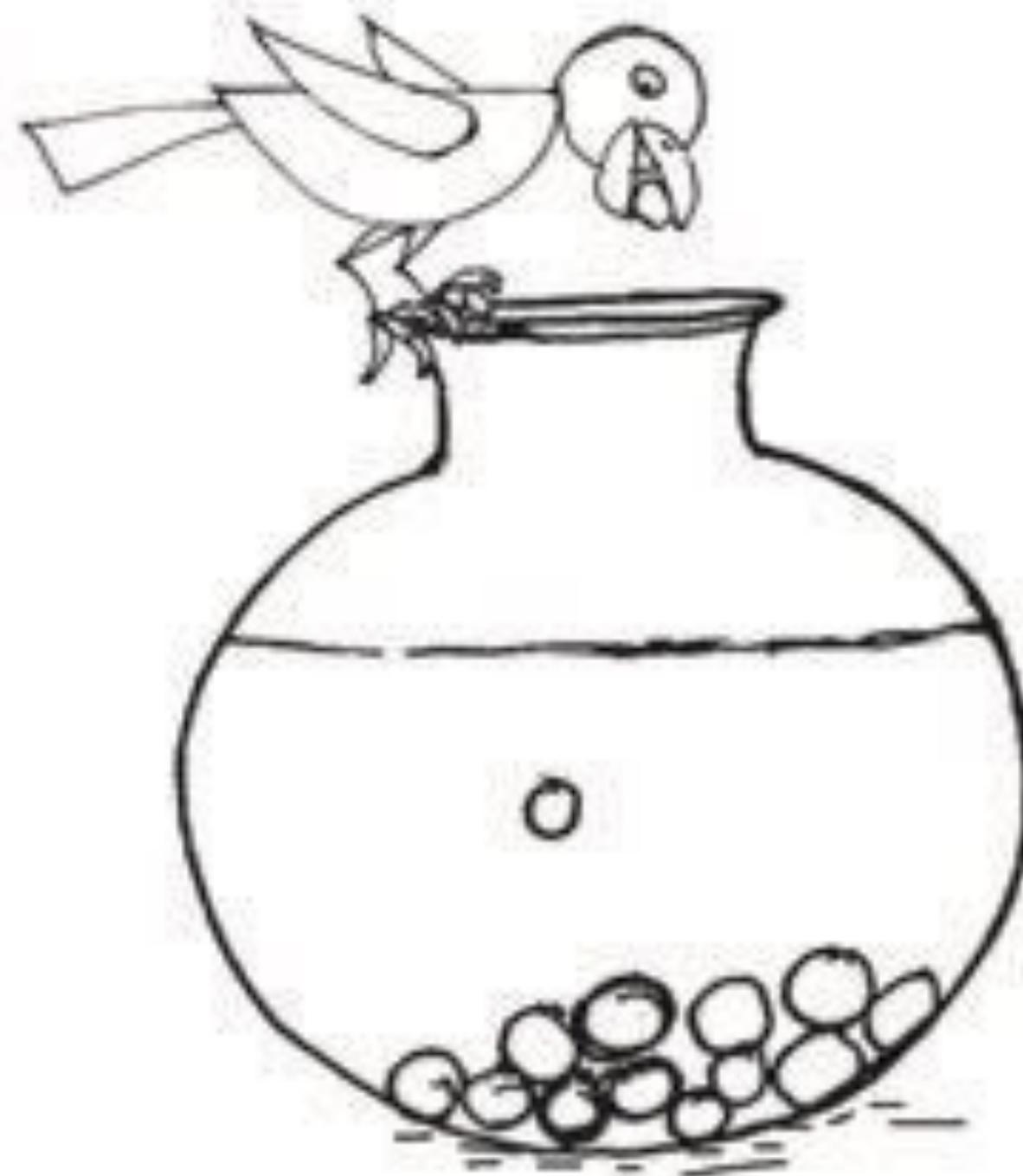
- Functions are short programs already provided to us which does specified things.
- Like `len(hello_str)` gives us the length of the string.
- There are a lot of others functions as well, like `lower()` or `join()` and `find()`
- Let's see some of these in action !

