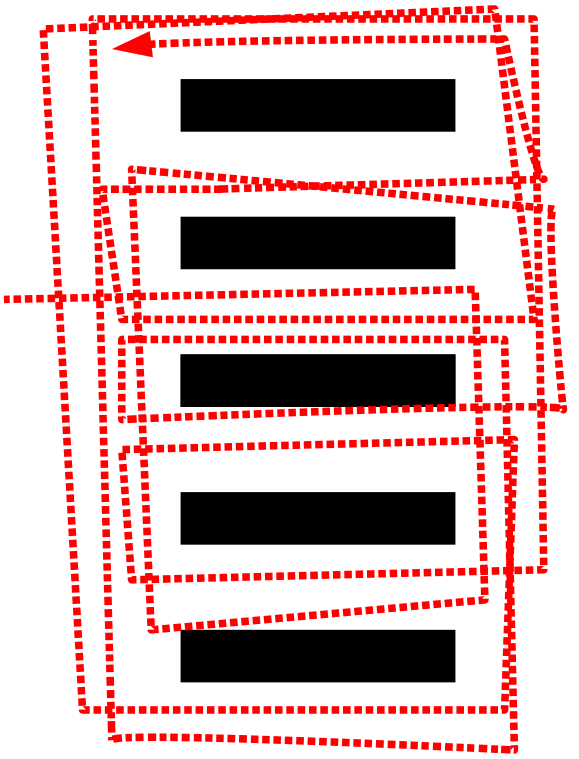
Corn Flakes
Bread
Body Lotion
Oranges
Marg
Flour
Washing Powder
Bread rolls
Ice cream
Grapes
Carrots
Soap



