

Generative Art

Variables / *lab-2a*



Standup!

*What did
you do?*

Issues · cmda-minor-vid/generative-art-20-21

← → <https://github.com/cmda-minor-vid/generative-art-20-21/issues?q=is%3Aissue+sort%3Aupdated-desc+is%3Aopen>

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- ☐ **Introduction**
#11 opened 5 days ago by davidvanr21
- ☐ **Introduction**
#7 opened 8 days ago by JornMeessen updated 6 days ago
- ☐ **Introduction**
#10 opened 6 days ago by FvanDoesum updated 6 days ago
- ☐ **Introduction**
#9 opened 6 days ago by LawrencePrins
- ☐ **Introduction**
#8 opened 7 days ago by mikehov

Issues >
New Issue >
Introduction

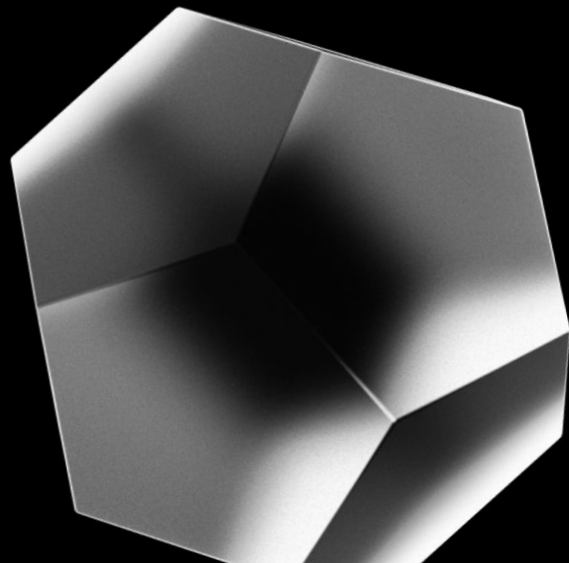
today

~~I. Standup~~

II. Built-in Variables

III. Randomness (algorithms)

IV. Interaction (events)



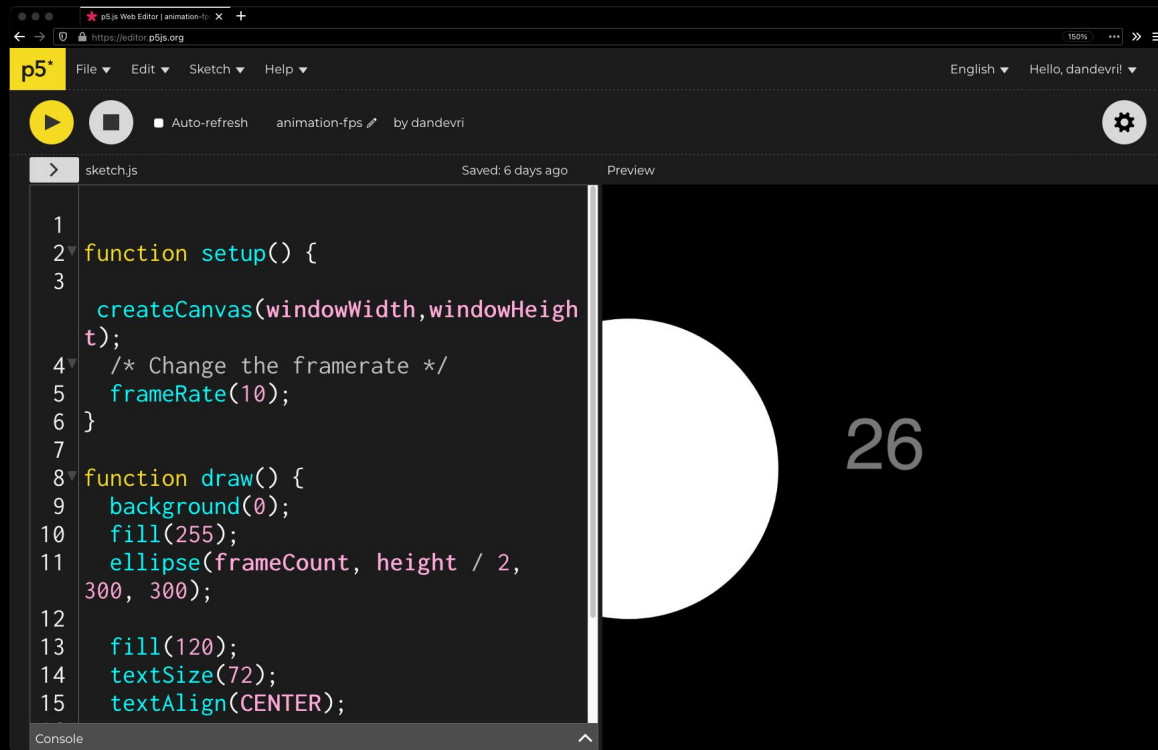
Variables

Built-in

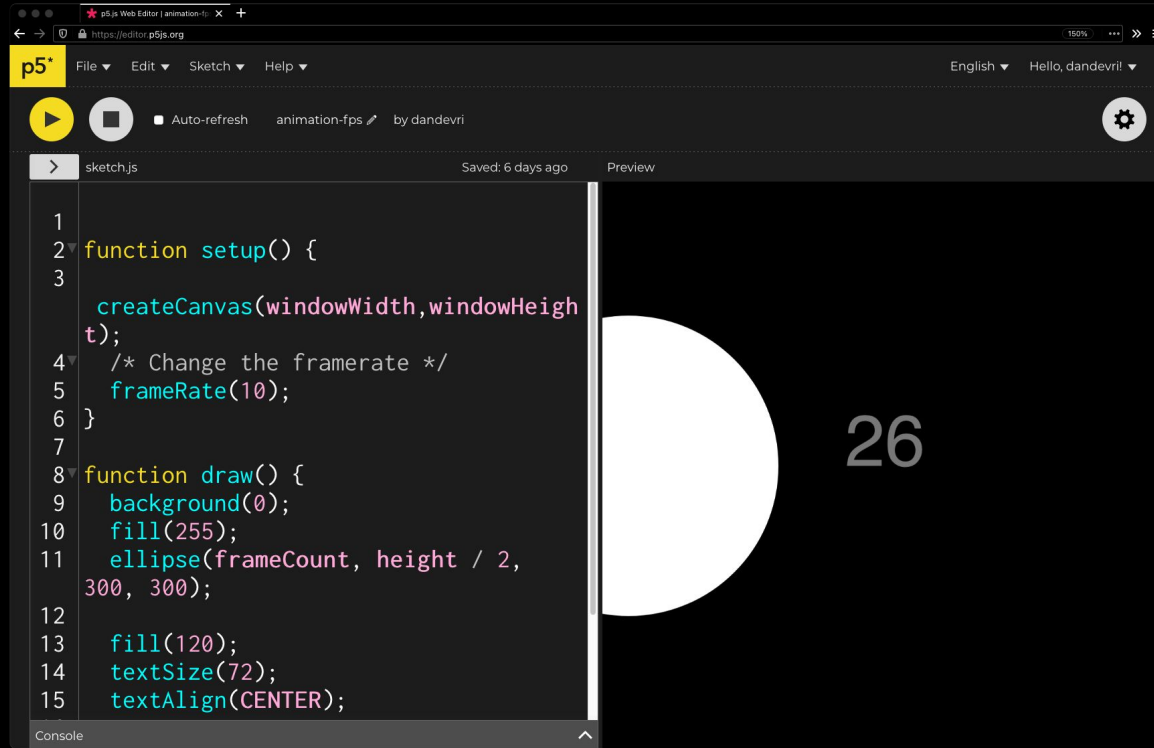
p5.js

p5.js is an open-source JavaScript library for creative coding. A **collection of pre-written code**, it provides us with tools that simplify the process of creating interactive visuals **with code in the web browser.**