NUMBERS

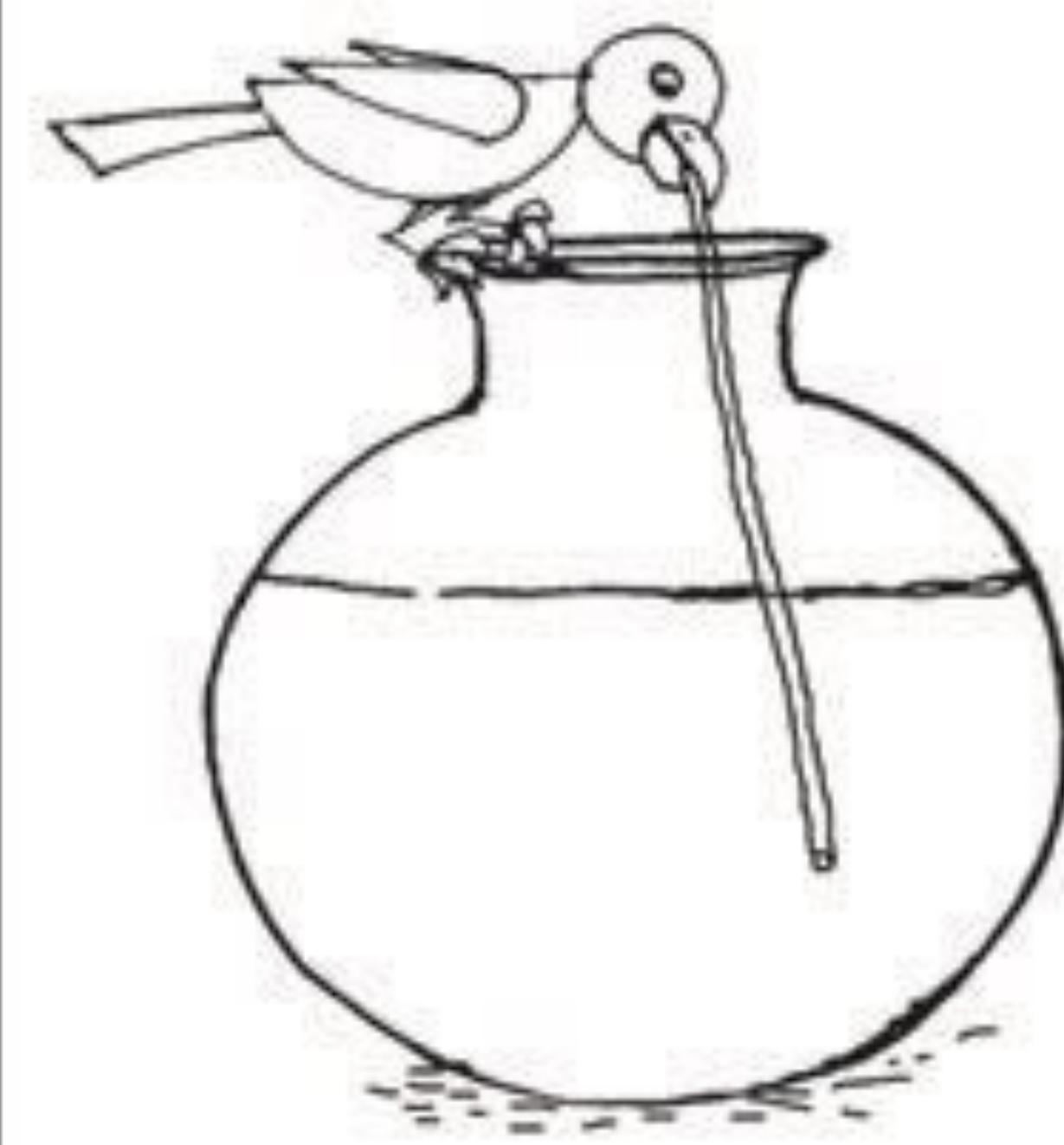
- Numbers are divided into two:
 - Integers which are whole numbers , like 1 , 23, 456, 1034
 - Floating which are anything with a decimal like 1.2, 0.33333, 46.1
- Computers are calculators as well, so you can do math !
 - Let's try $1+3$. $1-5$. 2^3
 - It can also do division try $9/3$
 - You can do the same to variables holding a numbers, lets see an exmaple.
 - $a = 5$, $b= 6$ print ($a*b$)

HOPE YOU HAD FUN !