Fruit n veg

Oranges

Grapes

Carrots

Dairy

Marg

Ice cream

Bread n bake

Flour

Bread rolls

Bread

Bathroom

Body Lotion

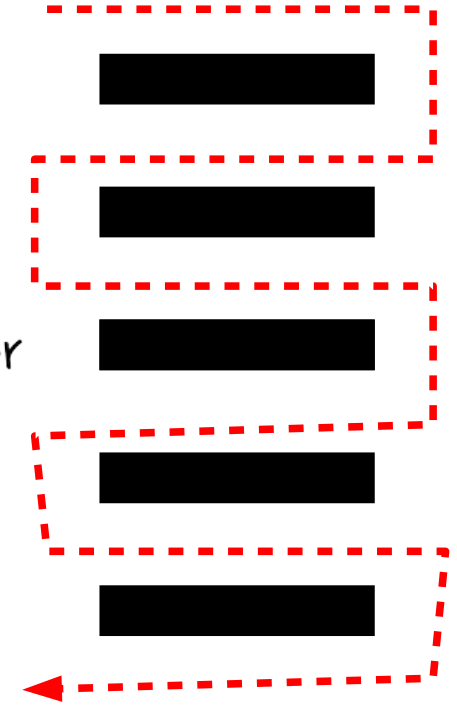
Kitchen

Washing Powder

Soap

Breakfast

Corn Flakes



Fruit n veg

- Oranges
- Grapes
- Carrots

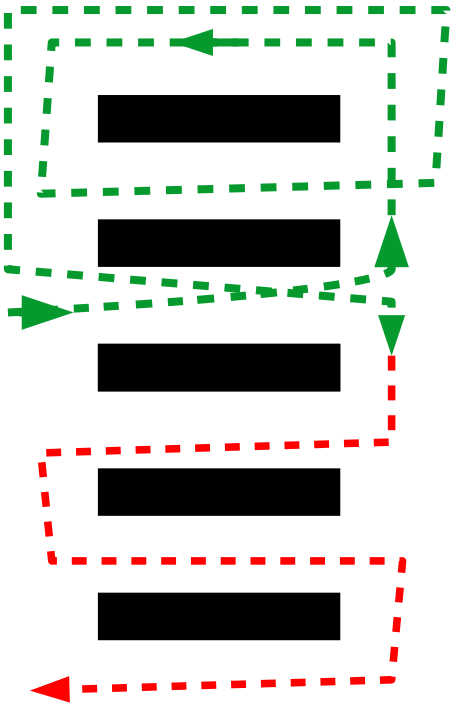
Dairy

- Marg
- Ice cream

Bread n bake

- Flour
- Bread rolls
- Bread

Body Lotion
Washing Powder
Soap
Corn Flakes



Fruit n veg

Oranges

Grapes

Carrots

Dairy

Marg

Ice cream

Bread n bake

Flour

Bread rolls

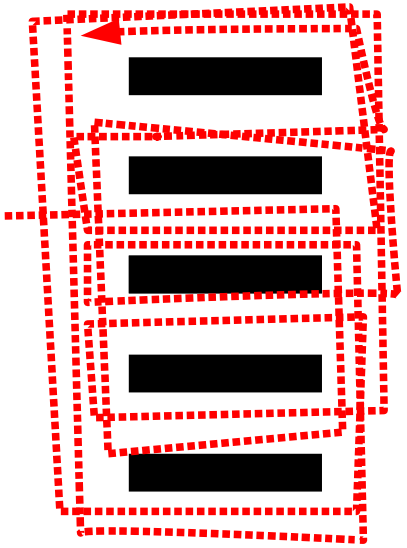
Bread

Body Lotion

Washing Powder

Soap

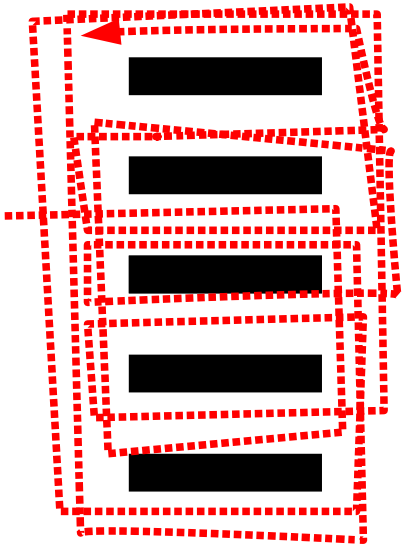
Corn Flakes

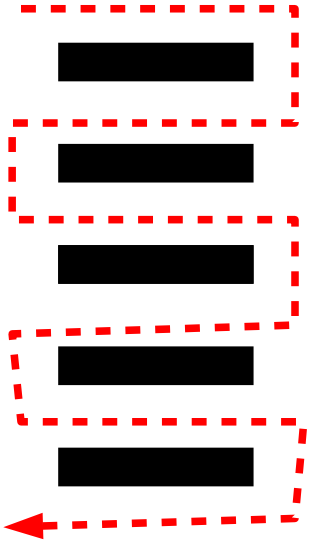


Interpreter

Immediately runs

Not efficient; can run slow





Interpreter

