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#bionodehack

BIONODE.IO

Tutorial

STREAMS

Streams are a first-class construct in Node.js for handling data.

PROCESS DATA IN CHUNKS

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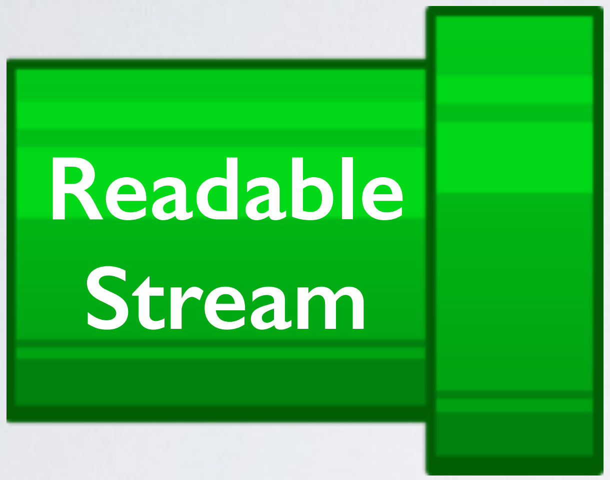

fs.createReadStream(file)

request(url)

process.stdin()

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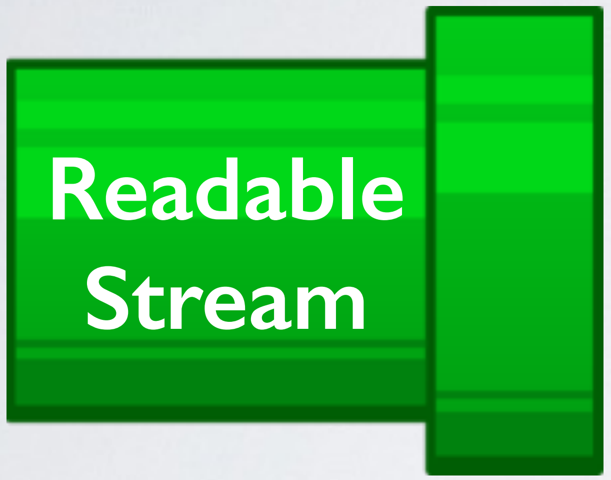

.pipe(   )

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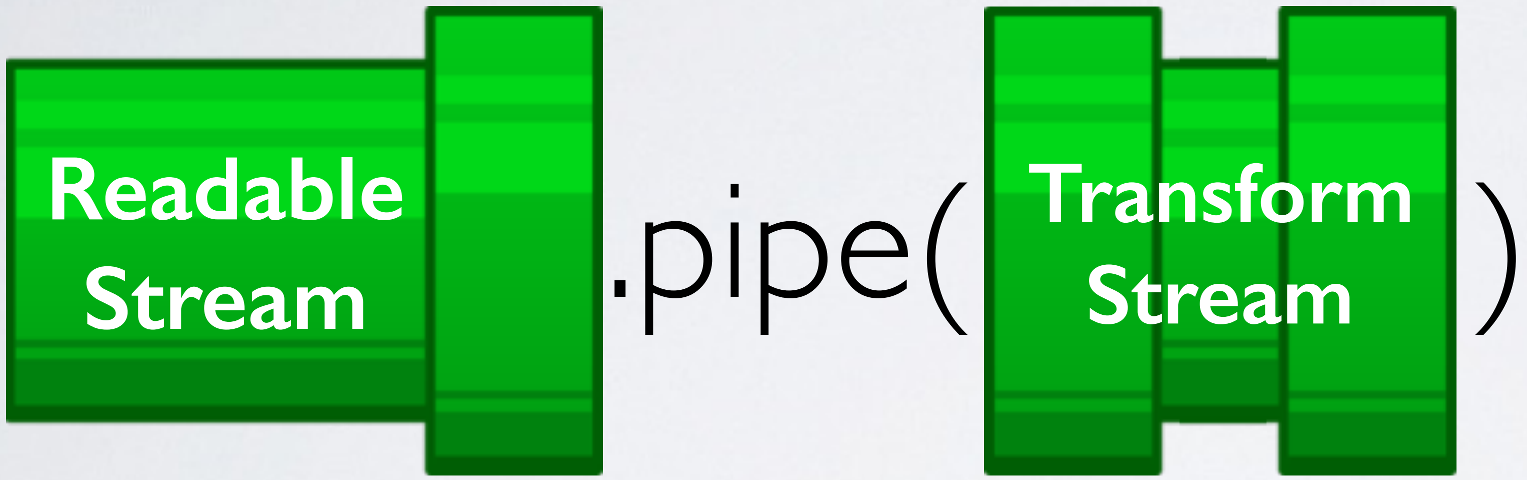

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filterFunction()

multithreadAnalysis()

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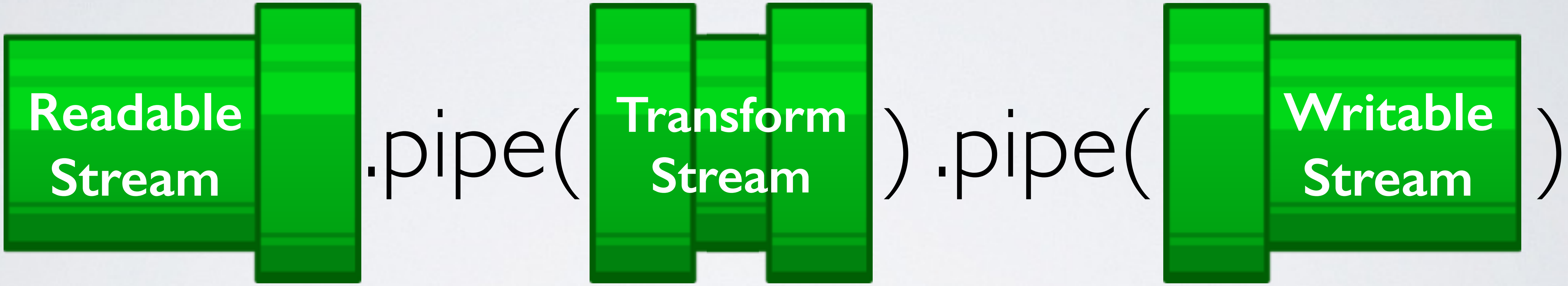

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fs.createWriteStream(file)

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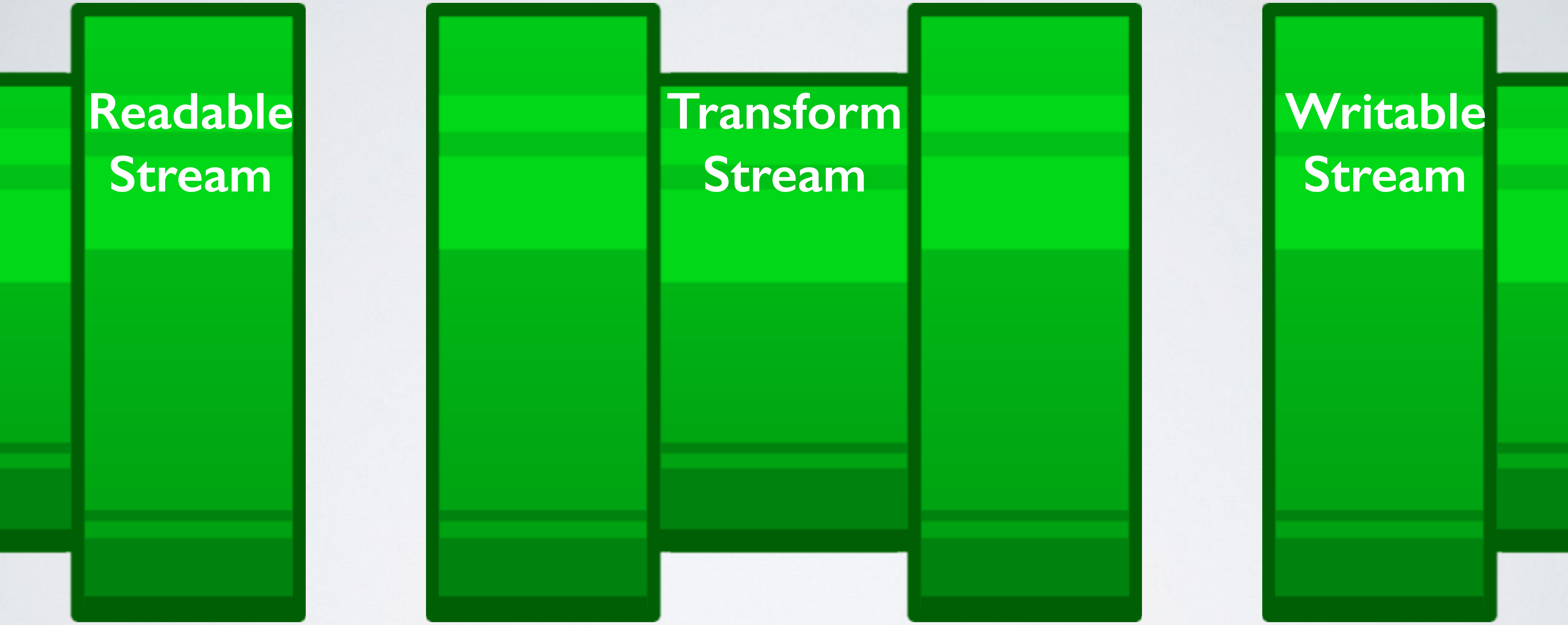
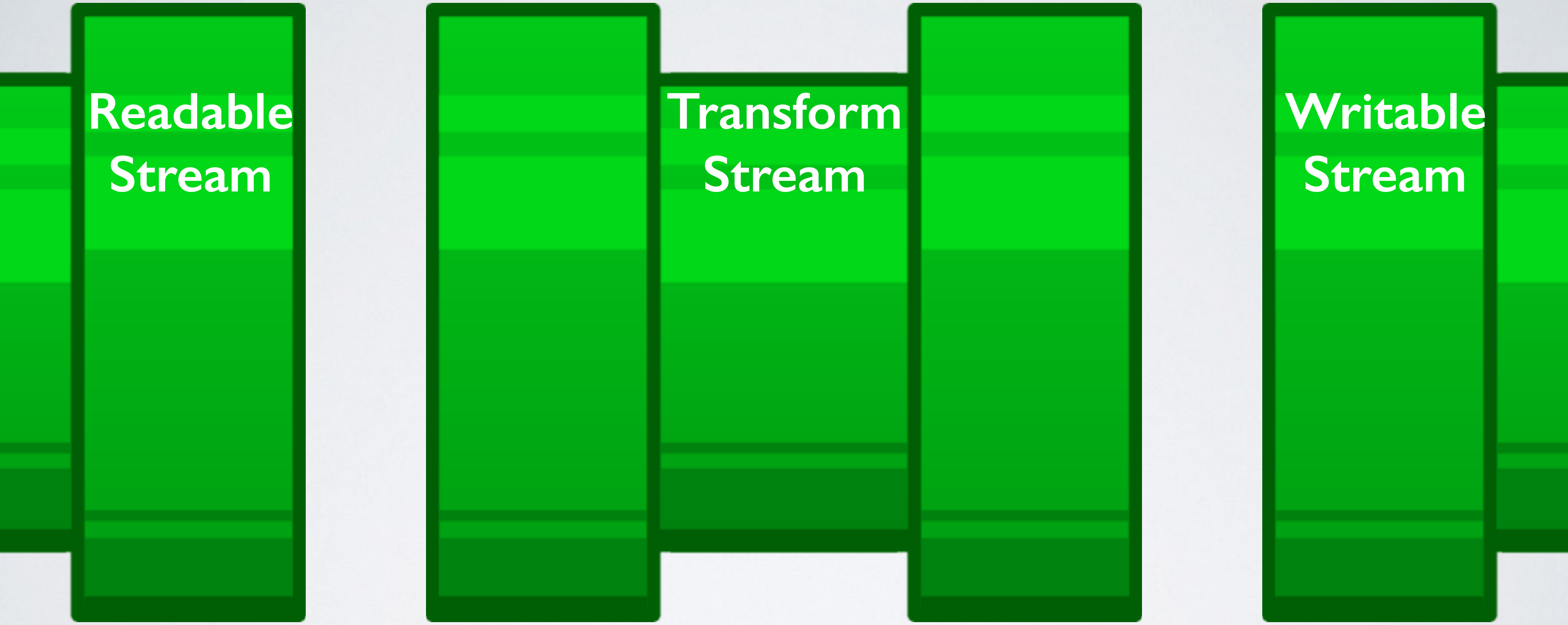