Processing



Mouse Position



Device Features

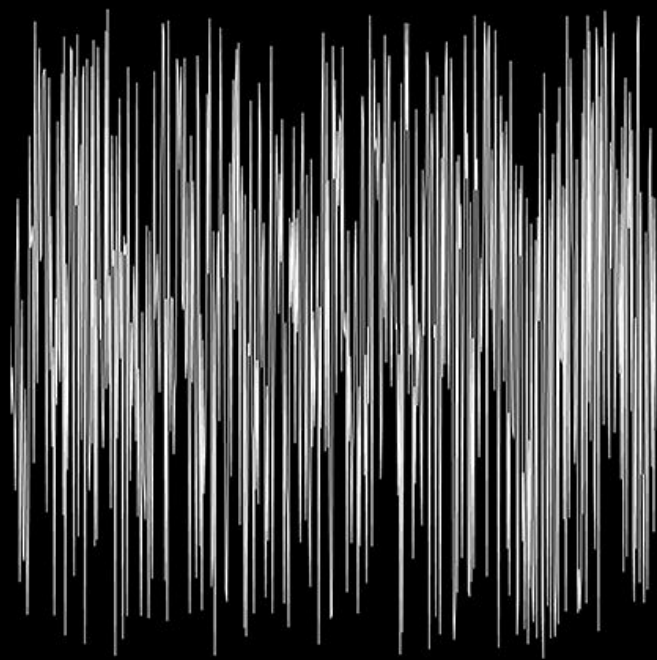
Randomness

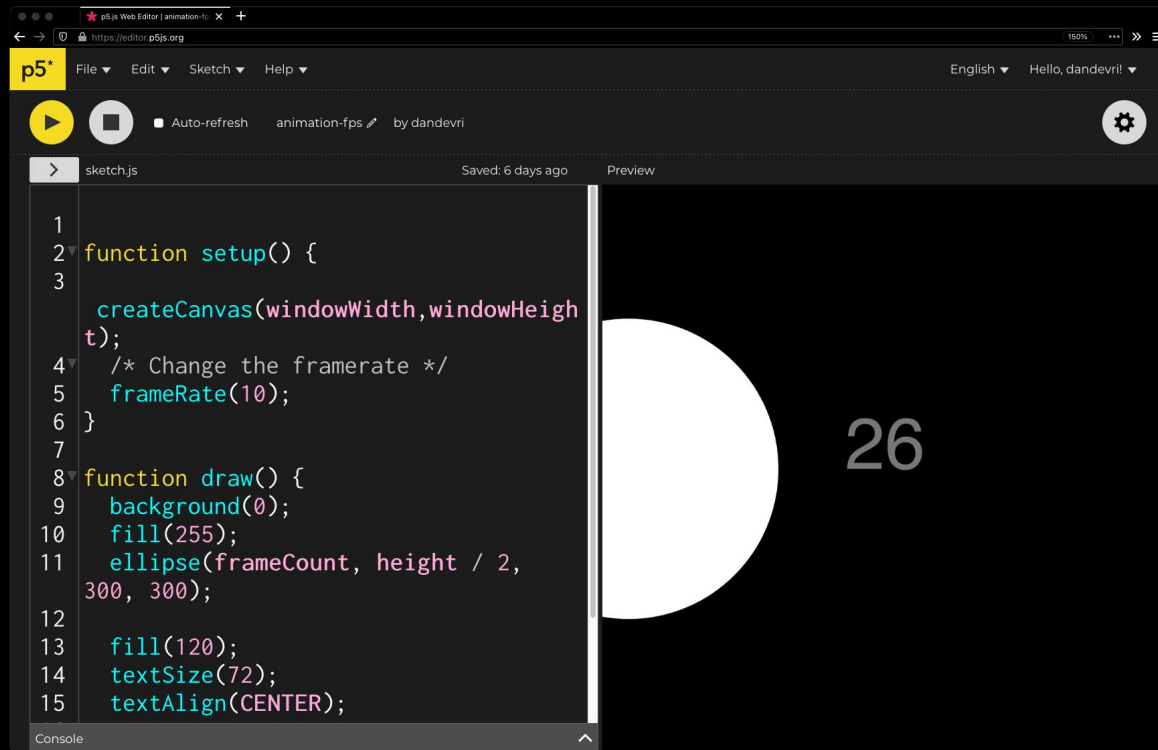
Randomness

p5.js

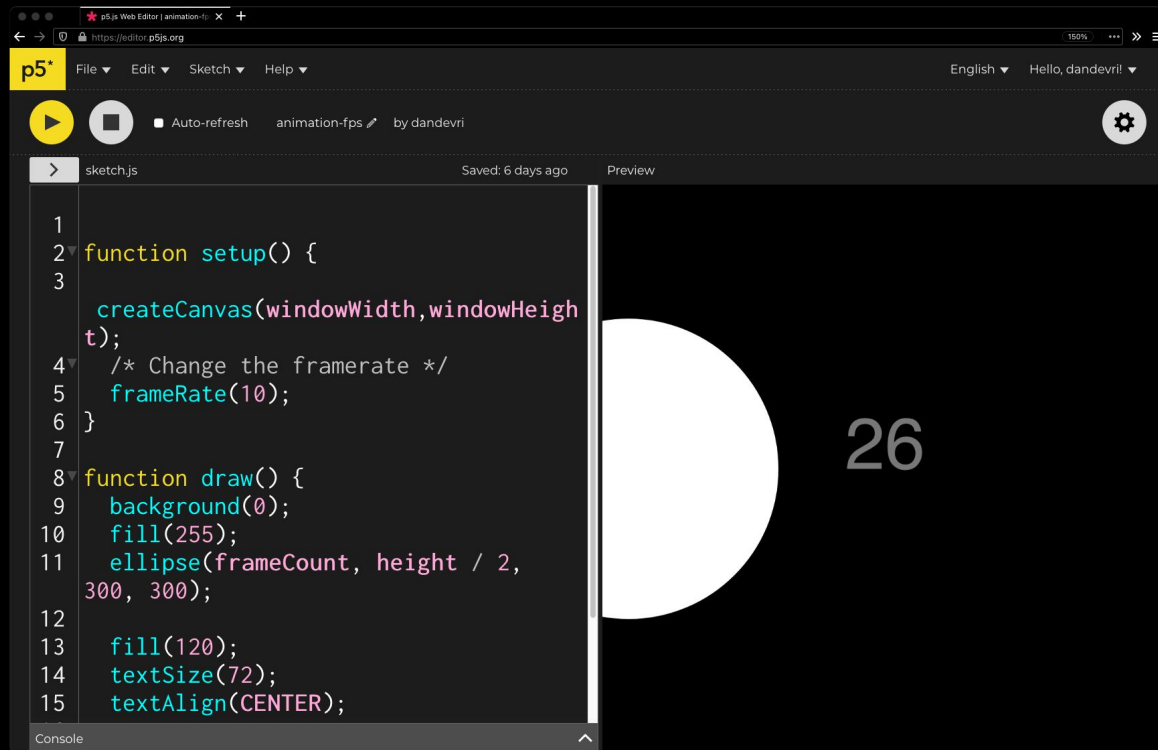
Random (or `math.random`) **returns a random floating-point number**. Usually between 0 or 1. To get larger or (min max) numbers you can perform **mathematical calculations** on them (e.g. multiplication).

