

Turing50 + Evolve50

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<https://github.com/AlyShmahell/CS50>

Turing50

- Is a Turing Machine Language Implementation
- It only supports Integers like in the old days
- However, It supports 255 digits for each single Integer!

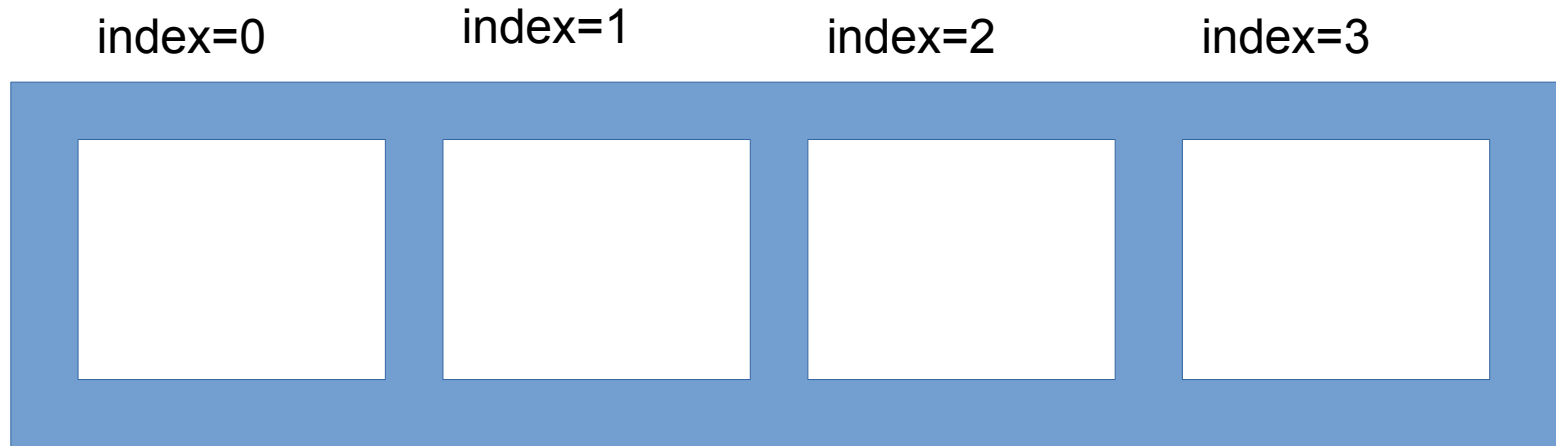
What is a Turing Machine?

Basically it's a machine that determines if an algorithm/operation is computable!

Vague ha?

Physically, it's a tape with squares that can store values, much like an array, with a read/write head, much like a pointer!

This is a Turing machine!