Readable Stream
Transform Stream
Writable Stream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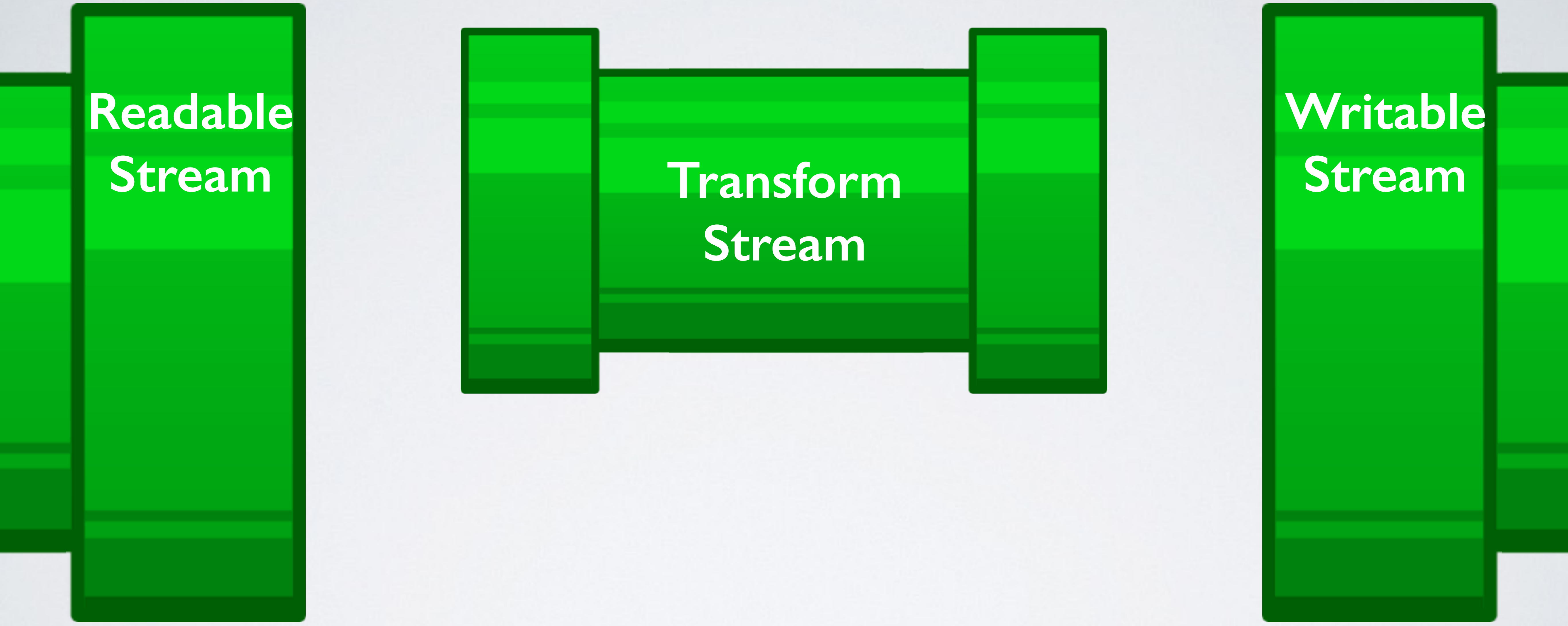
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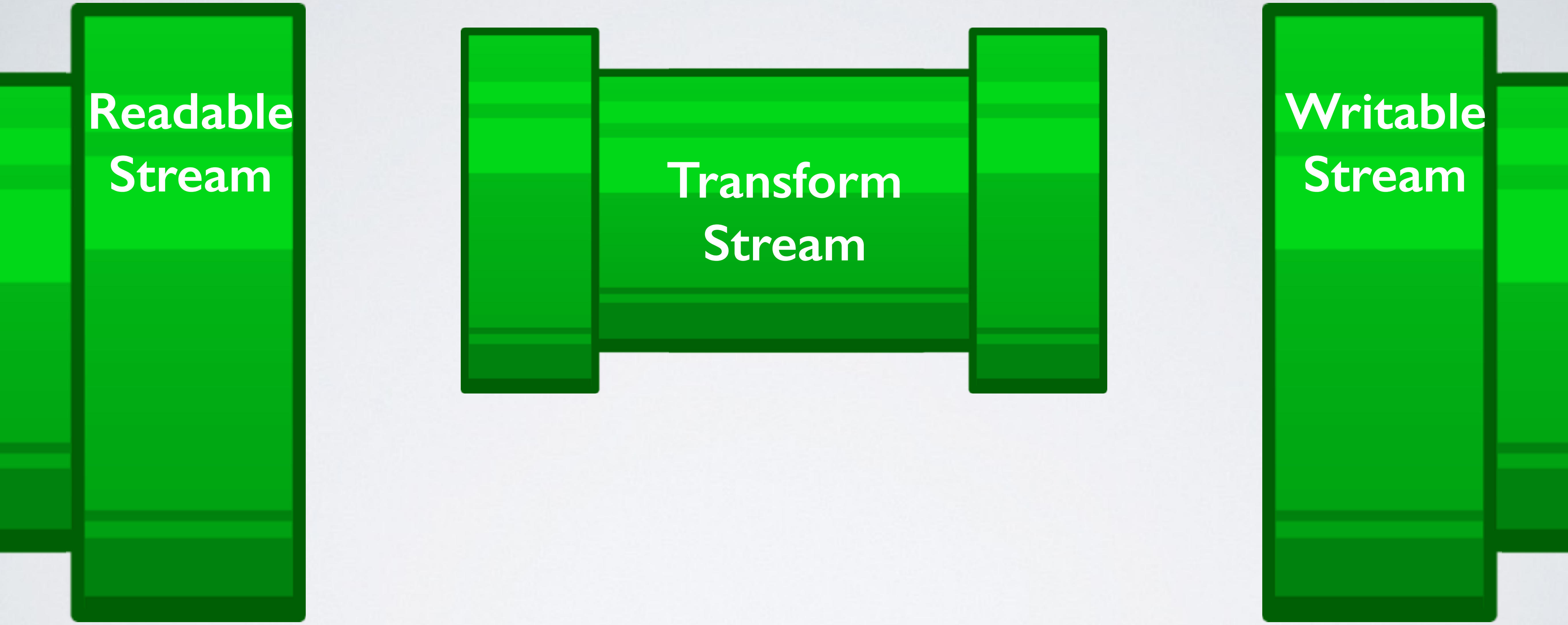
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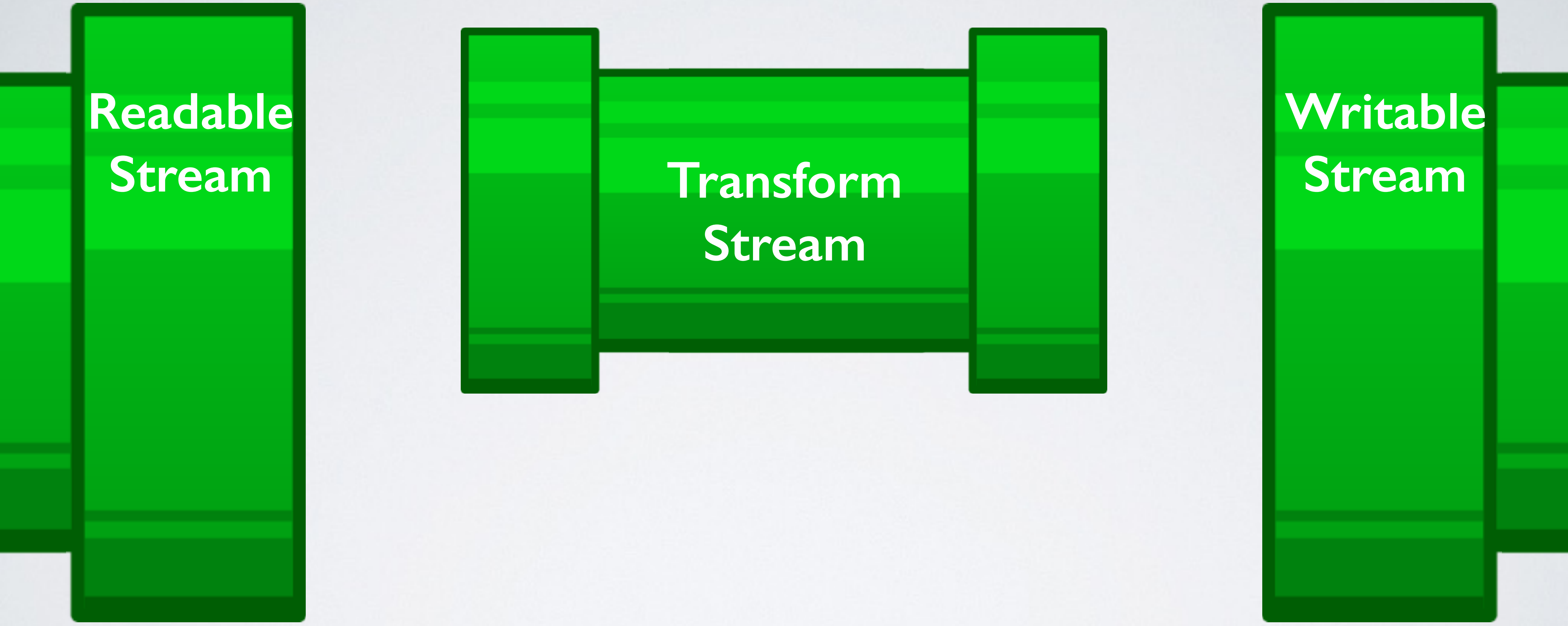
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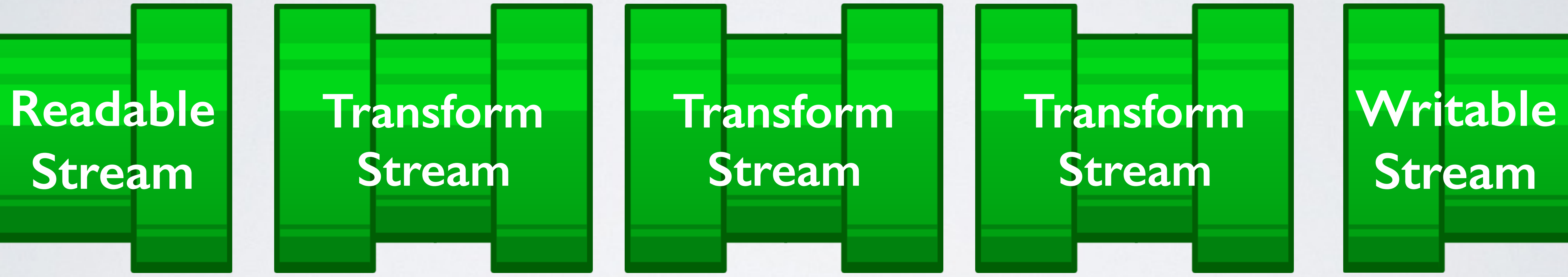

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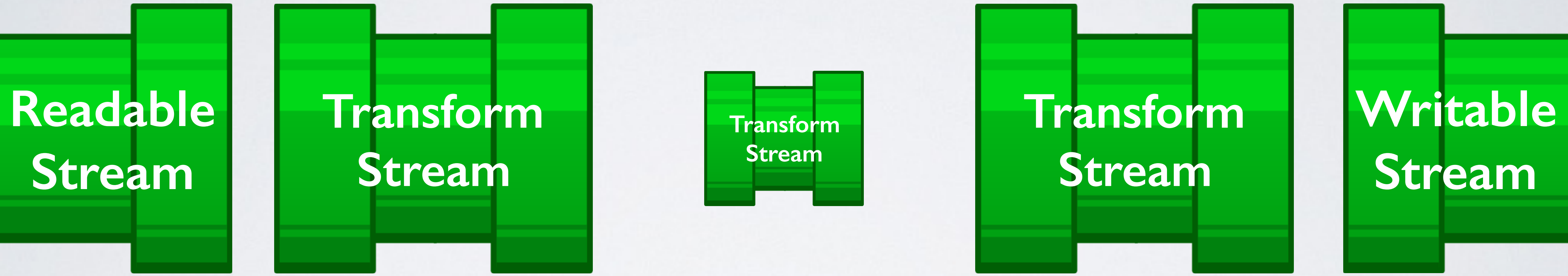

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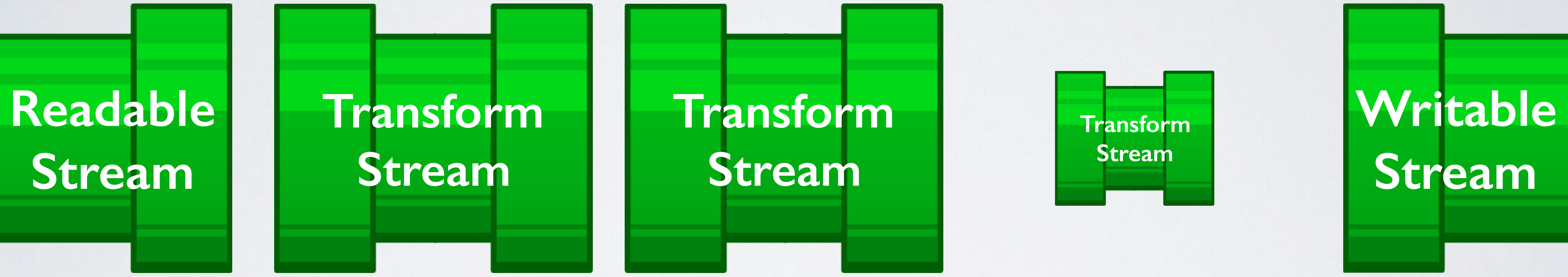

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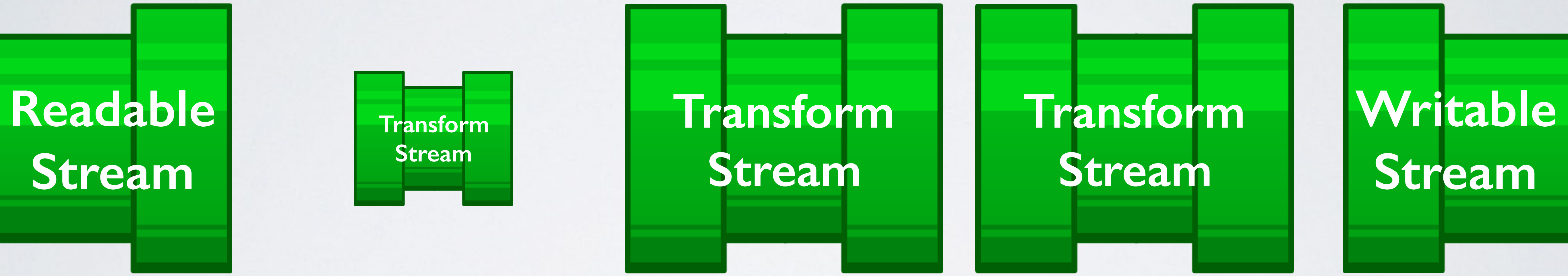