p5js.org





Math.random



Random circles

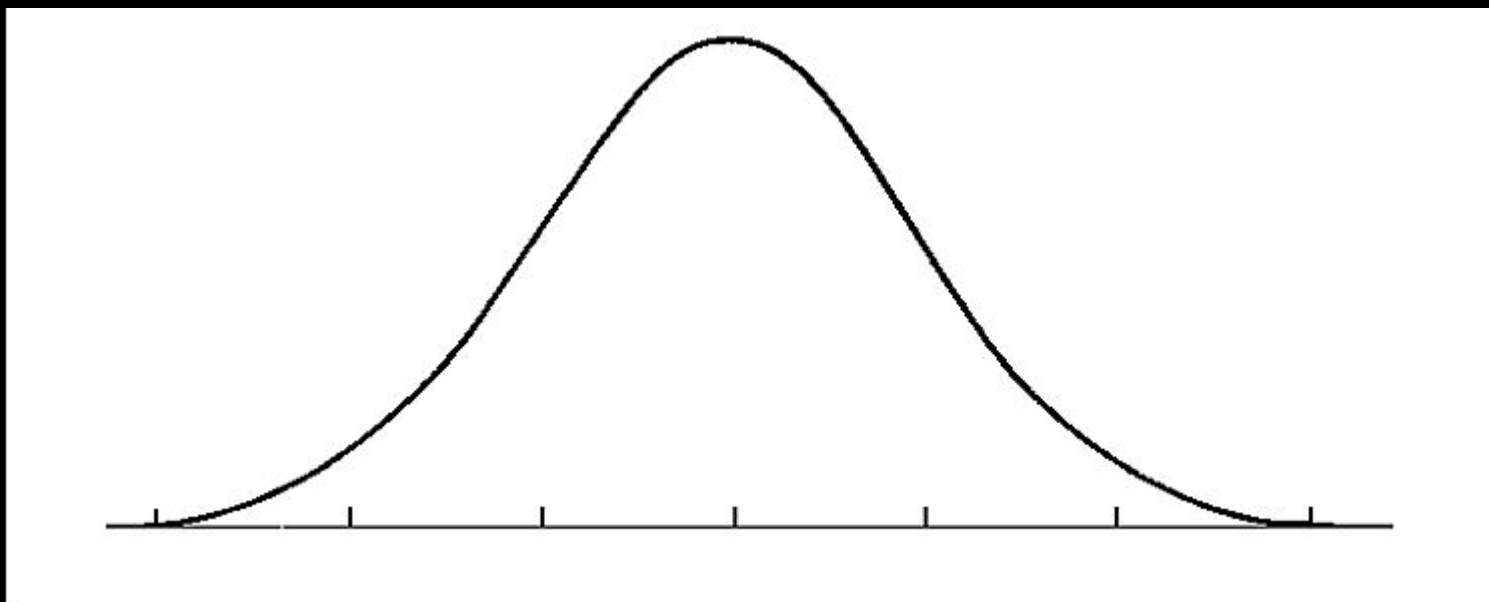
Probability

p5.js

How likely is X to occur?

Min / max heights versus average height
(normal distribution). **It's gaussian; bell
curve (mean).**