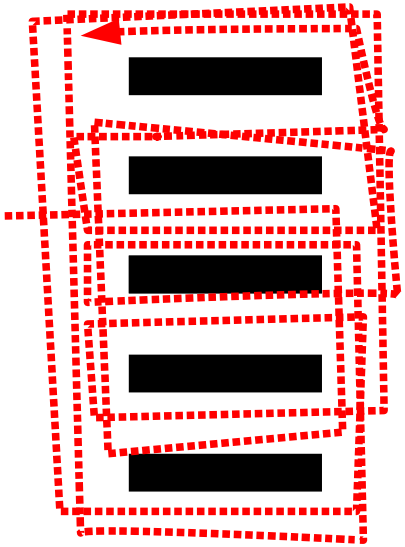
Immediately runs

Not efficient; can run slow

Compiler

Delay before running

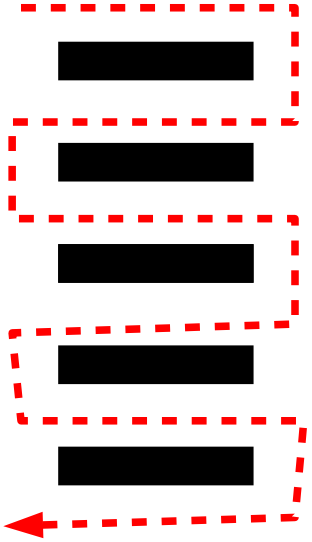
Runs efficiently



Interpreter

Immediately runs

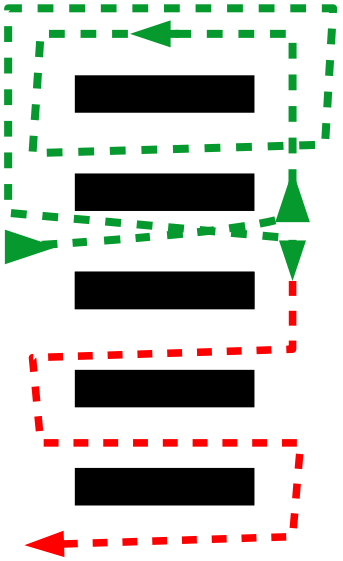
Not efficient; can run slow



Compiler

Delay before running

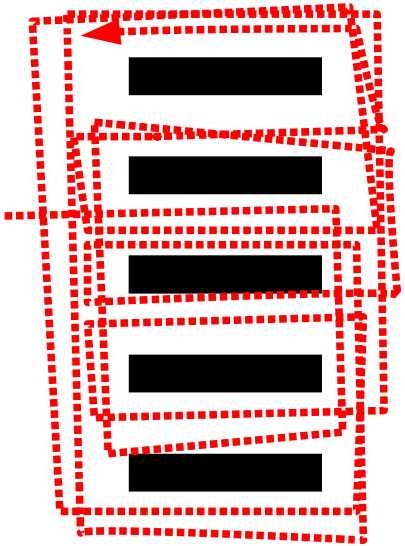
Runs efficiently



Just-in-time

Immediately runs

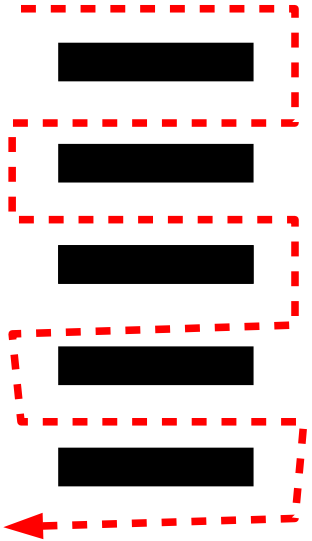
Runs quite efficiently (2008)



Interpreter

Immediately runs

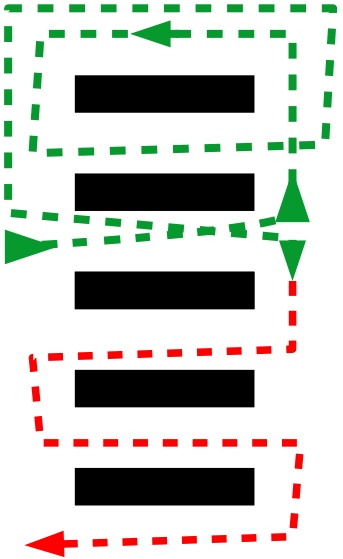
Not efficient; can run slow



Compiler

Delay before running

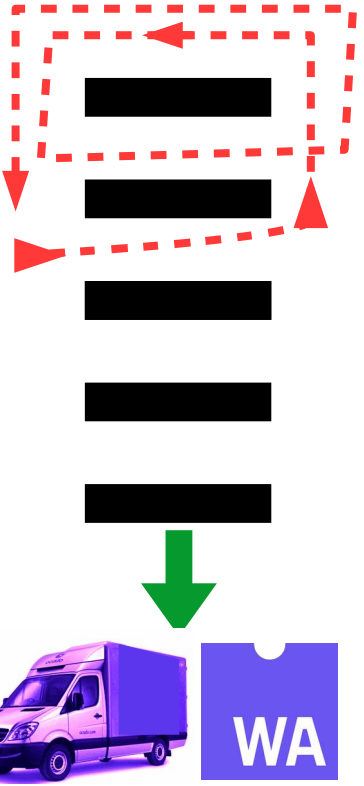
Runs efficiently



Just-in-time

Immediately runs

Runs quite efficiently (2008)



WebAssembly

Immediately runs highly efficiently (MVP 2017)