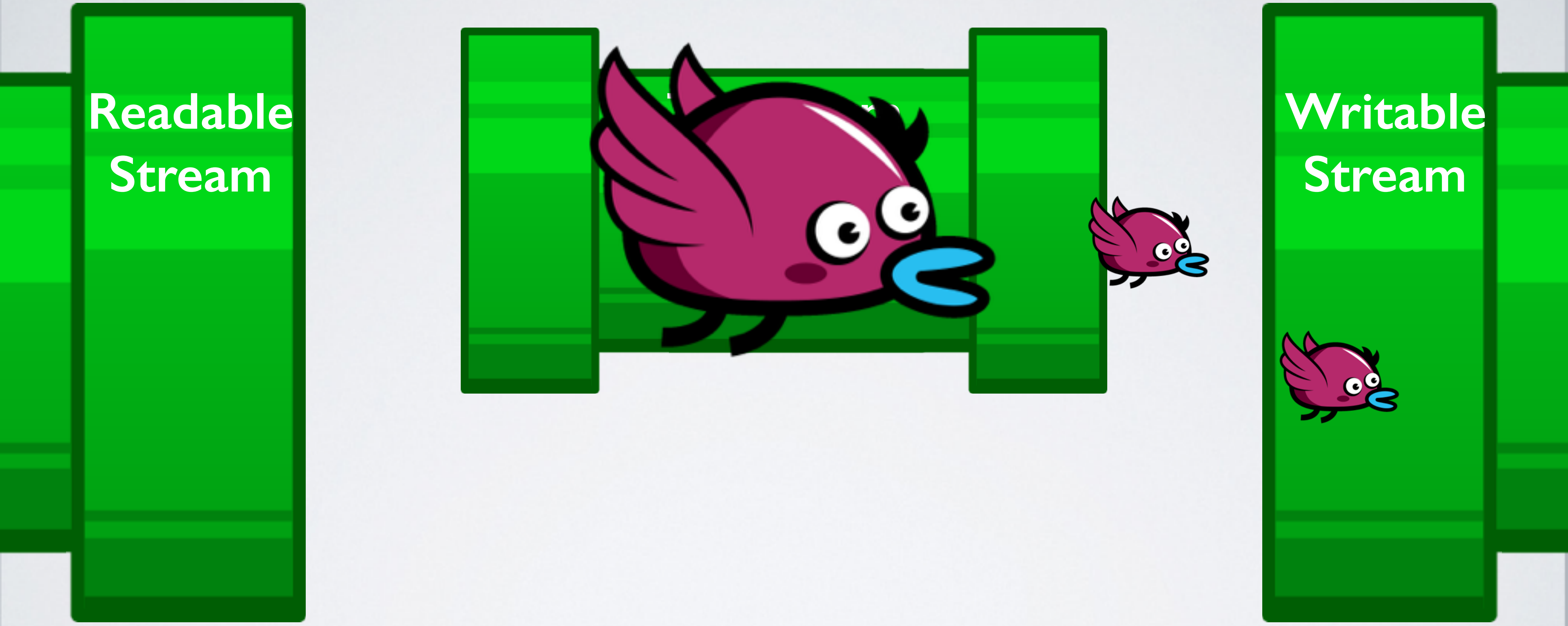
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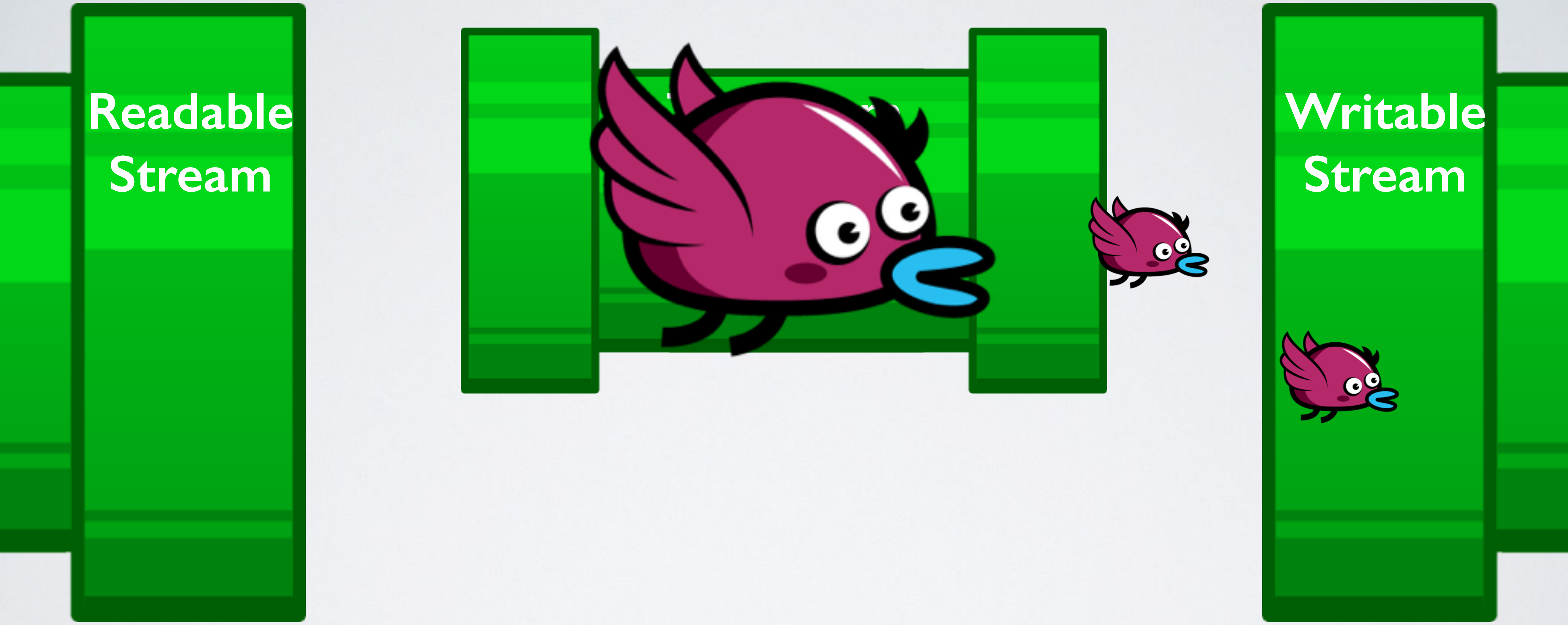
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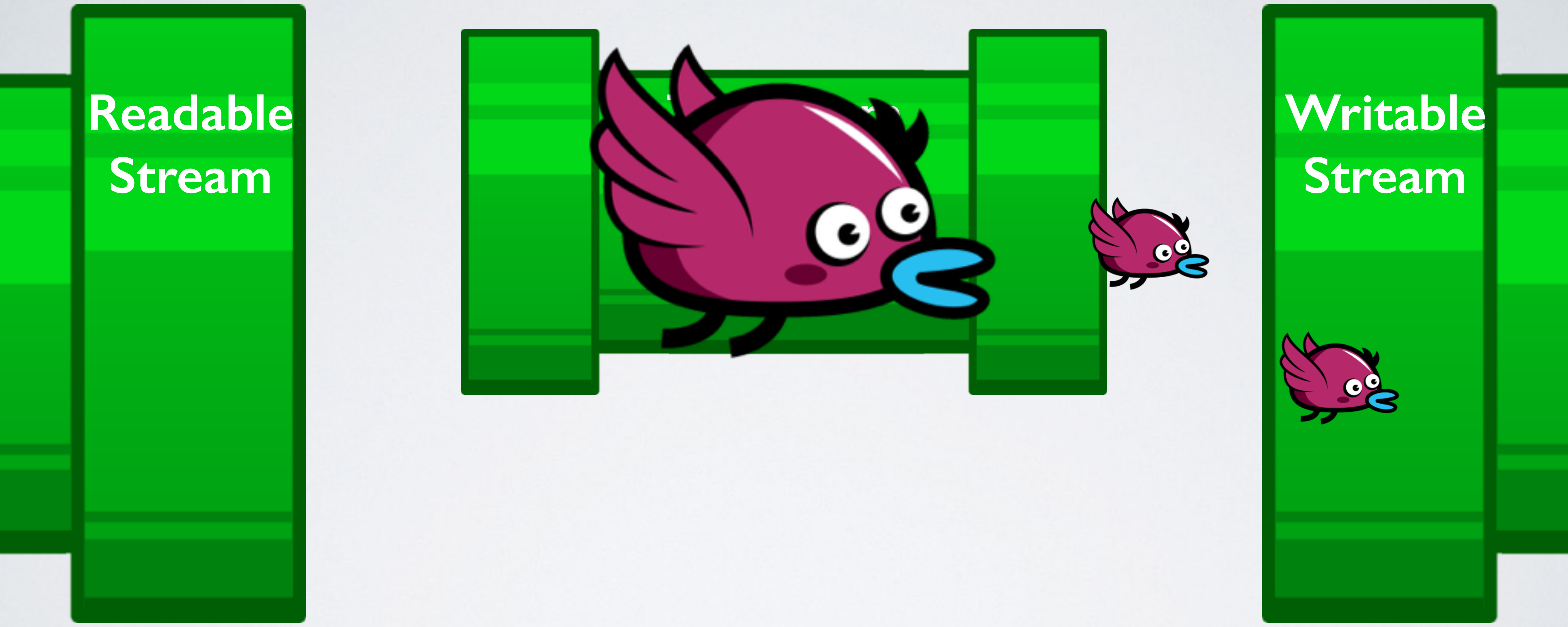
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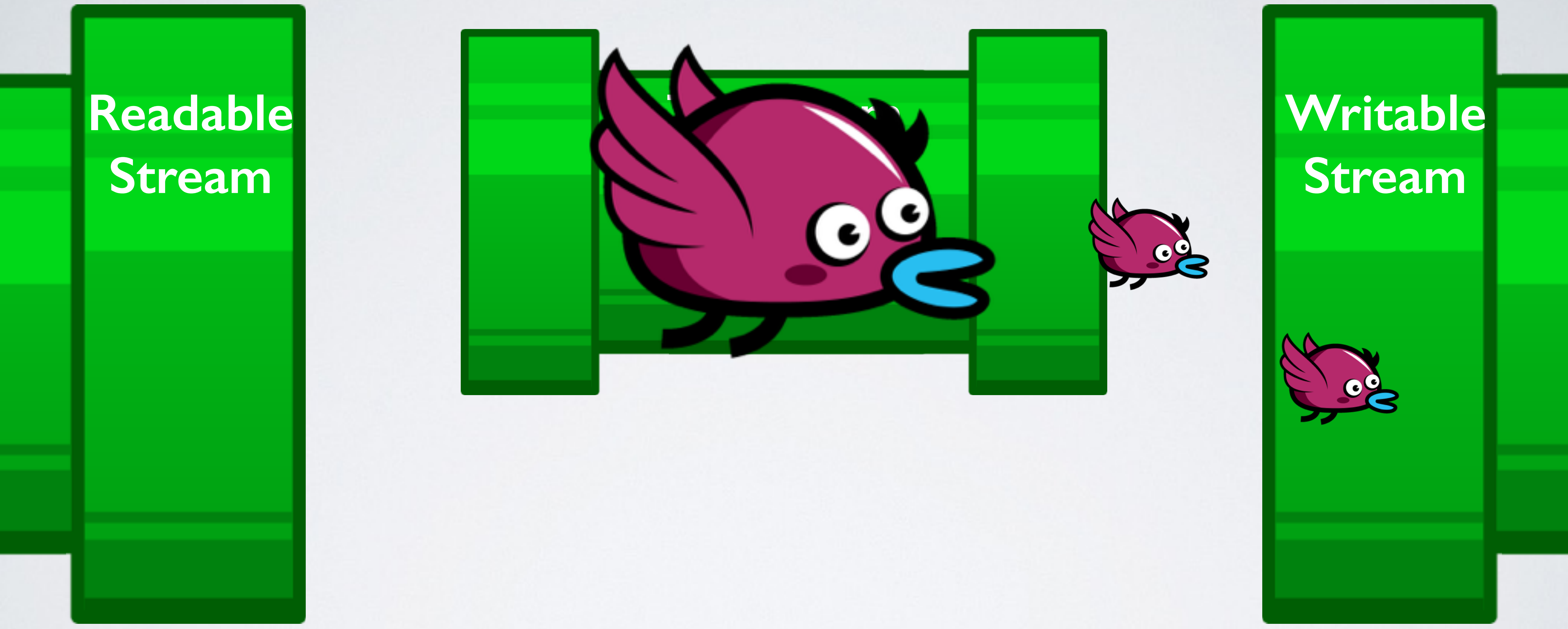
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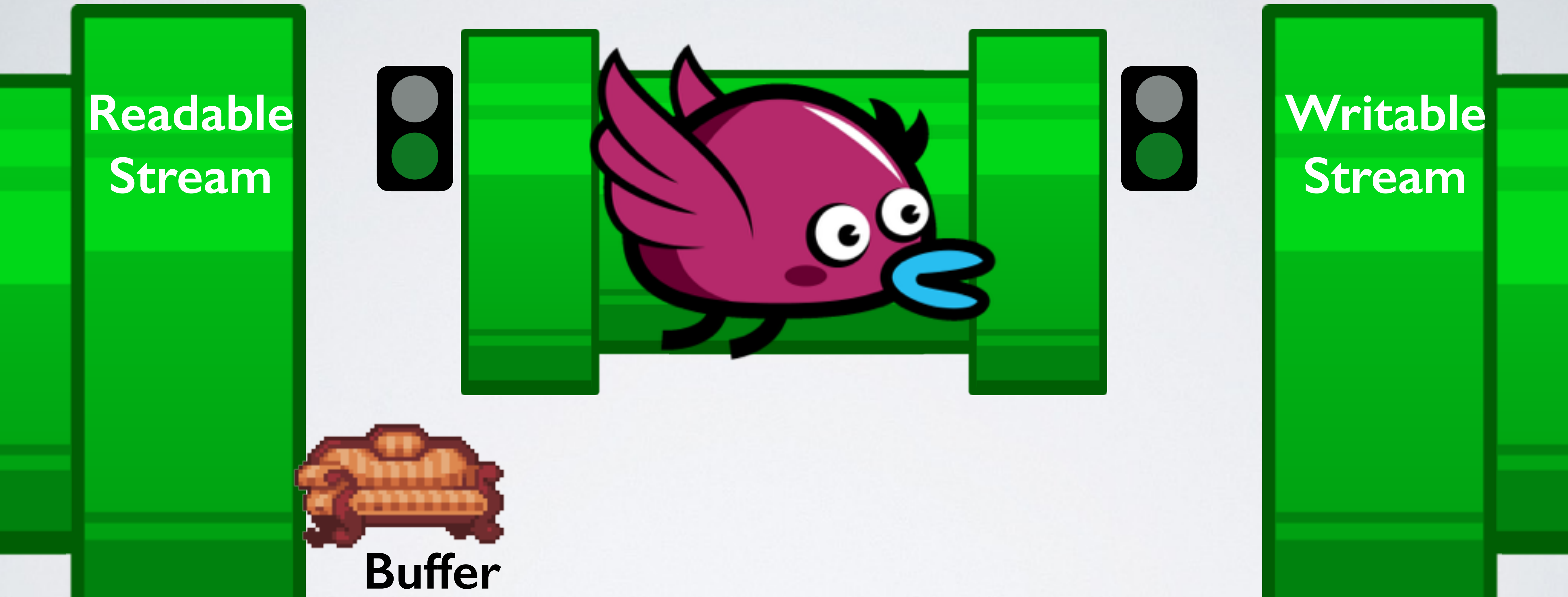
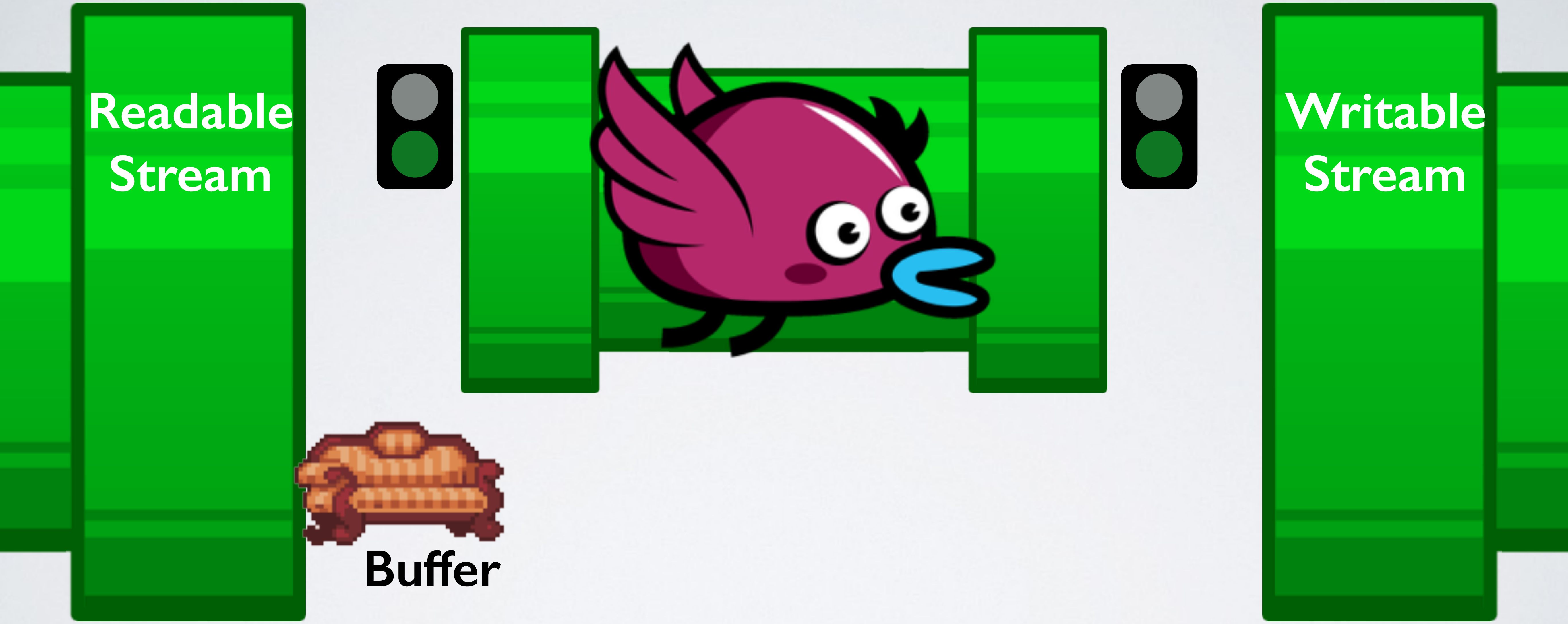