p5js.org



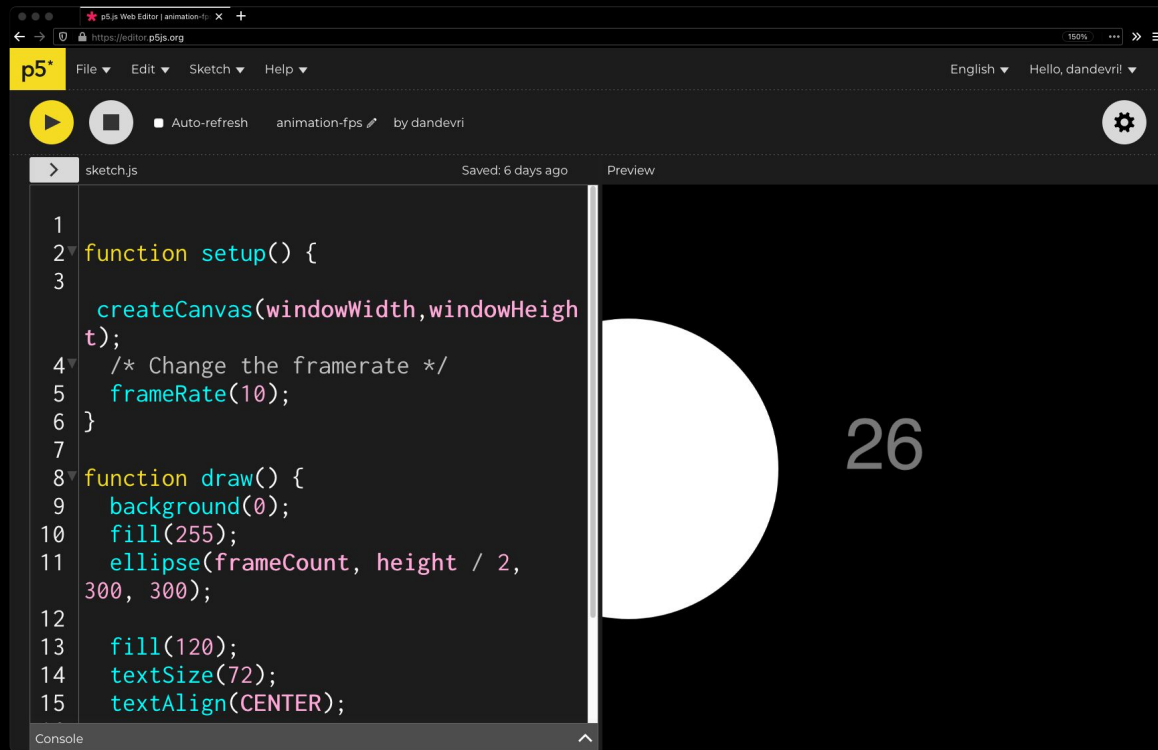
Noise

p5.js

Perlin Noise has a pseudo-random appearance.
Noise can be described as **controllable
randomness. [..]**

appear more natural, by imitating the
controlled random appearance of **textures in
nature.**

perlin noise wiki



Perlin Noise

Creative coding algorithms & techn...

https://www.notion.so/Creative-coding-algorithms-techniques-c5550ef2f7574126bdc77b09ed76651b 150%

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Cellular noises (Voronoi, ... Noise Nature