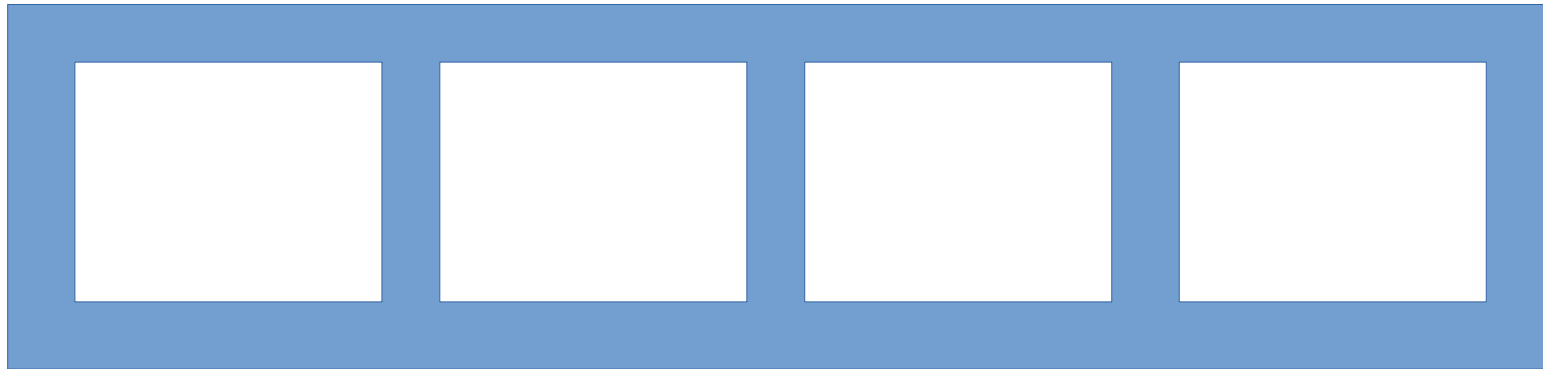


index=0

index=1

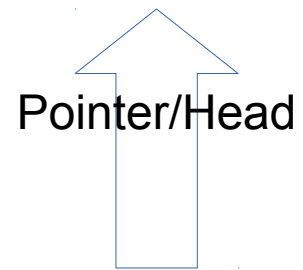
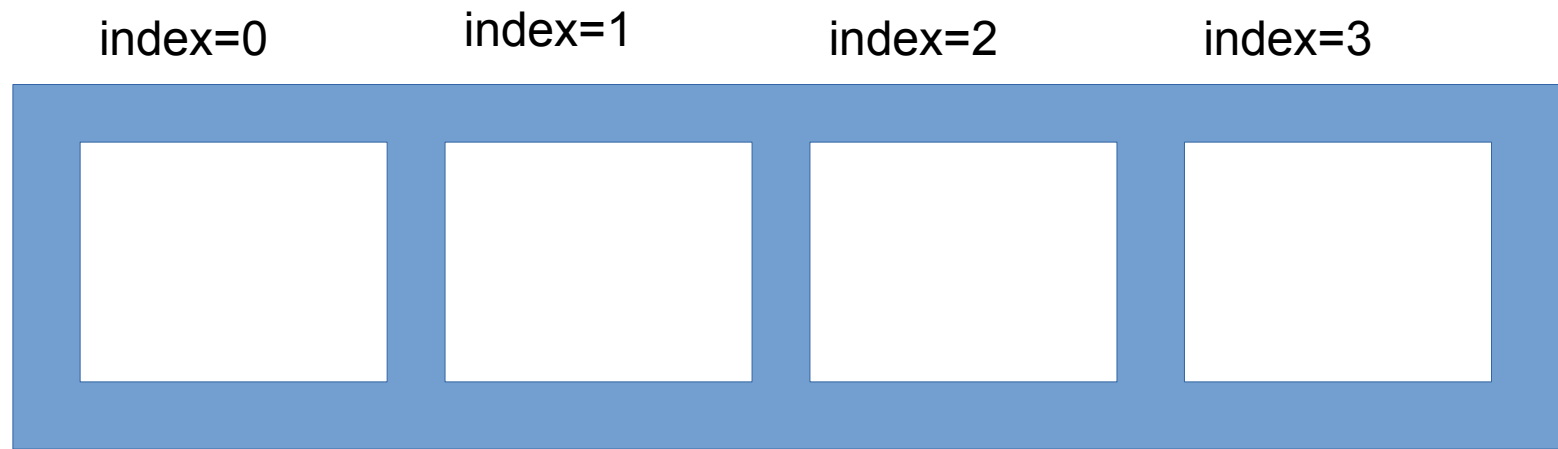
index=2

