

Creative Coding

Generative Art Paradigms: Randomness

COD 207 - Week 05 Class →



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Wrap-up (Summary)

Things we learn about P5JS programming language.

- Variables
- Styling shape properties `stroke()`, `noStroke()`, `fill()`, `noFill()`
- Computational Thinking

Computational Thinking Framework

- 1 Decomposition
- 2 Pattern Recognition
- 3 Abstraction
- 4 Algorithm

Generative Art Paradigms: Randomness



Generative Art Exploration Chapter I Tracing the Roots: The History of Generative Art



Paylaş



İzlemek için: [YouTube](#)

Randomness

Randomness can manifest in various ways and is a fundamental concept in fields such as mathematics, statistics, science, and philosophy.



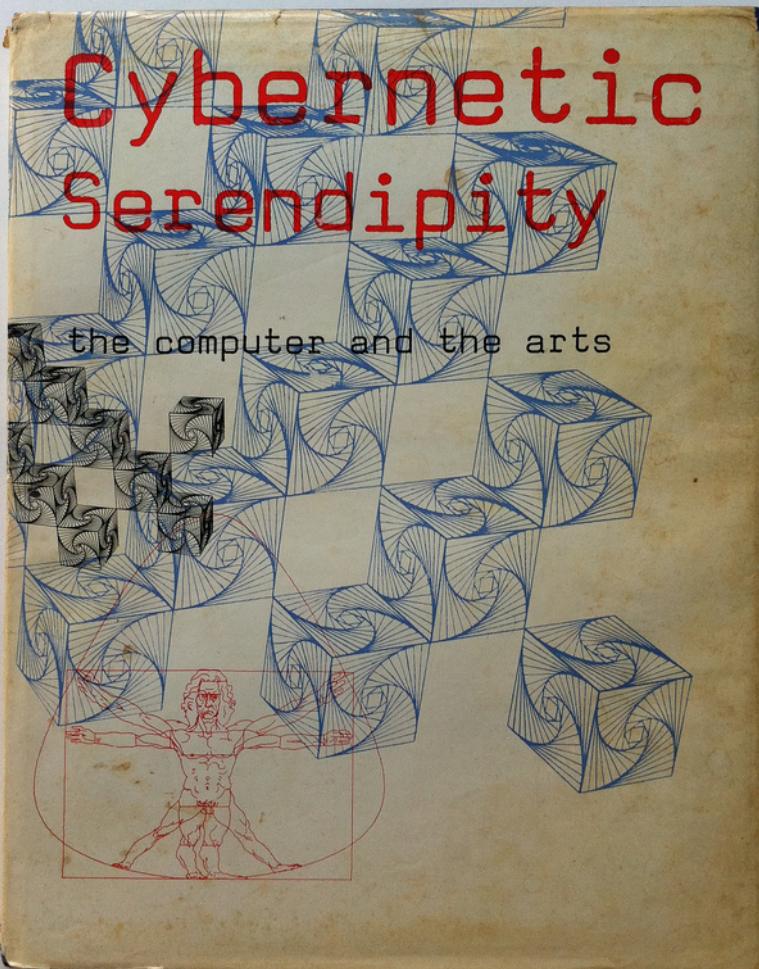
Deterministic

Deterministic in principle, random in practice (E.g Weather)



Stochastic

True randomness (E.g Rolling dice, toss a coin...)



Randomness in Generative Art

Randomness plays a significant role in generative art, where it can be used as a creative tool to introduce variability, unpredictability, and serendipity into the artistic process.