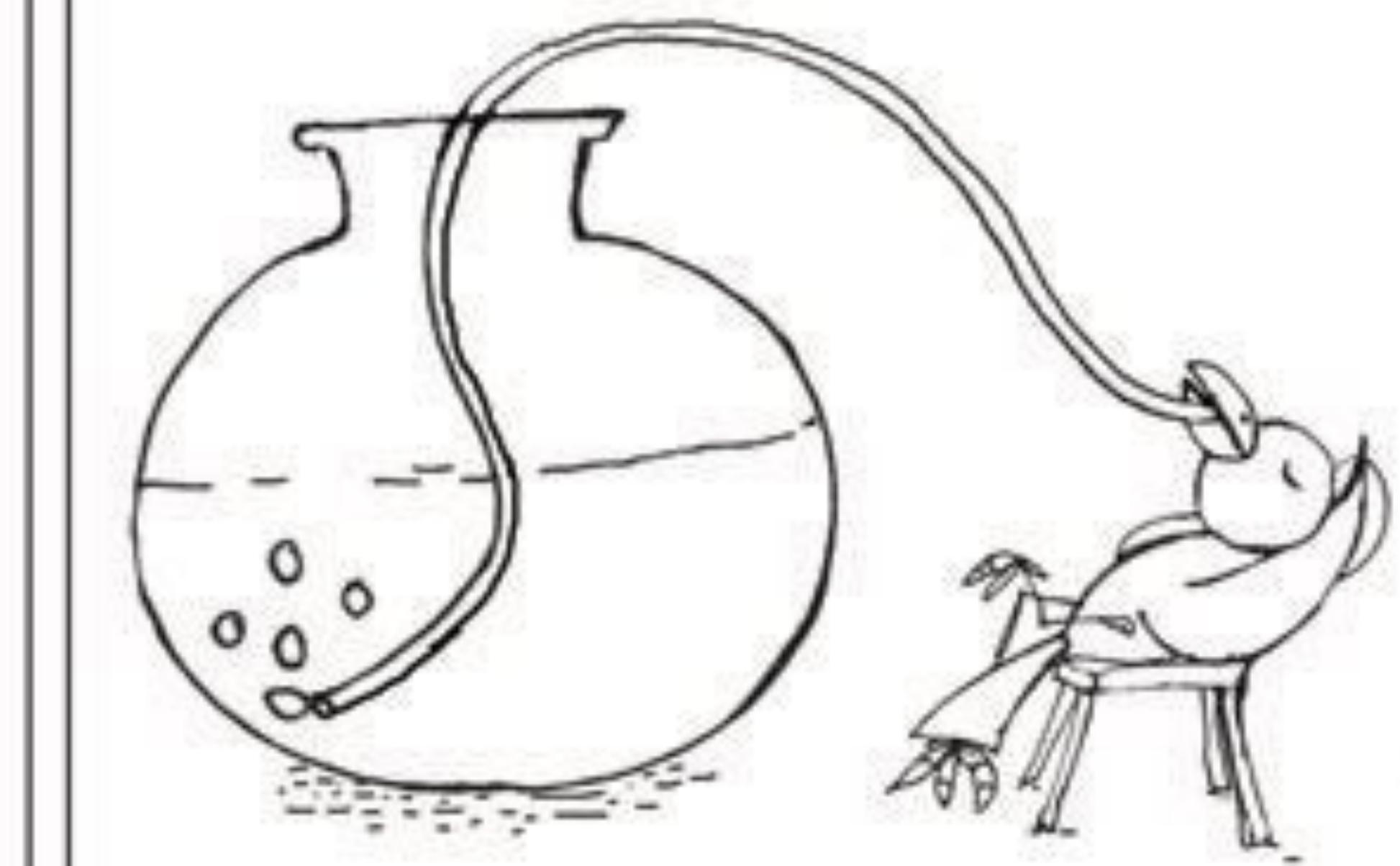
Non-programmer



Programmer



Python Programmer



Yes, there is Home work :) No, its not hard