index=3



Pointer/Head



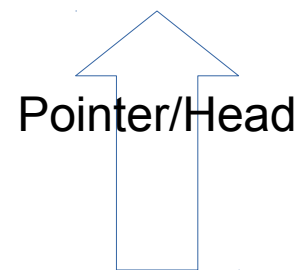


index=0

index=1

index=2

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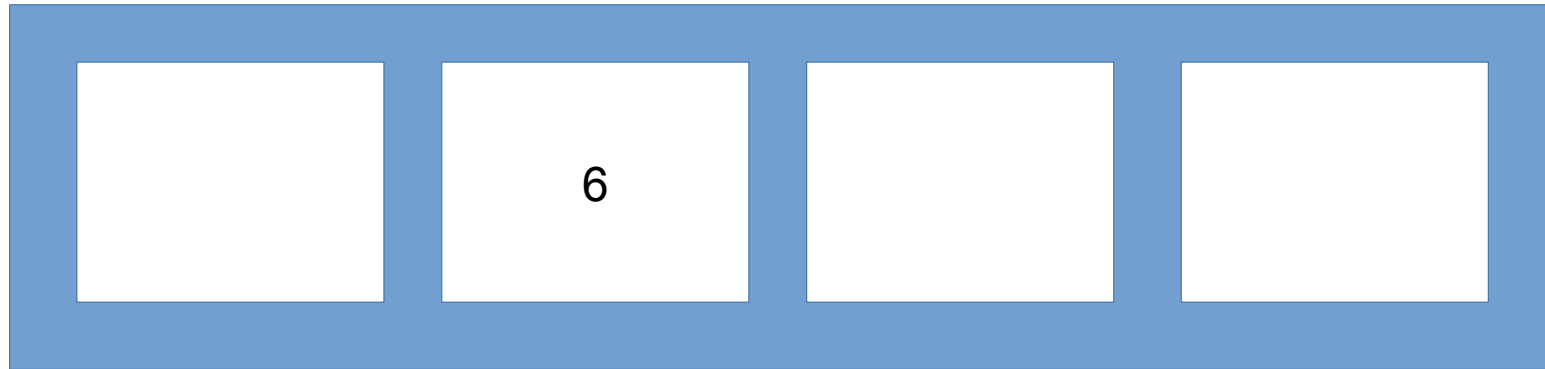