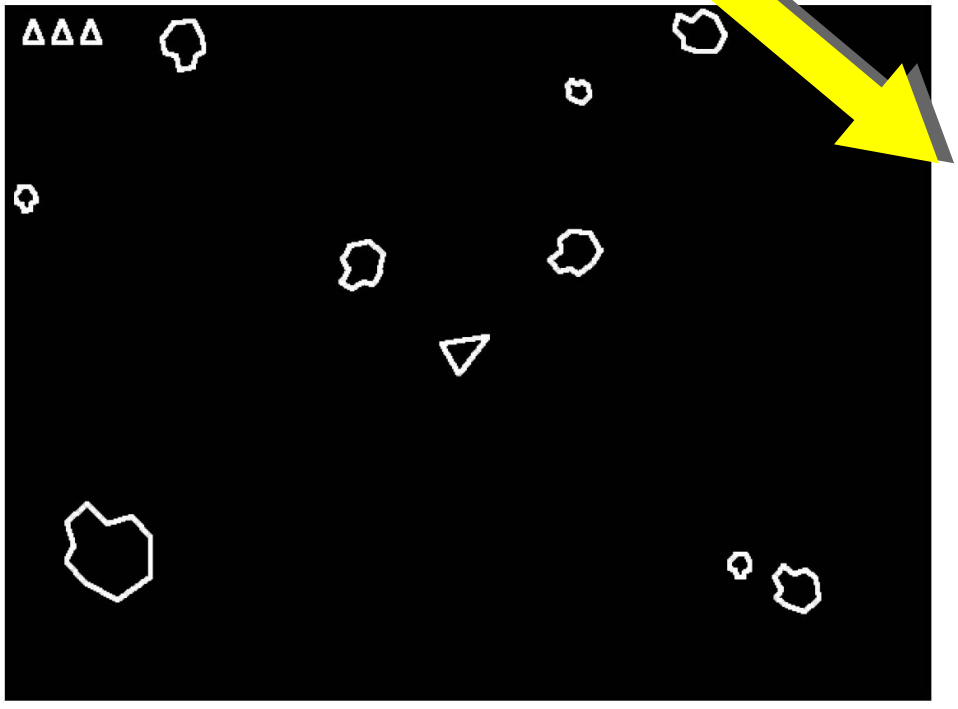
What is WebAssembly

Asteroids in WebAssembly

Code on GitHub

An Asteroids game ported from C to WebAssembly.

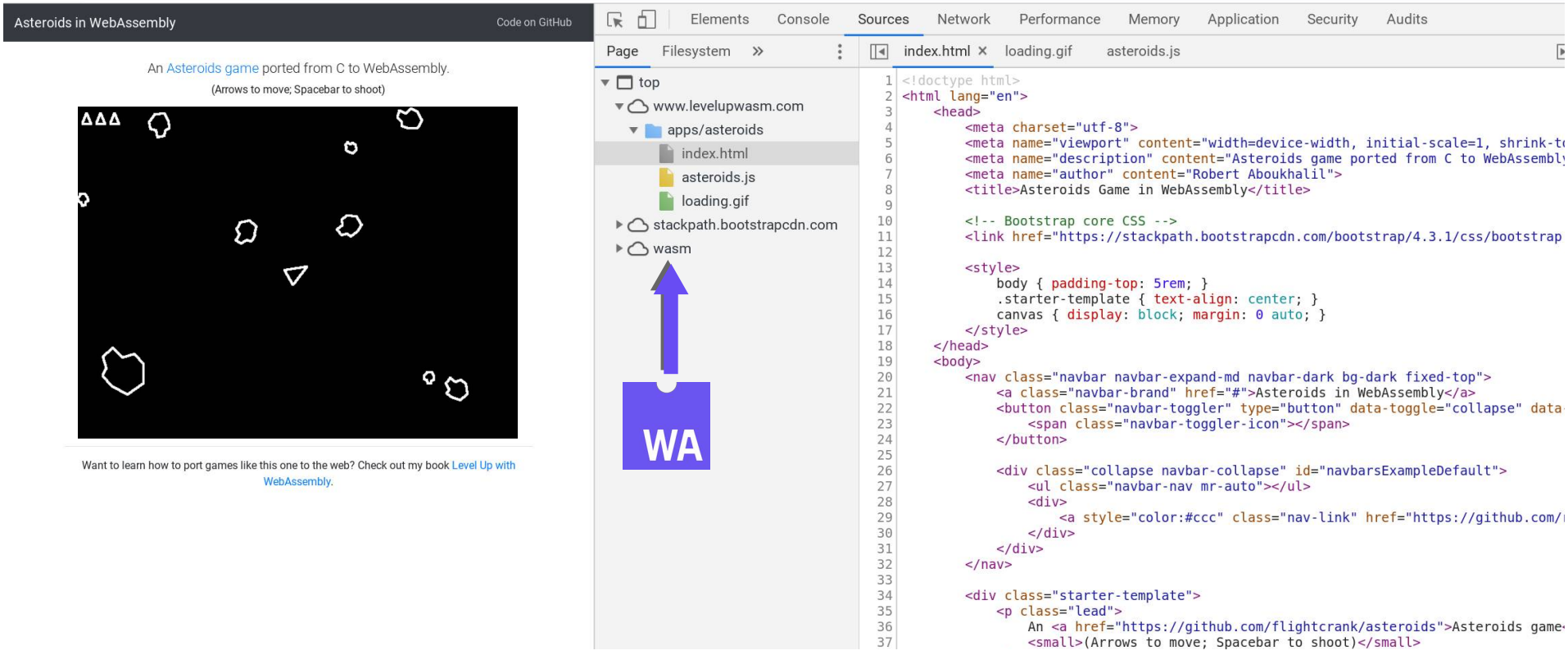
(Arrows to move; Spacebar to shoot)