- 🕒 Organic patterns and textures.
- 🎨 Unique compositions; Altering position, shape, color, or texture instantly.
- ♾ Alternative variations
- ♻️ Combining with iterative actions
- 📽 Dynamic Content Creation

Perlin Noise

Elevated by iq in 2013-02-10

👁 219618 ❤ 964

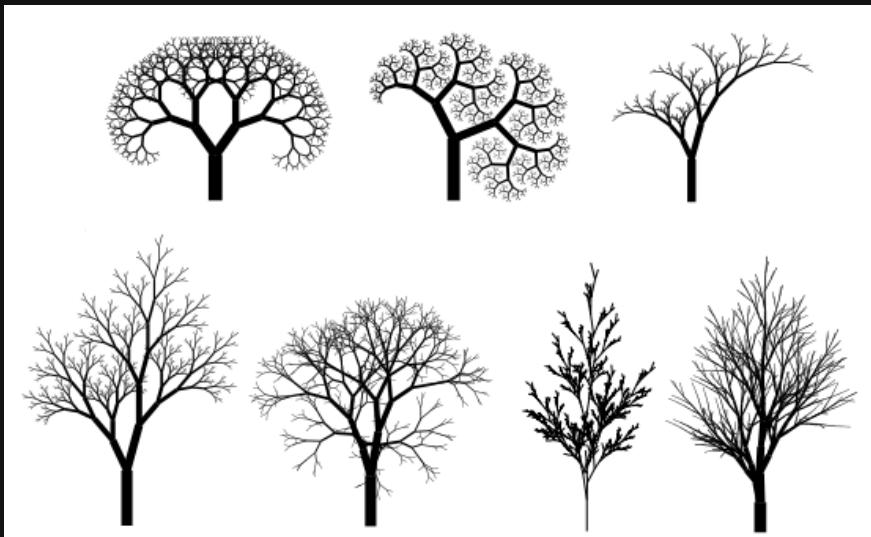
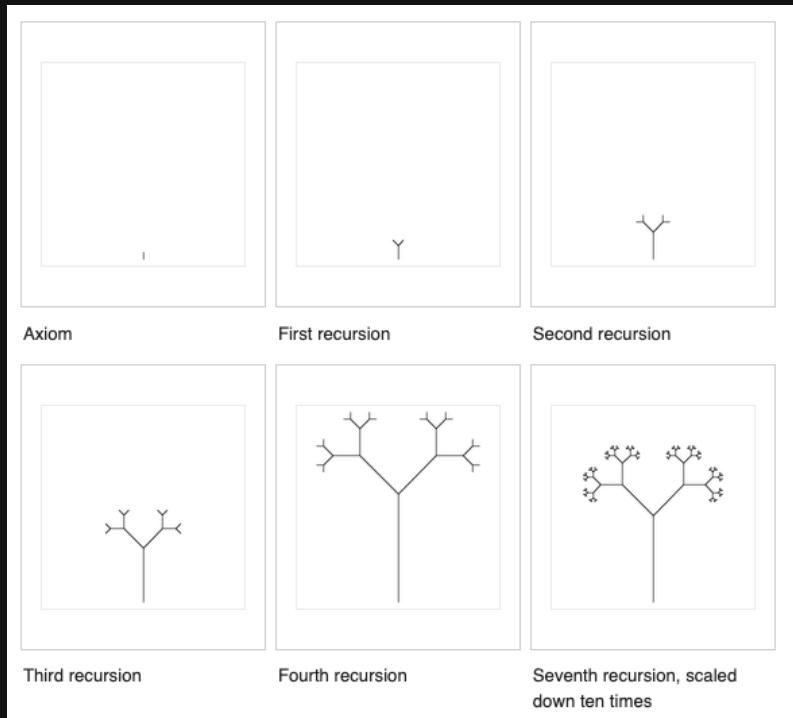
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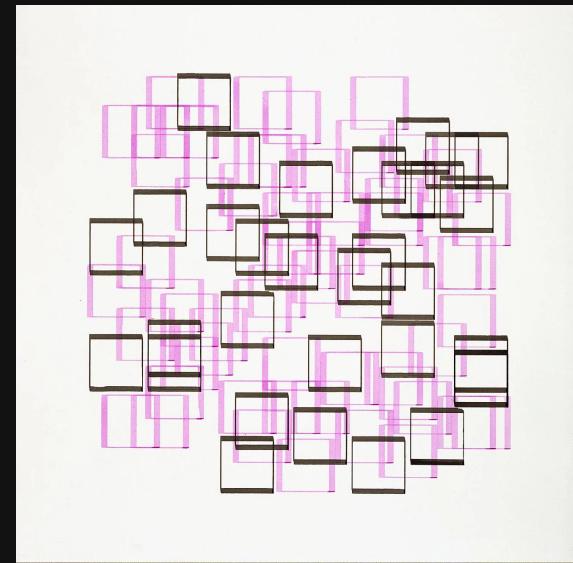
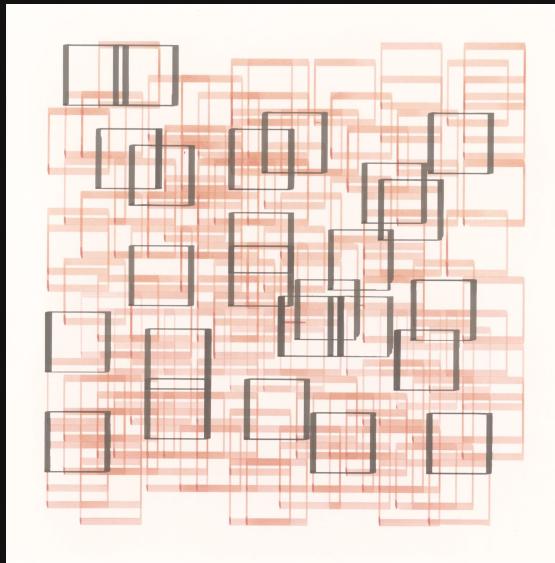
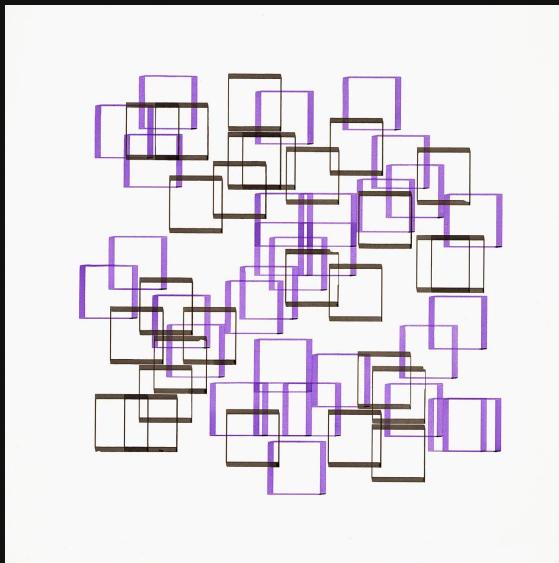
Ξ ShaderToy