index=0

index=1

index=2

index=3



Pointer/Head

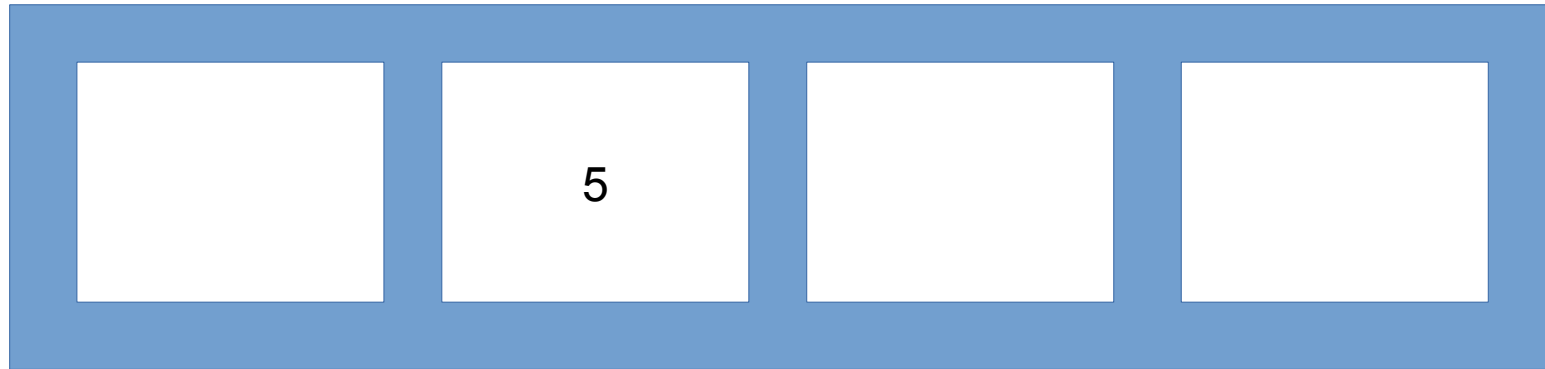


index=0

index=1

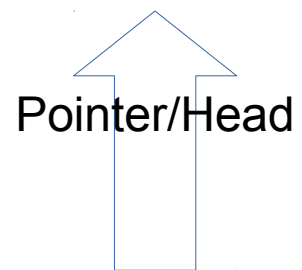
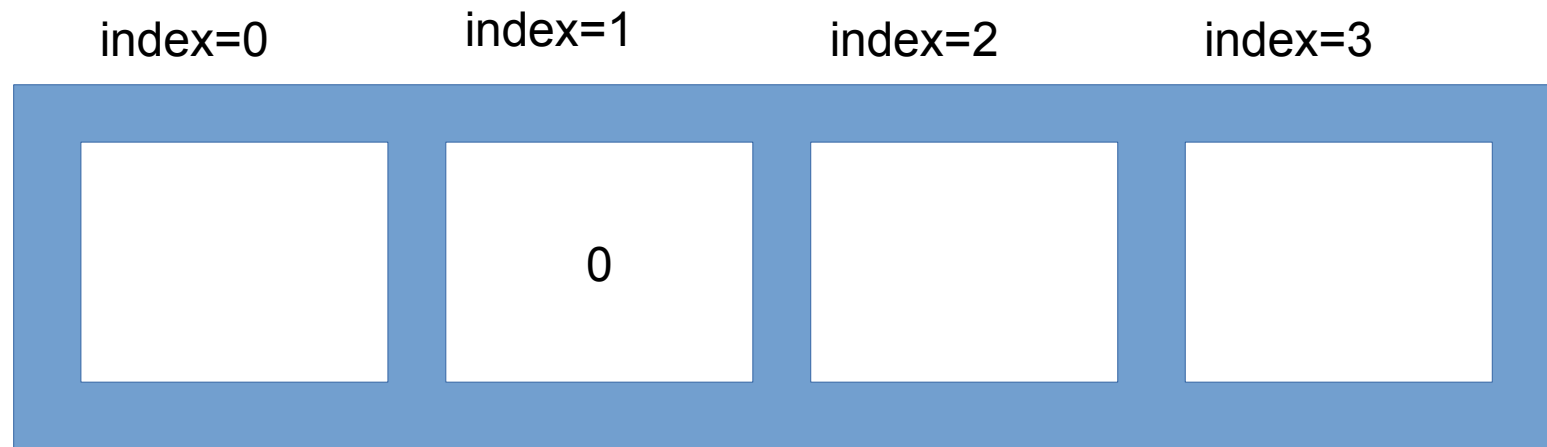
index=2

index=3



Pointer/Head





Evolve50

Is an AI tool that takes <Input, Output> Pairs, Then Generates Appropriate Turing50 Programs.

The Generated Turing50 Programs should take the Input from the Pair, then give the Output from the same pair.

Yes, Evolve50 is a general problem solver!

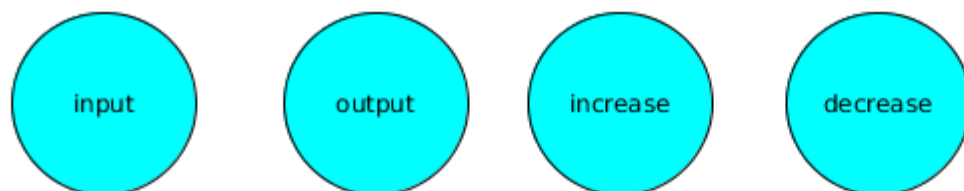
How does it do that?

Genetic Algorithms, Or a simple one for that matter!

It uses Turing50 Commands as DNA then does the following:

- 1) Test the command.
- 2) If the command gives The desired output, stop everything and declare that a solution!
- 2) If the command gives neither good or bad solutions, pass it to the next generation after pairing it with other commands!
- 3) If the command gives a bad result, kill it, and prohibit it from having offspring with other commands!

Gen 0



Gen 1