Readable Stream
Buffer
Writable Stream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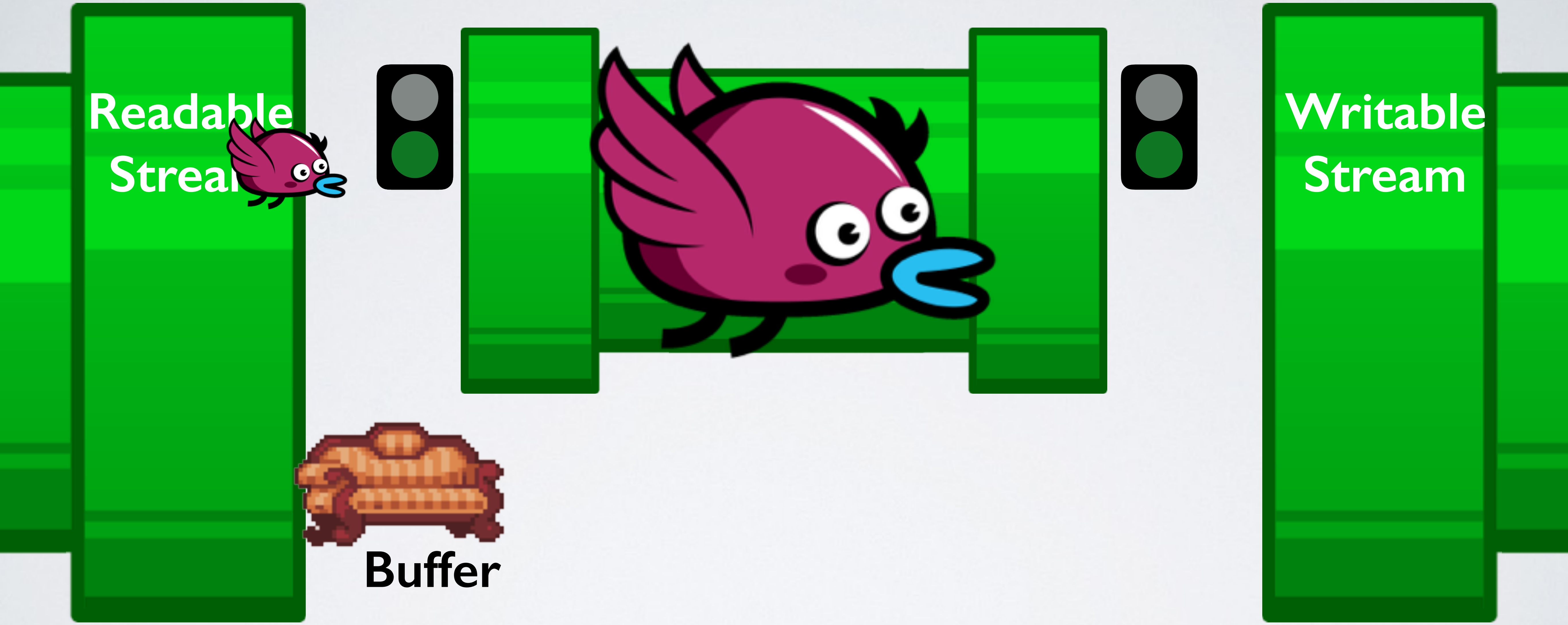
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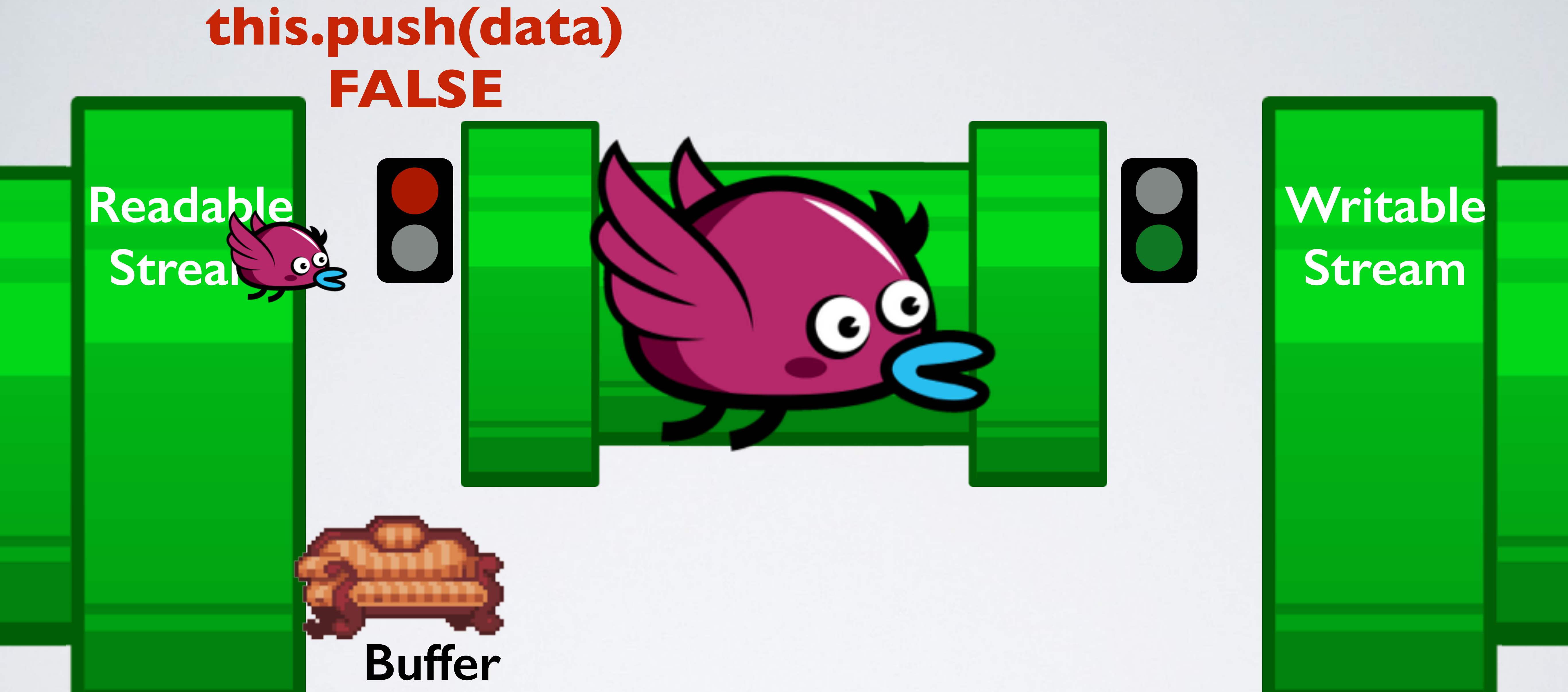
this.push(data)
FALSE
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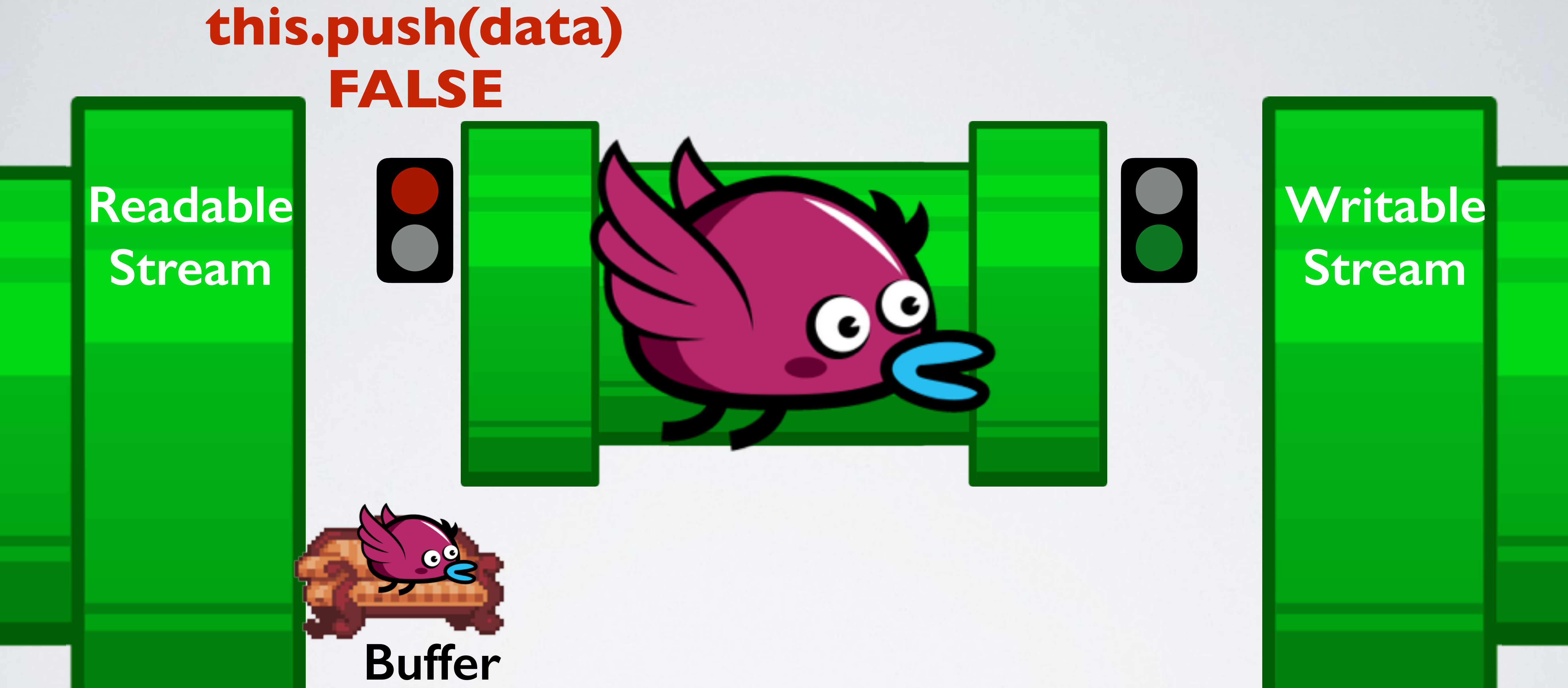
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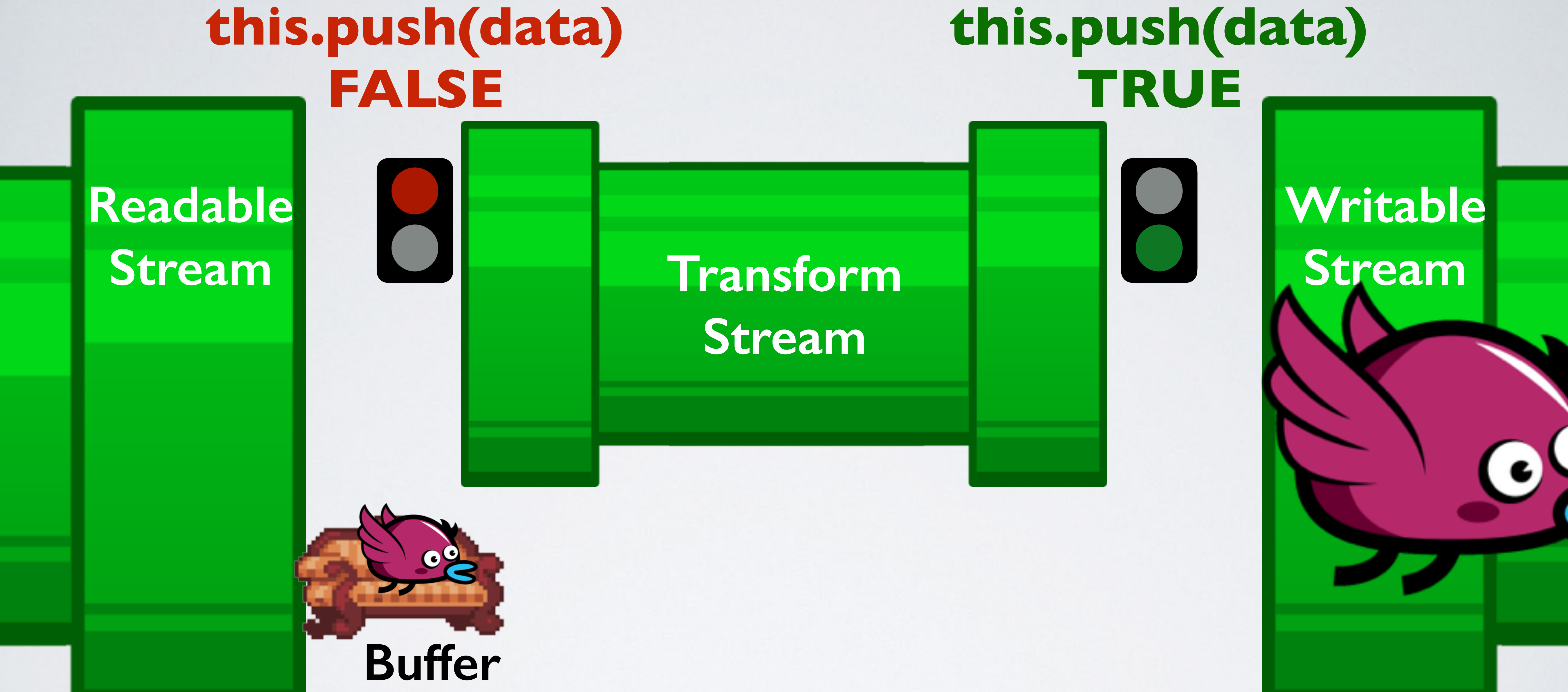
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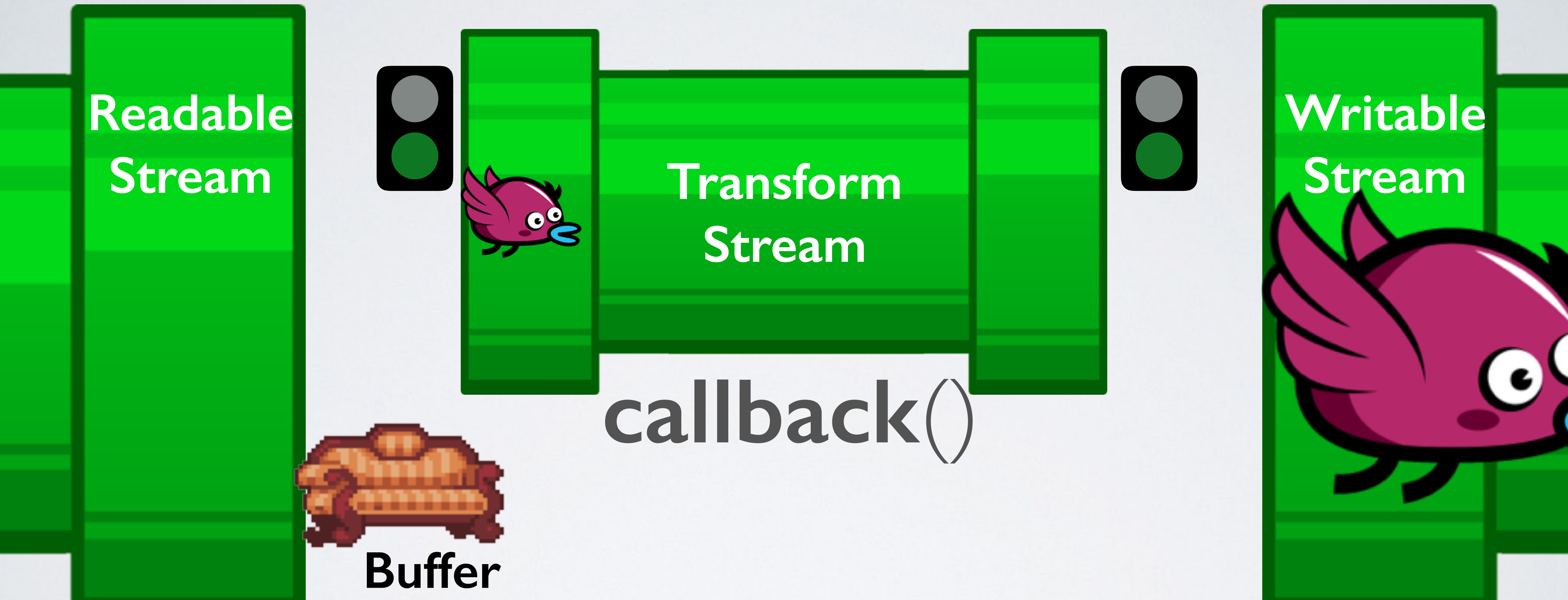
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callback()
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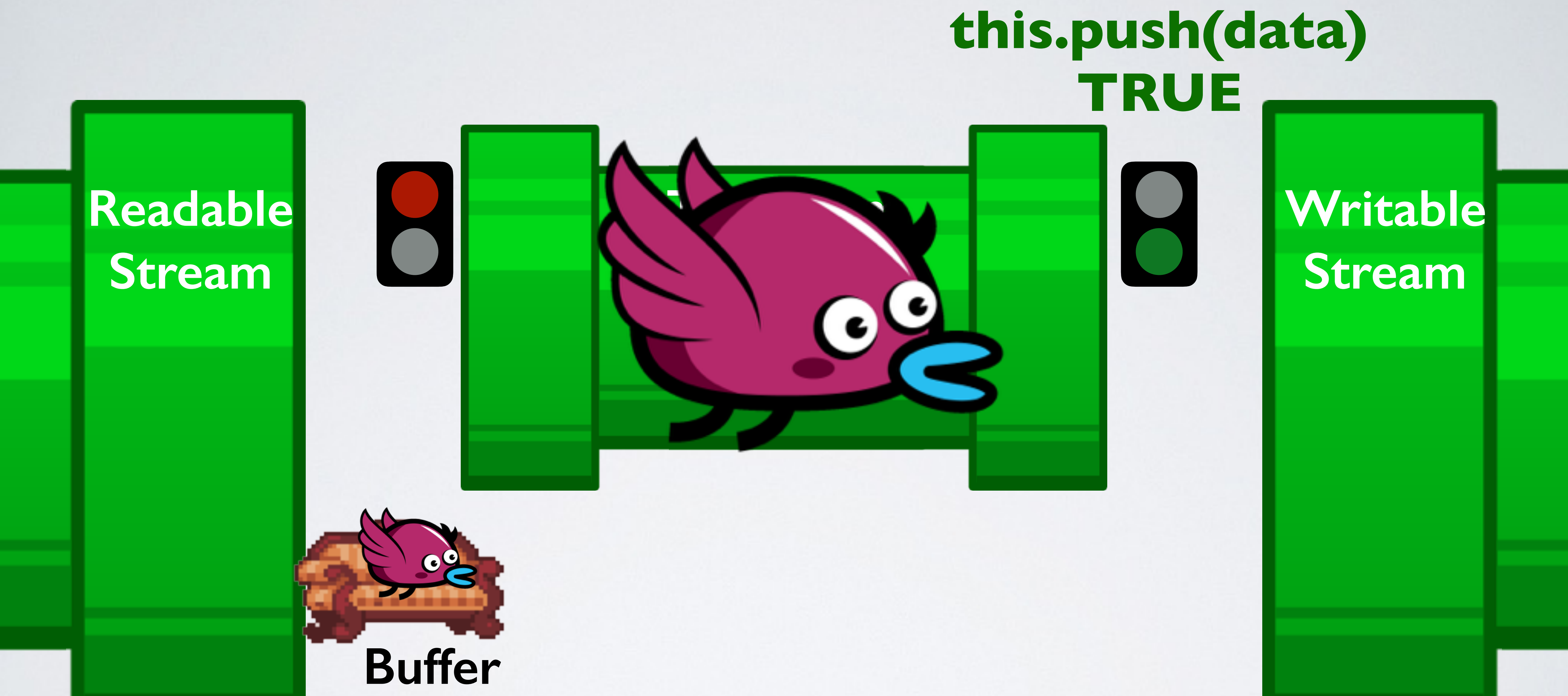
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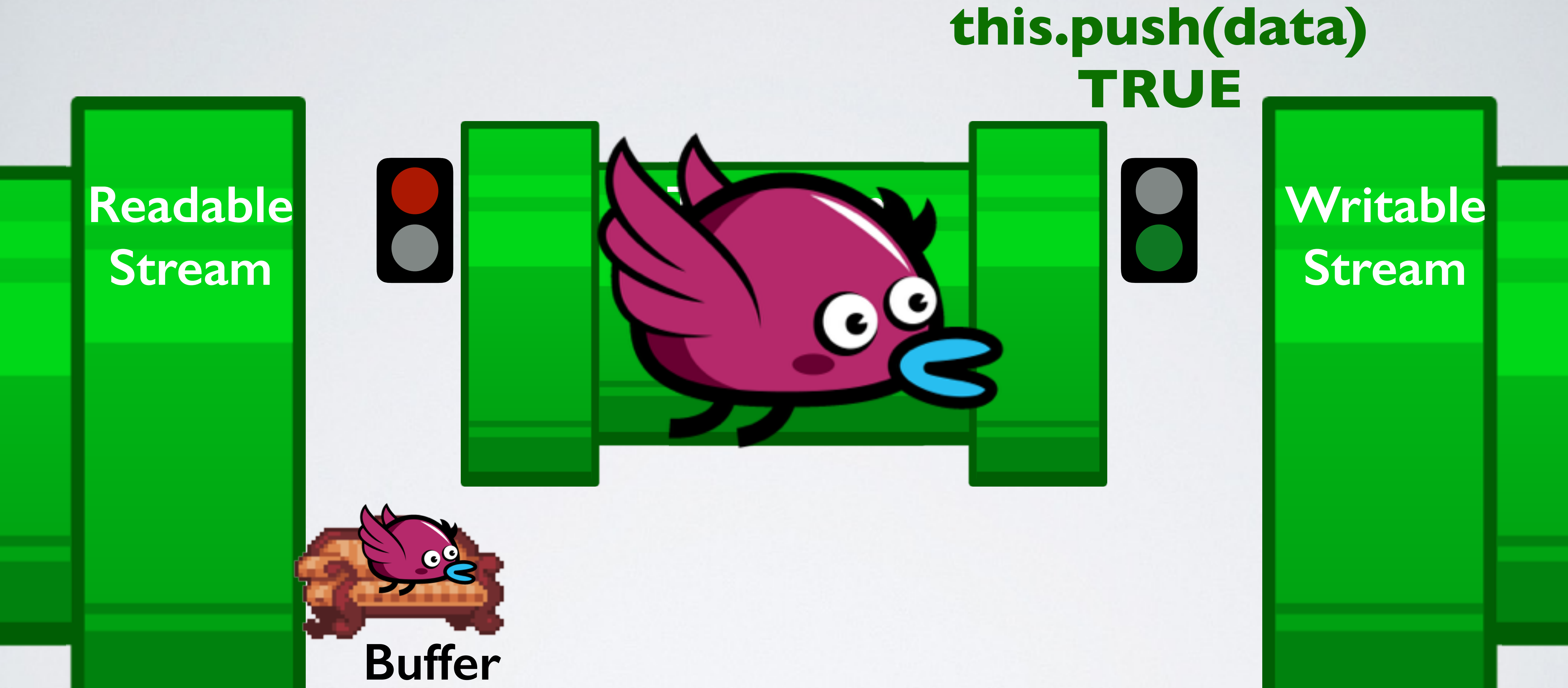
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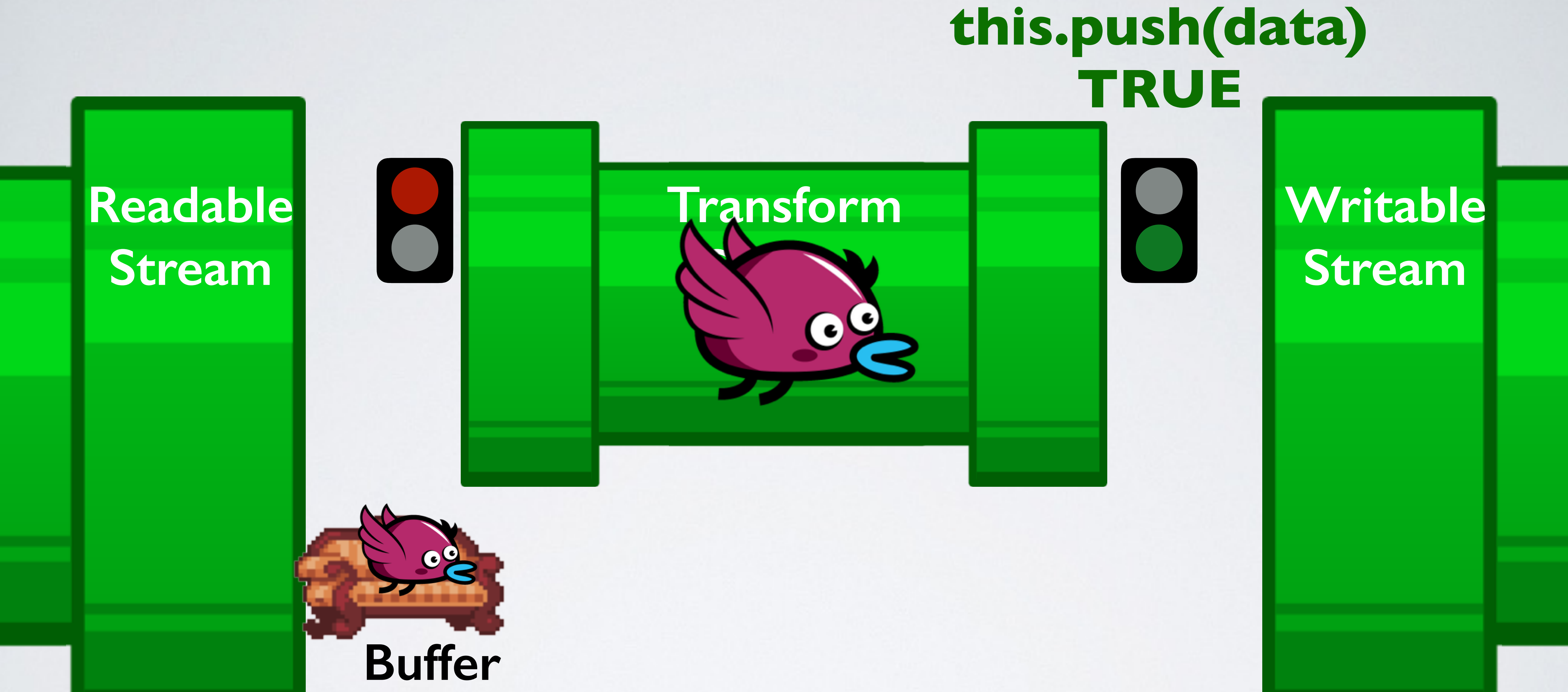
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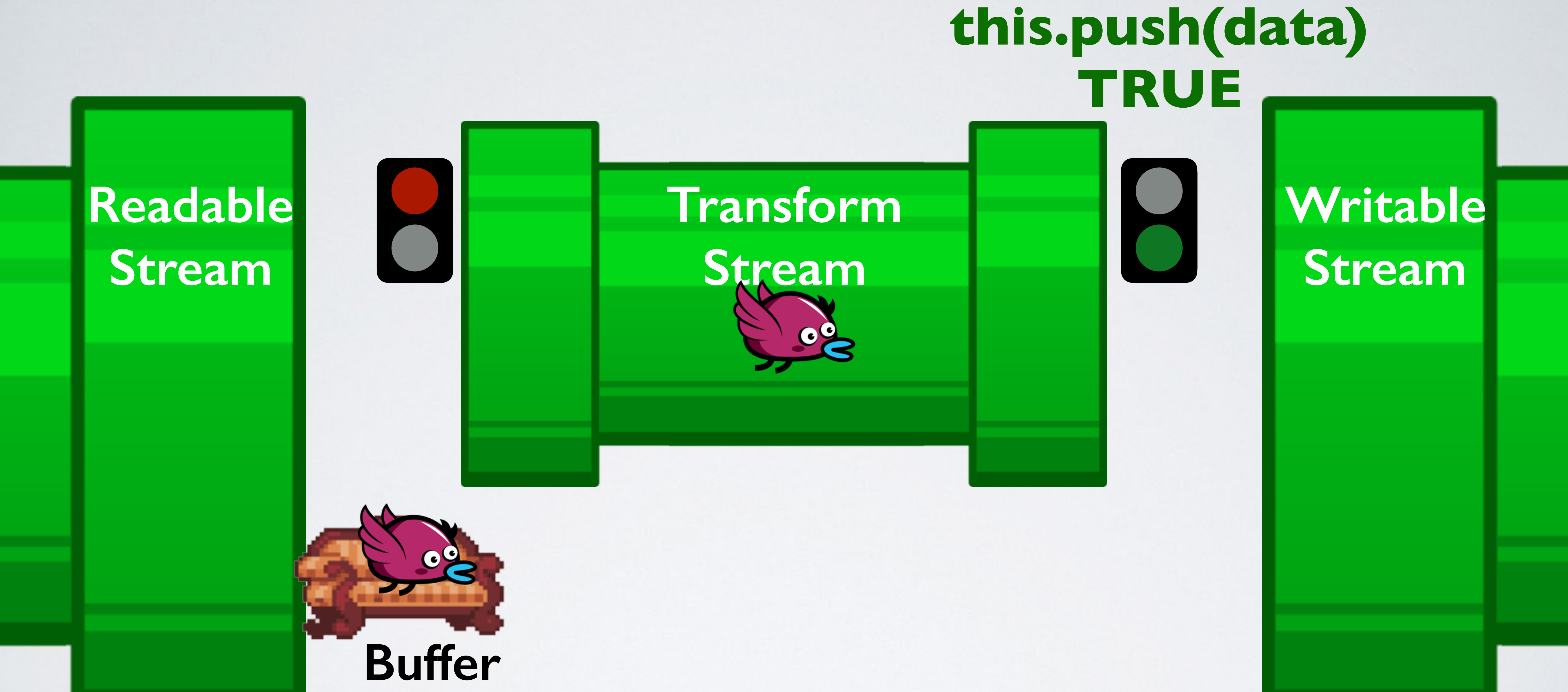
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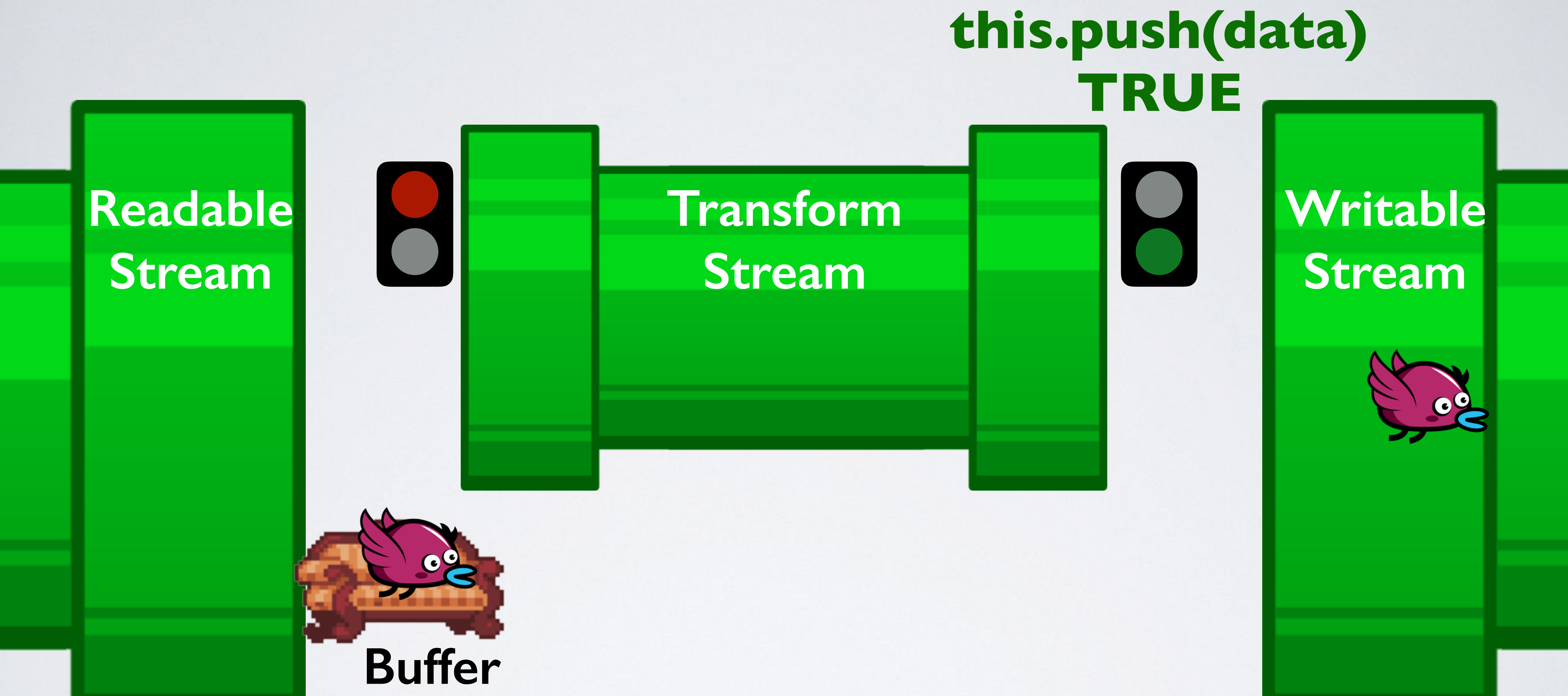
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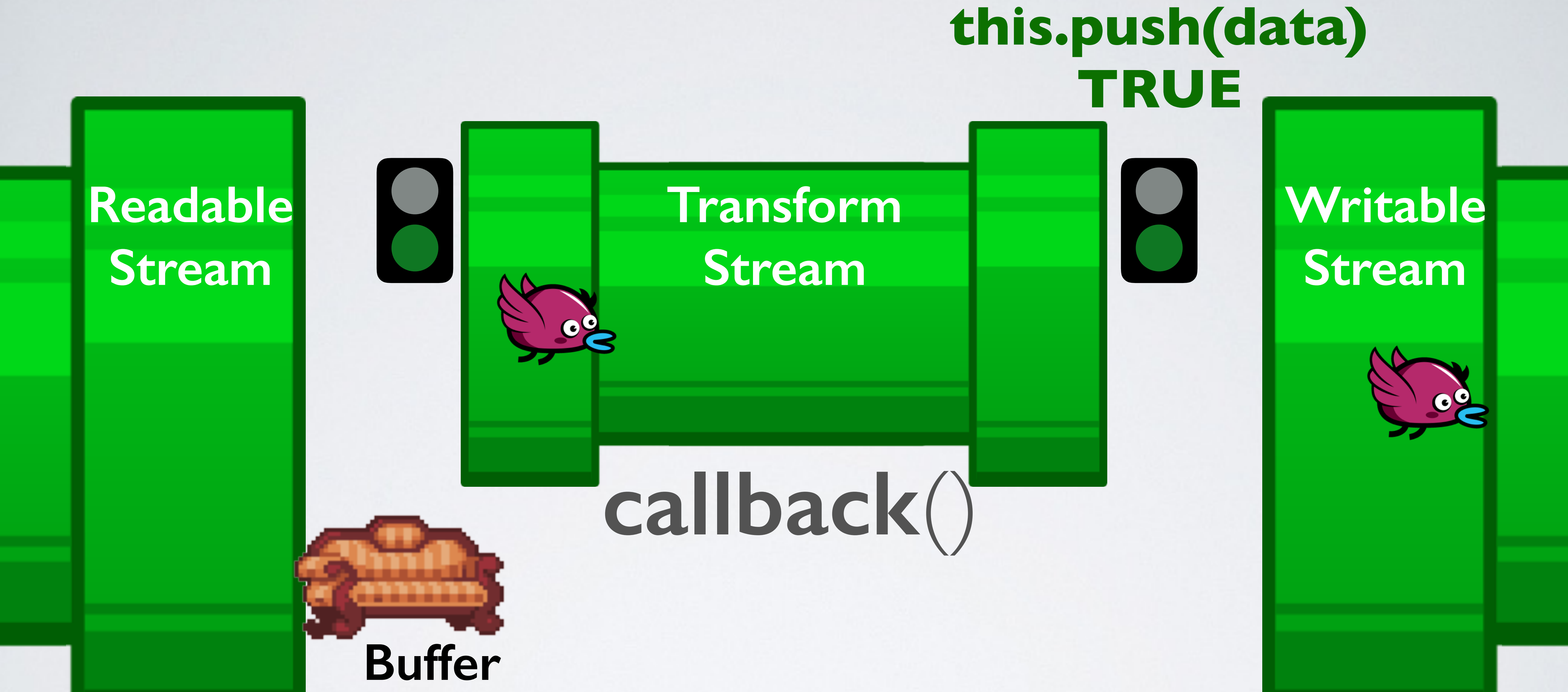
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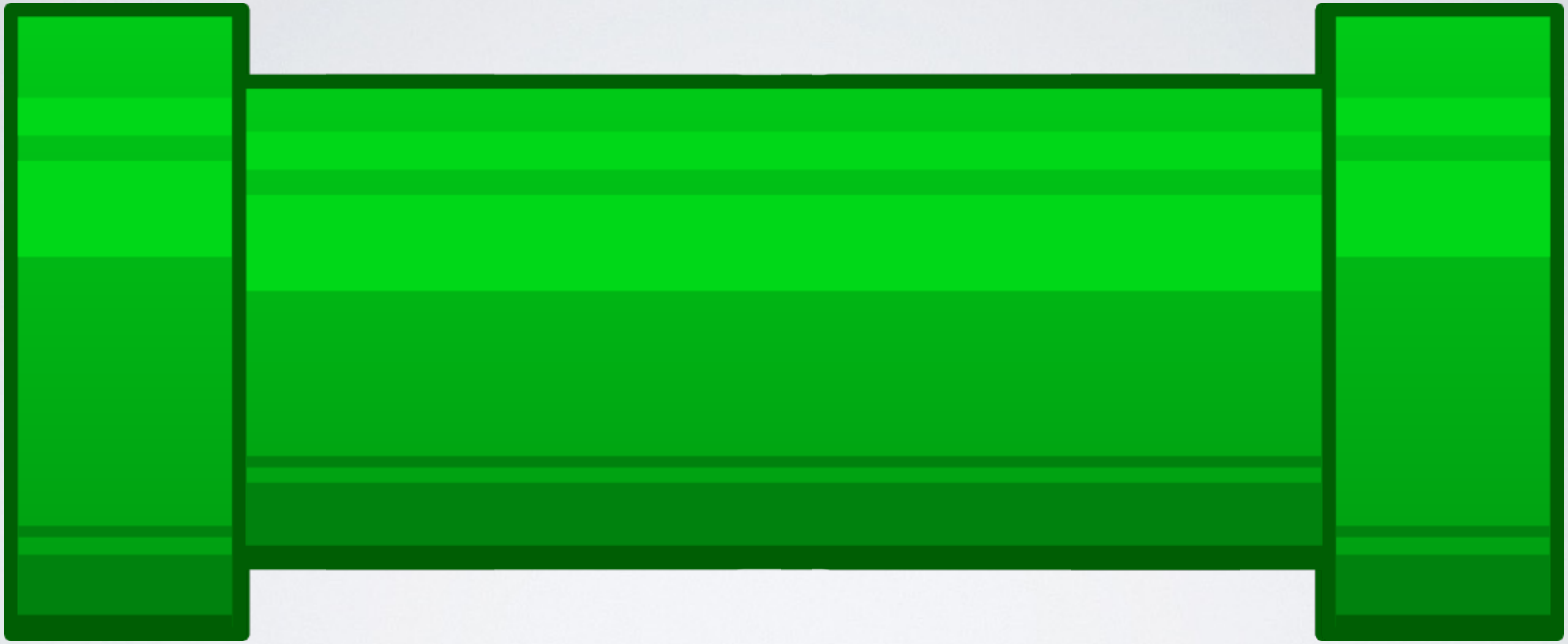
DUPLEX STREAM