L-Systems, Iterative Actions

An L-system or Lindenmayer system is a parallel rewriting system and a type of formal grammar. Ordered distribution of instructions. (ref: [Wikipedia](#))

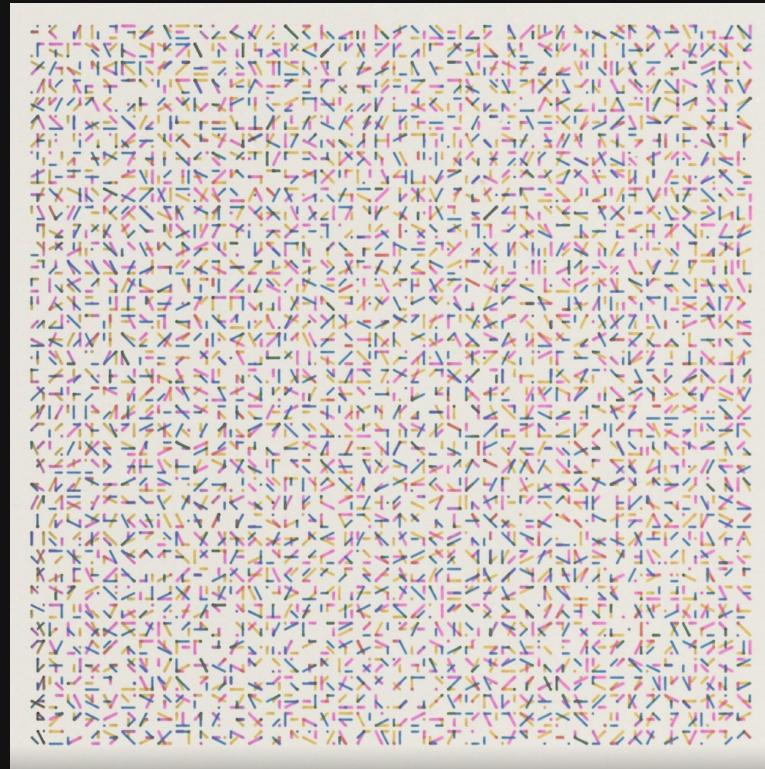


Alternative Variations



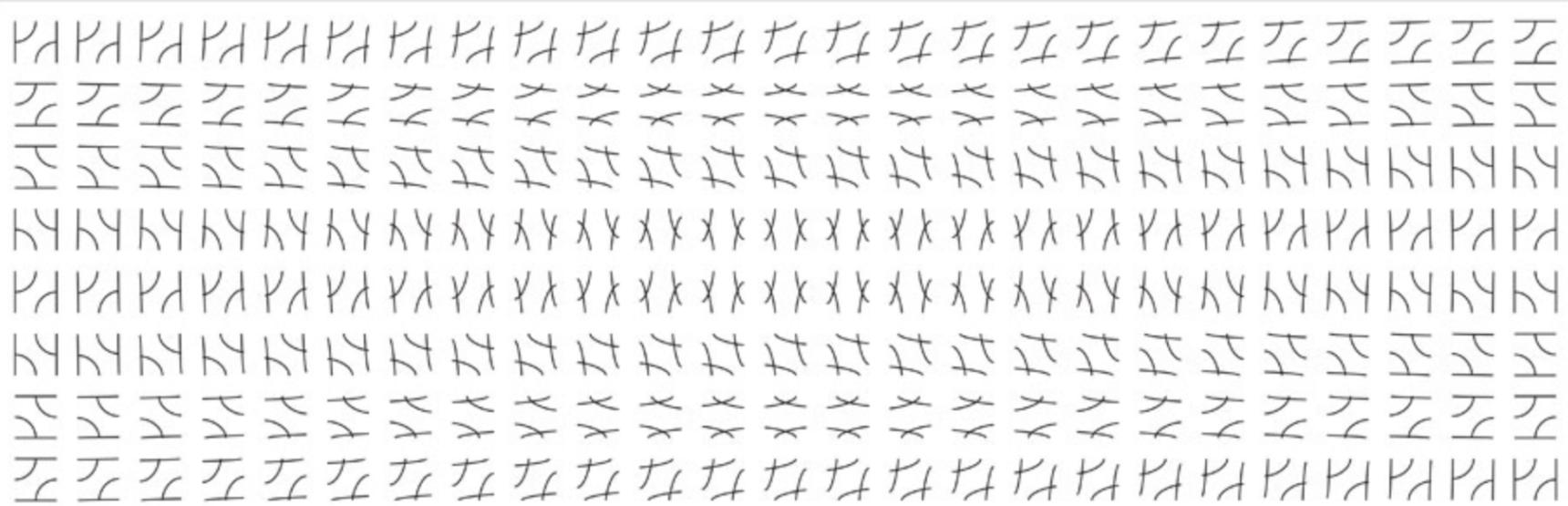
Frieder Nake, Walk Through Raster, 1966

Alternative Variations



Peter Beyls, Untitled, 1981

Iterative Actions



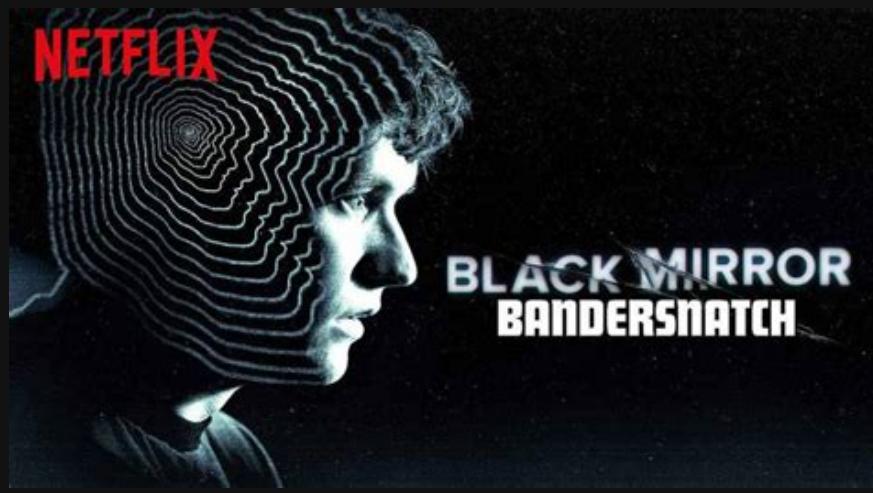
Paul Brown, Long Loop, 2000

Iterative Actions



Masao Komura and Kunio Yamanaka, Return to a Square, 1968

Familiar?



Dynamic Content Generation



week 9 - Audio Reactive - 03
by alptugan

i



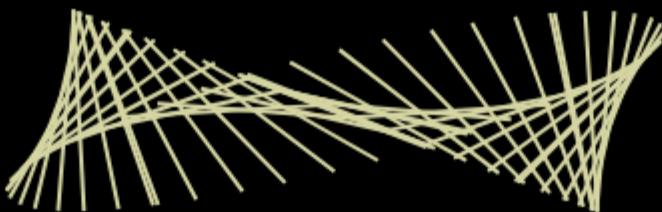
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Fork



CC Attribution NonCommercial





The Root



Paylaş



İzlemek için: YouTube

COD 207 Selected Projects

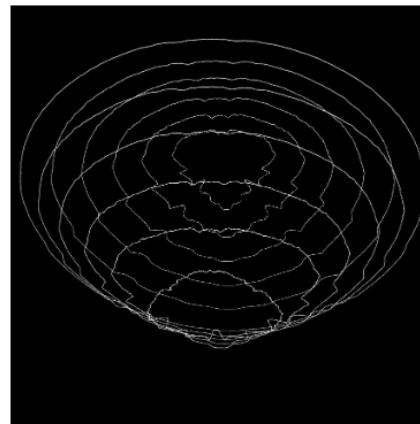
2021-2022 Project Structure Links



COD 207 Selected Projects



Generative Topography



Nerve: Audiovisual art



Toy Shop

randomSeed()
_DS

"GOOD DESIGN IS A LANGUAGE, NOT A STYL