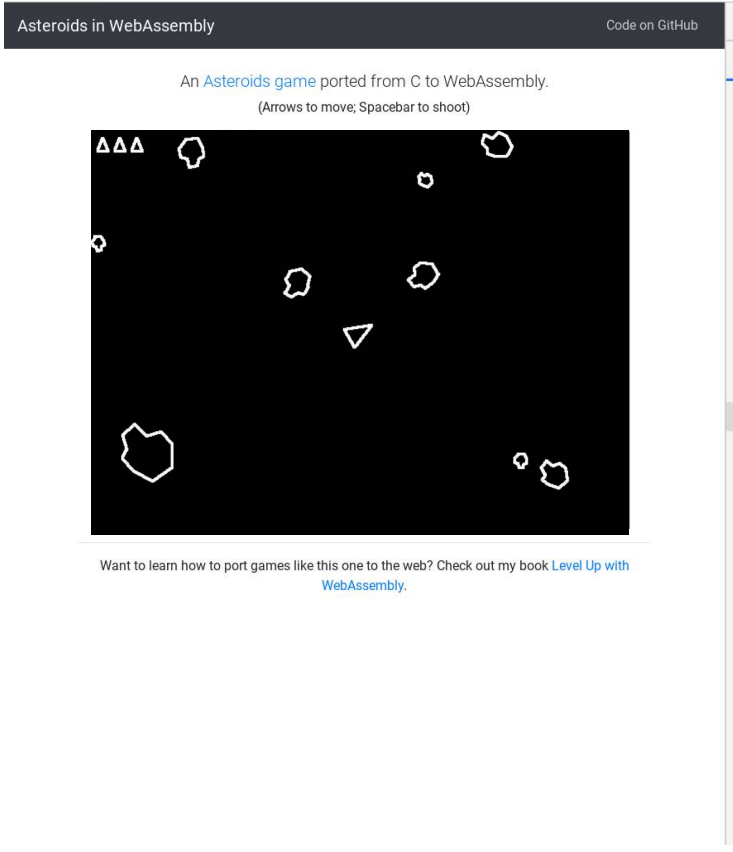
Written in C NOT JavaScript

levelupwasm.com
/apps/asteroids

What is WebAssembly



What is WebAssembly

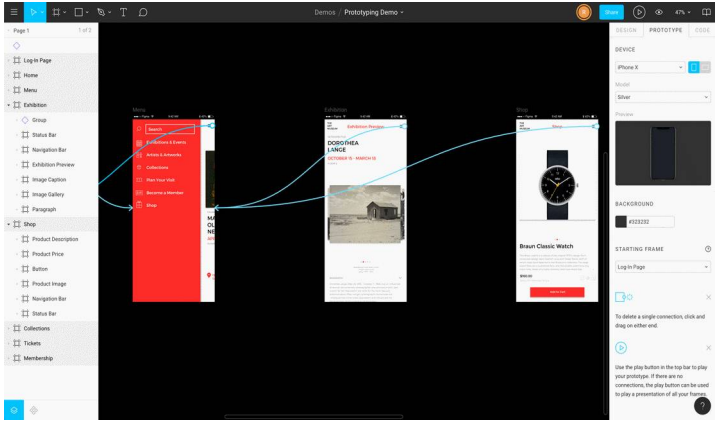


WebAssembly code (Wasam)