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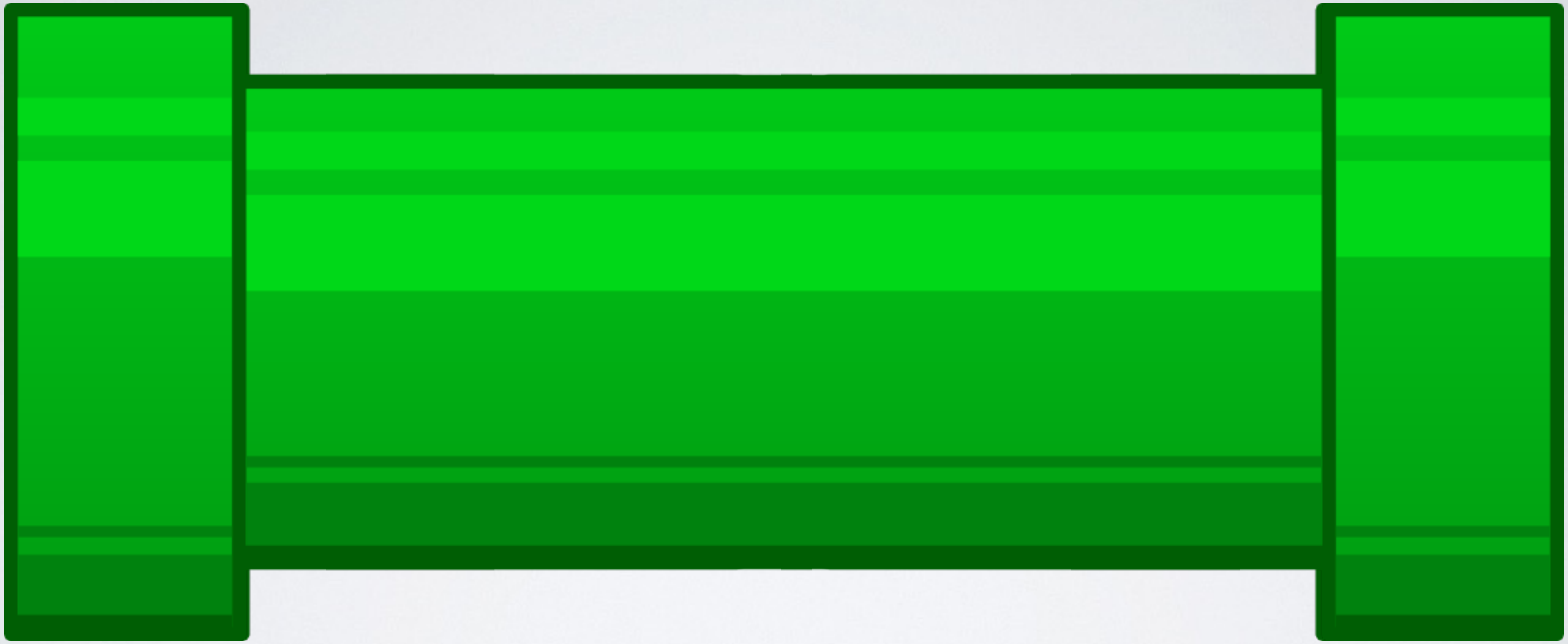