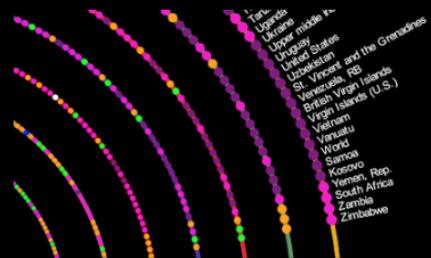
Info

Algorithmic art showcase
of Özyegin University, Classes of COD 207/208

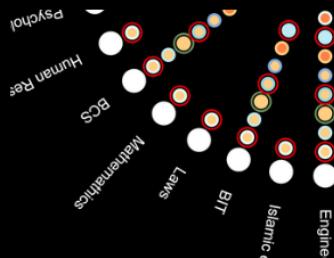
new semestre: 2023 Spring



W08_Izel_Ergül
COD207, 2023_SPRING



W05_Tutku_Çalış
COD207, 2023_SPRING





BREAK

10 mins.

Random Function In P5JS

Challenge

1. Goto p5js documentation web site → random()
2. Create a new sketch on your openProcessing account.
3. Set the canvas size to 600 x 400 px
4. Write a program that draws a circle in the center of the page.
5. Set the circle's parameters using variables. Do not type numbers inside the parenthesis.
6. Set circle's radius using `random()` function. The minimum value is 10 and maximum value is 300.

Assignments

1. Create a generative art sketch. The rules can be anything. First decide at least 5 rules for your composition and then write the code.
2. Upload the sketch to your openProcessing account.
3. Submit the openprocessing link.
4. Submit the sketch source code as zip file as well.
5. Read the document.
6. Watch the videos.