Perlin noise loop Noise

Noise / vector / flow fields Noise

Random Noise

Domain warping Noise

notion.so/creative-coding-algorithms

Interaction

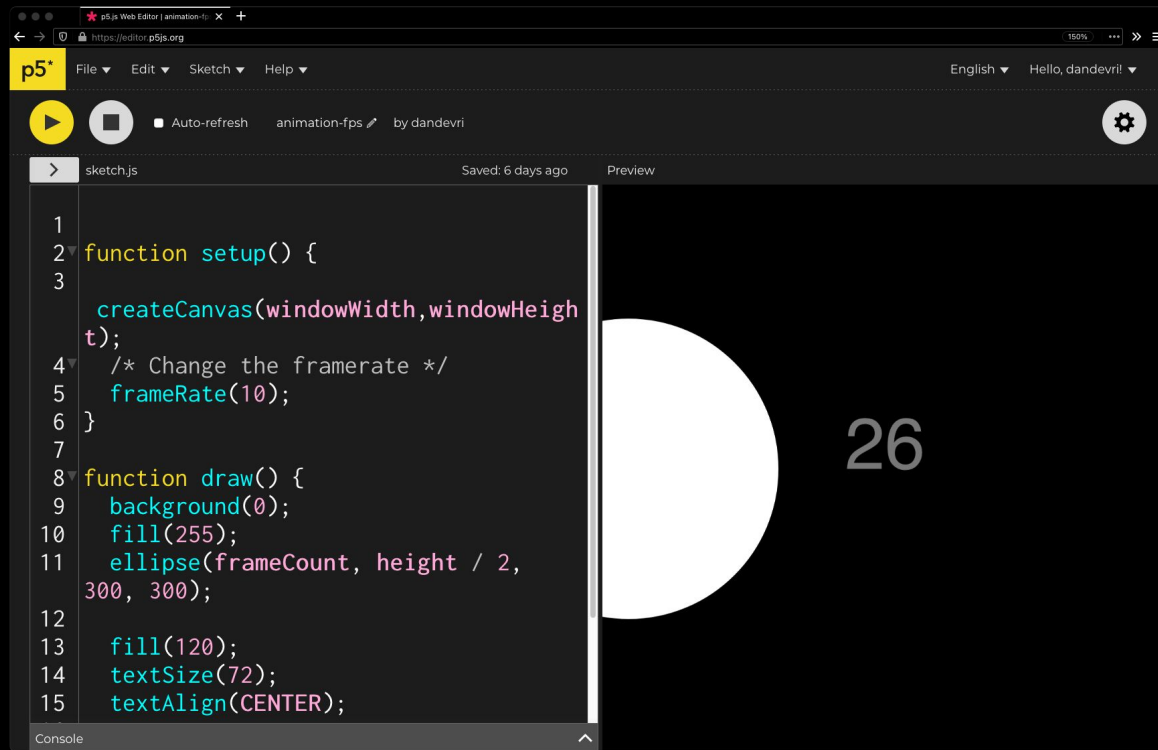
Events

?

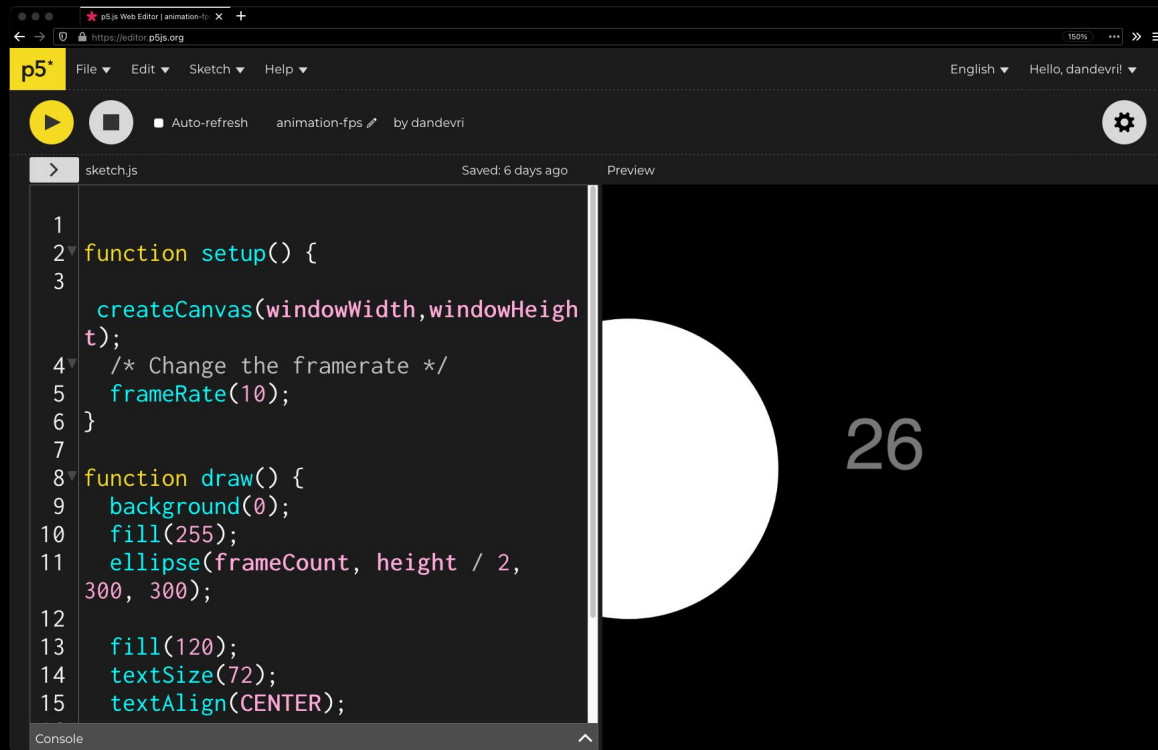
Changes of state from (for example) *user interaction* such as using a mouse, clicking, resizing a window etc.