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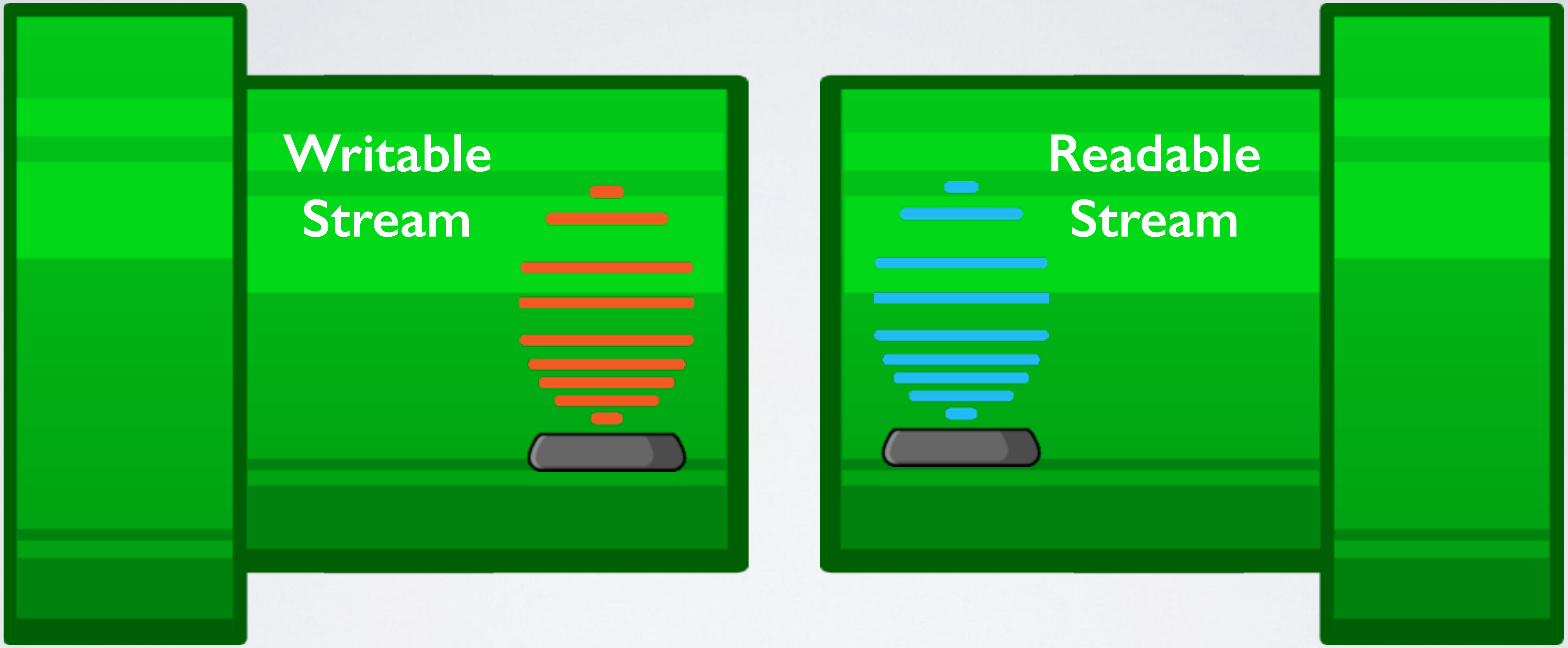