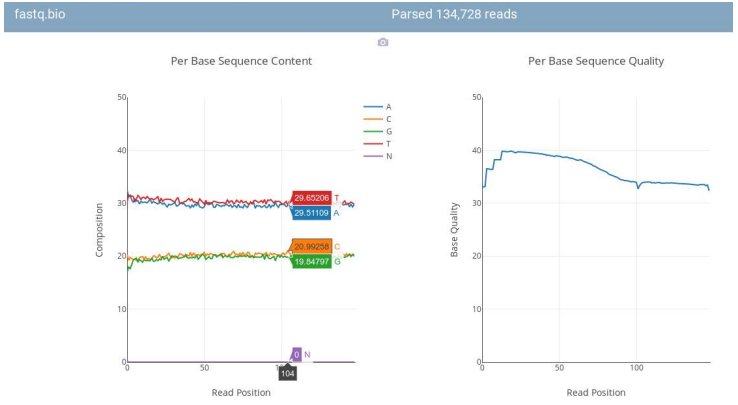
Compiled (converted) from C to WebAssembly to run directly in the browser

Why is WebAssembly important?

Faster than JavaScript



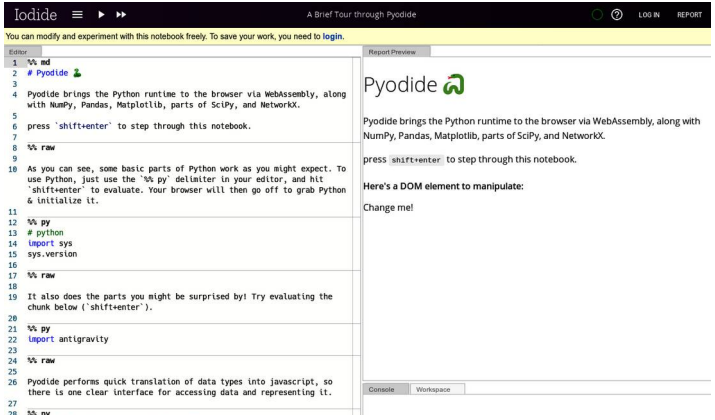
Figma 3X faster



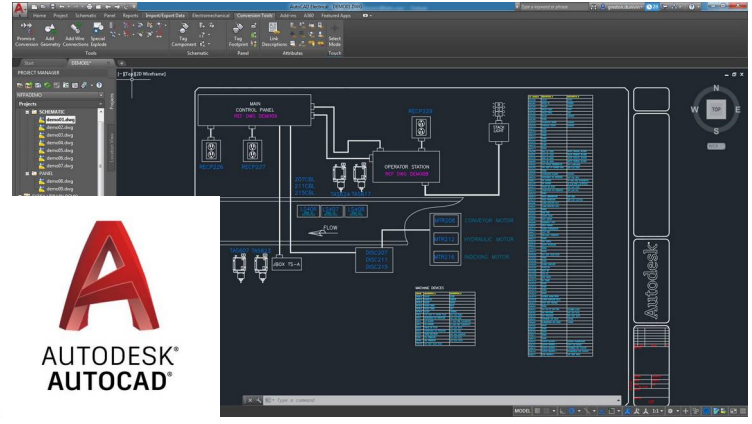
fastq.bio DNA sequencer 20X faster

Why is WebAssembly important?

Run established codebase



Pyodide is Python running on the browser via webAssembly for scientific and AI



AutoCAD web version uses identical codebase as desktop - C

TL;DR

WebAssembly Code is ‘shipped in’ via a binary blob

Allows faster execution than JavaScript

Allows established non JavaScript code via compiler to run on the web