System notifies you about something so you can respond to them in some way if desired.

MDN Events



Click functions



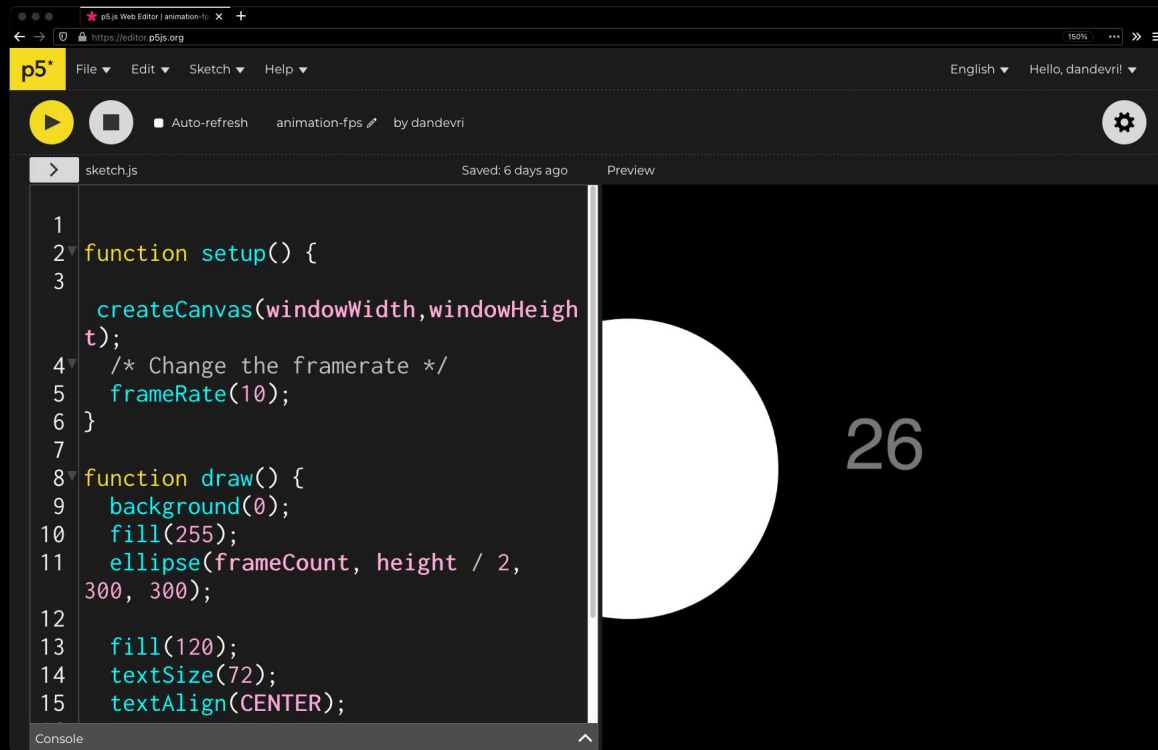
Keyboard events

Data as input

?

Use external data as input. With `loadJSON` and `preload()` you can load external data files such as `.csv` / `.json` extensions.

Loadjson p5.js



Api's / JSON

What to do?

Start by introducing **randomness** and **input** to your artwork in p5.js.

exit;

see you in *lab-2b*