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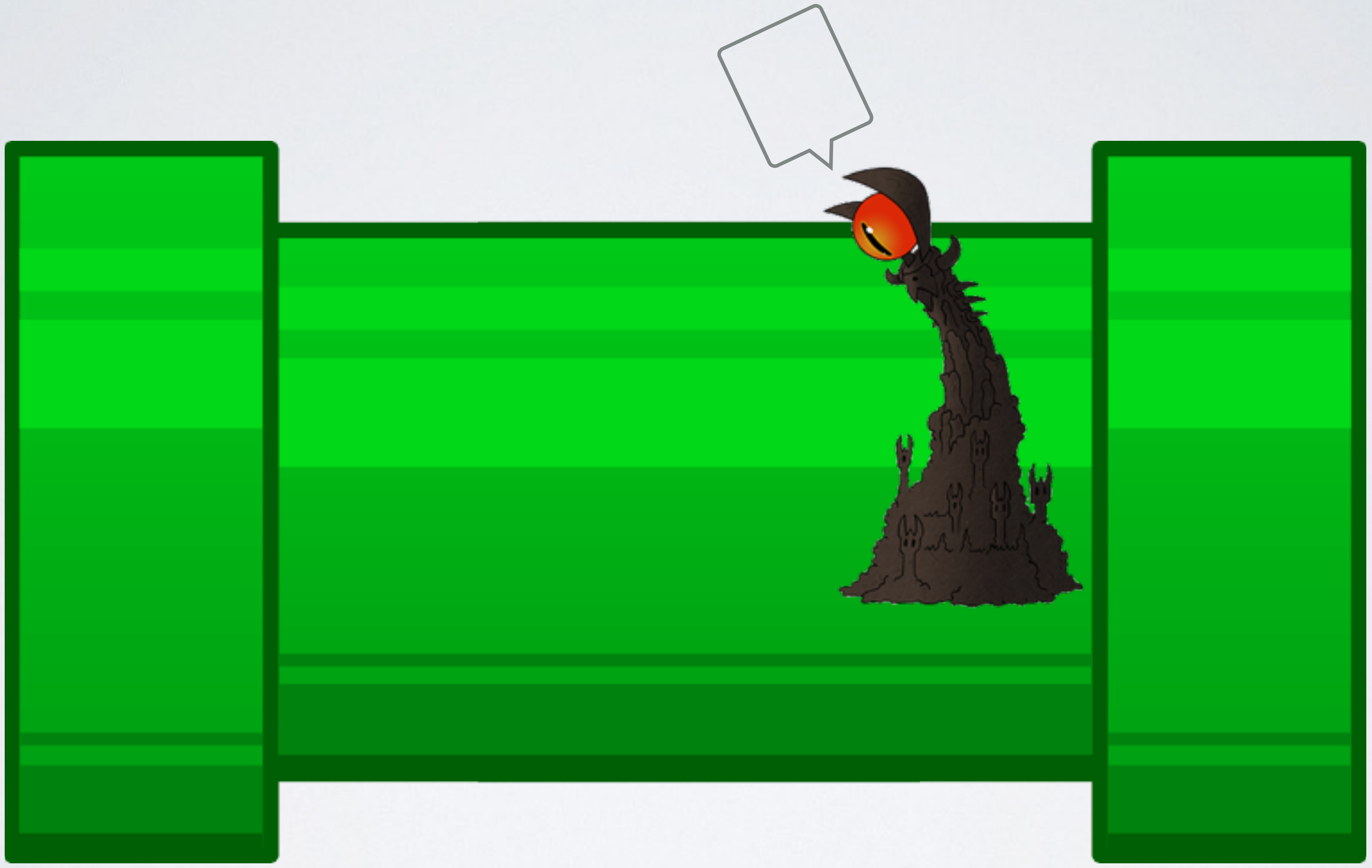

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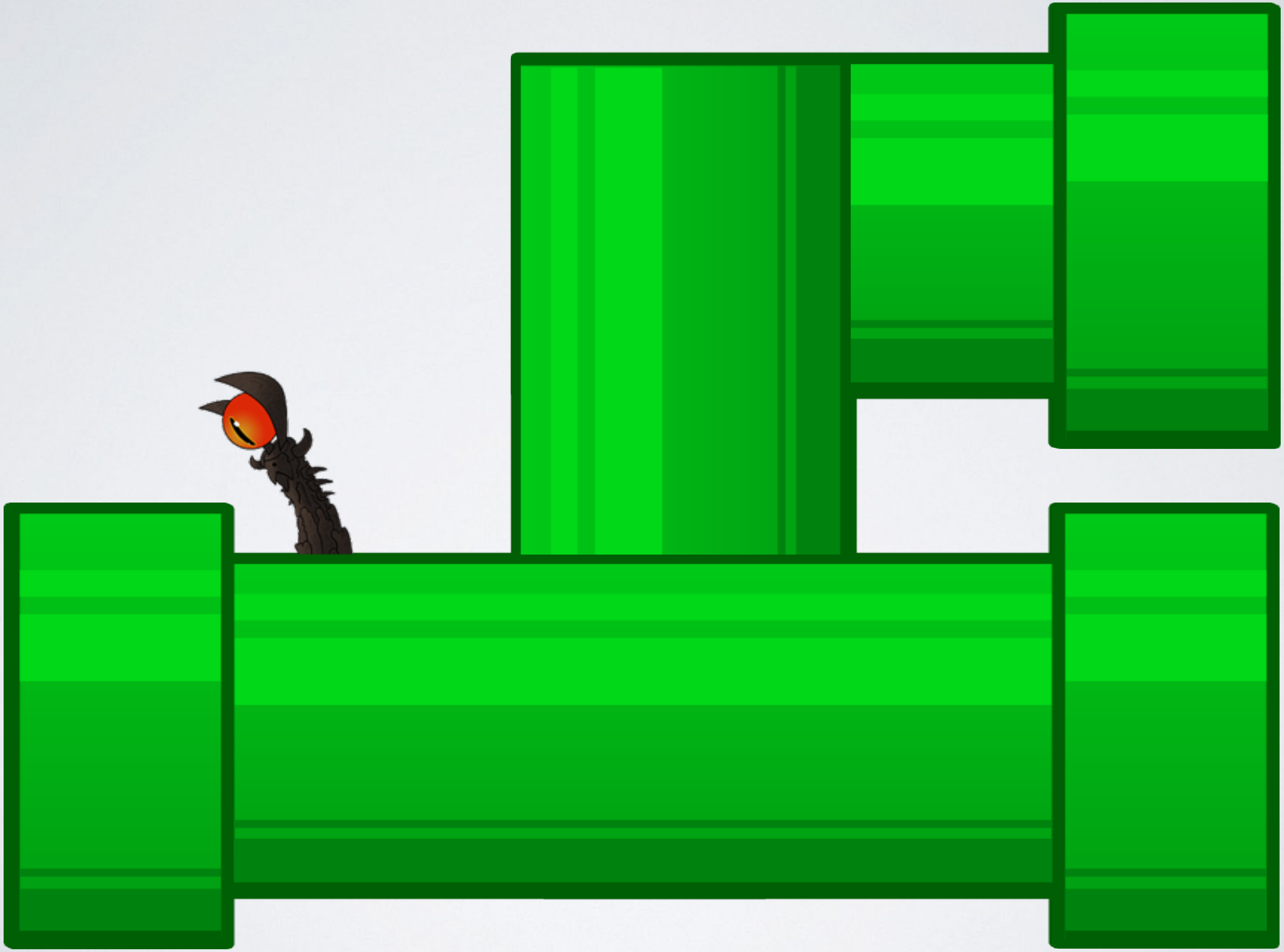

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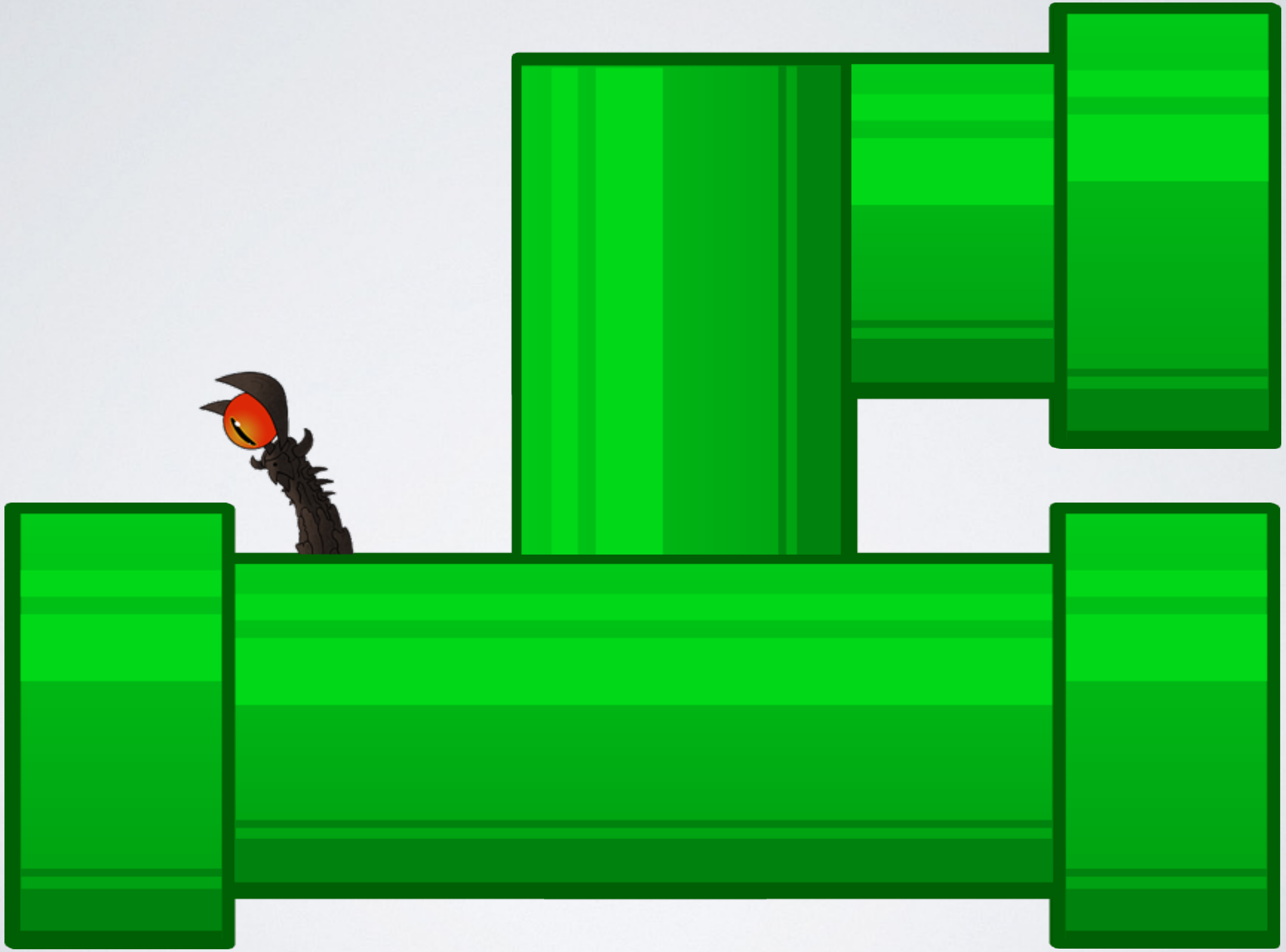

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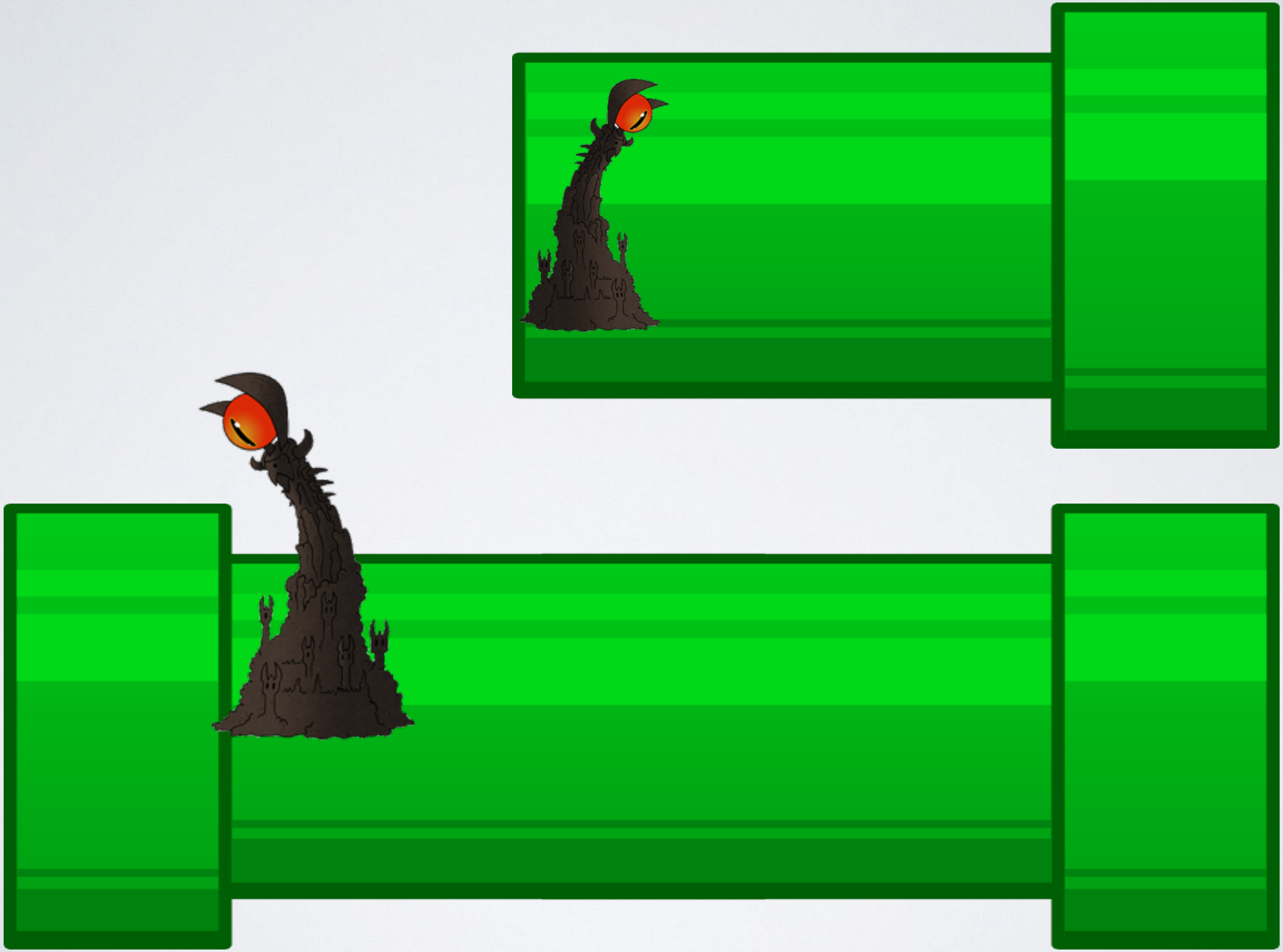

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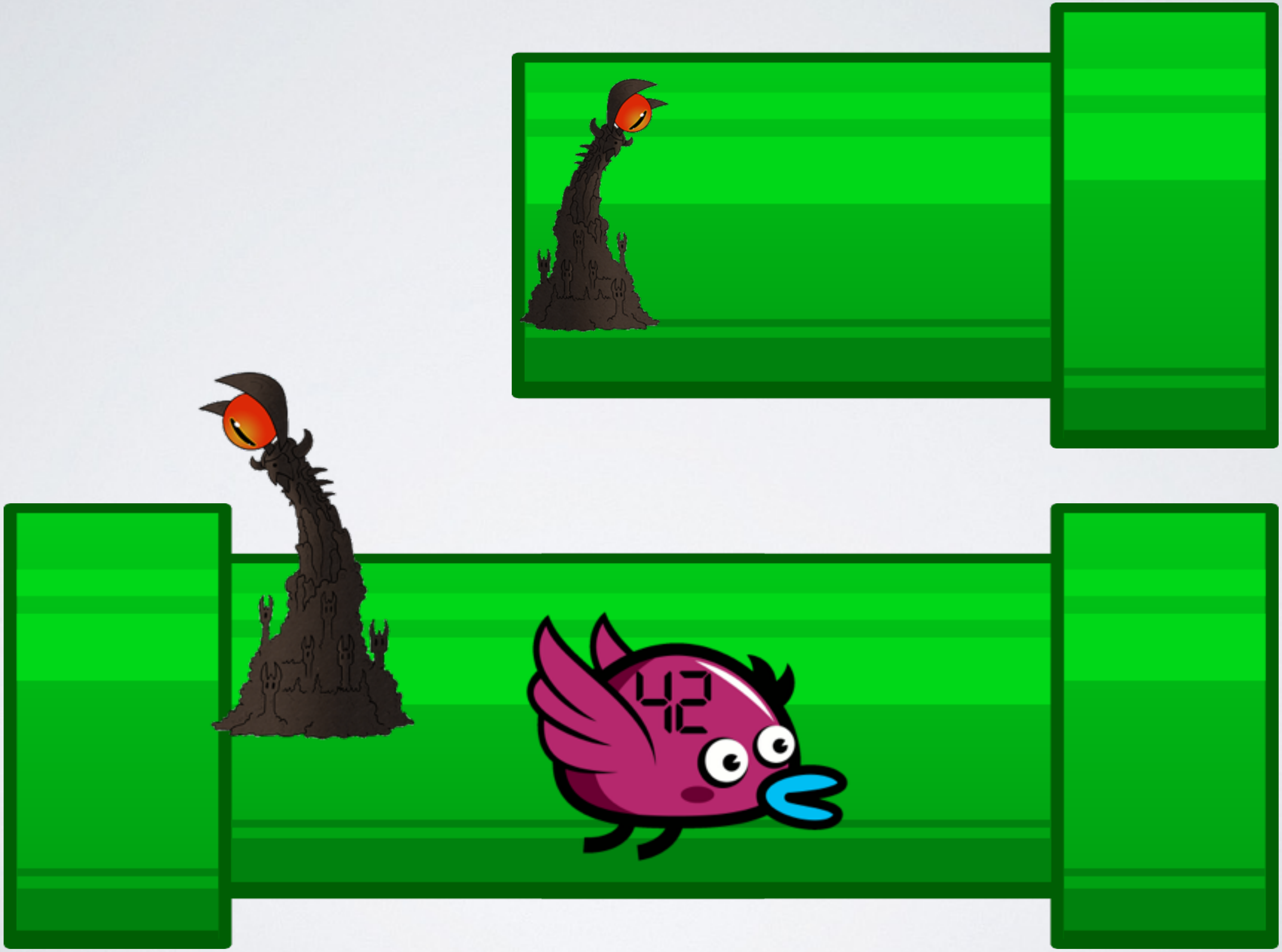

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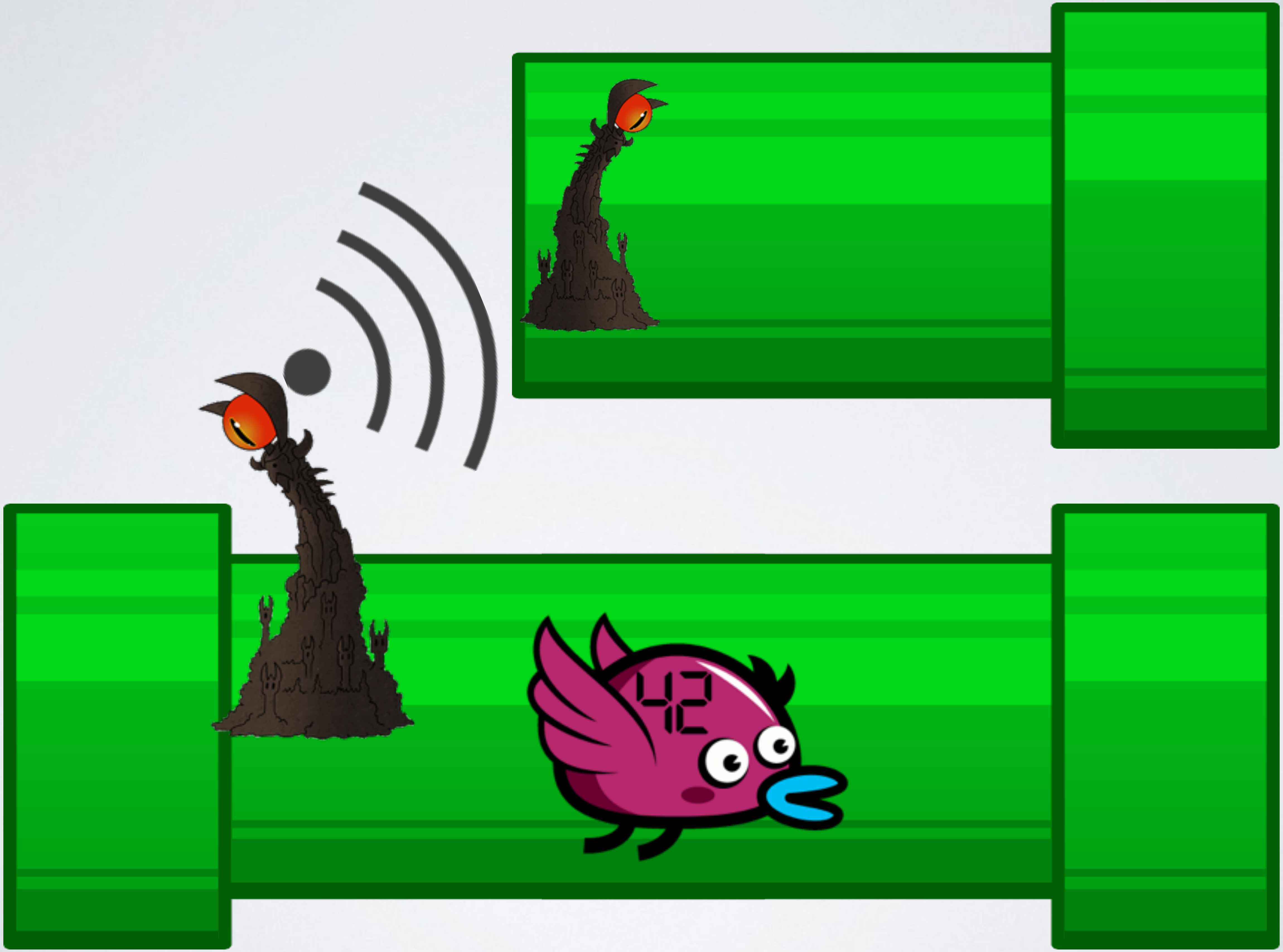

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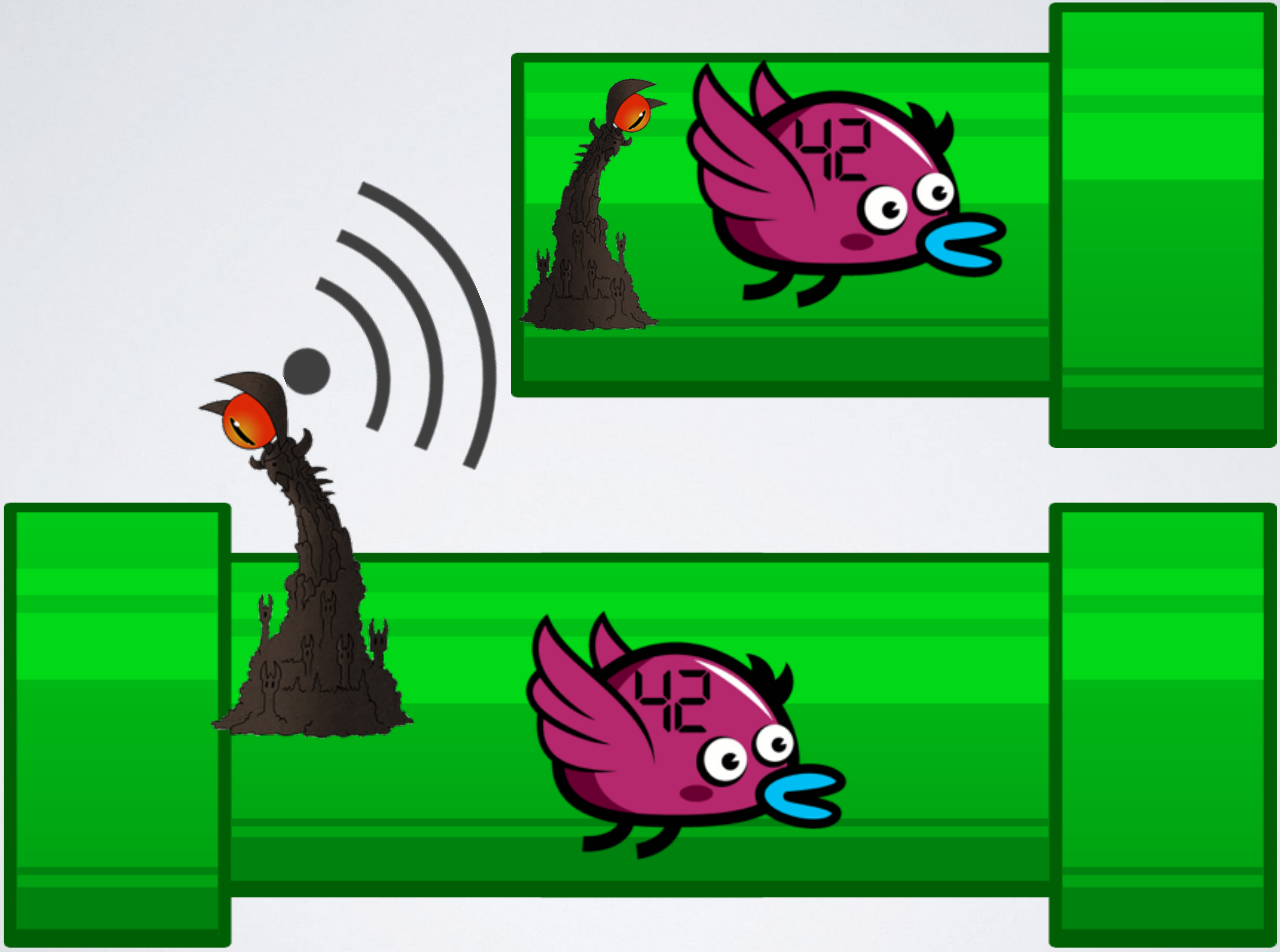

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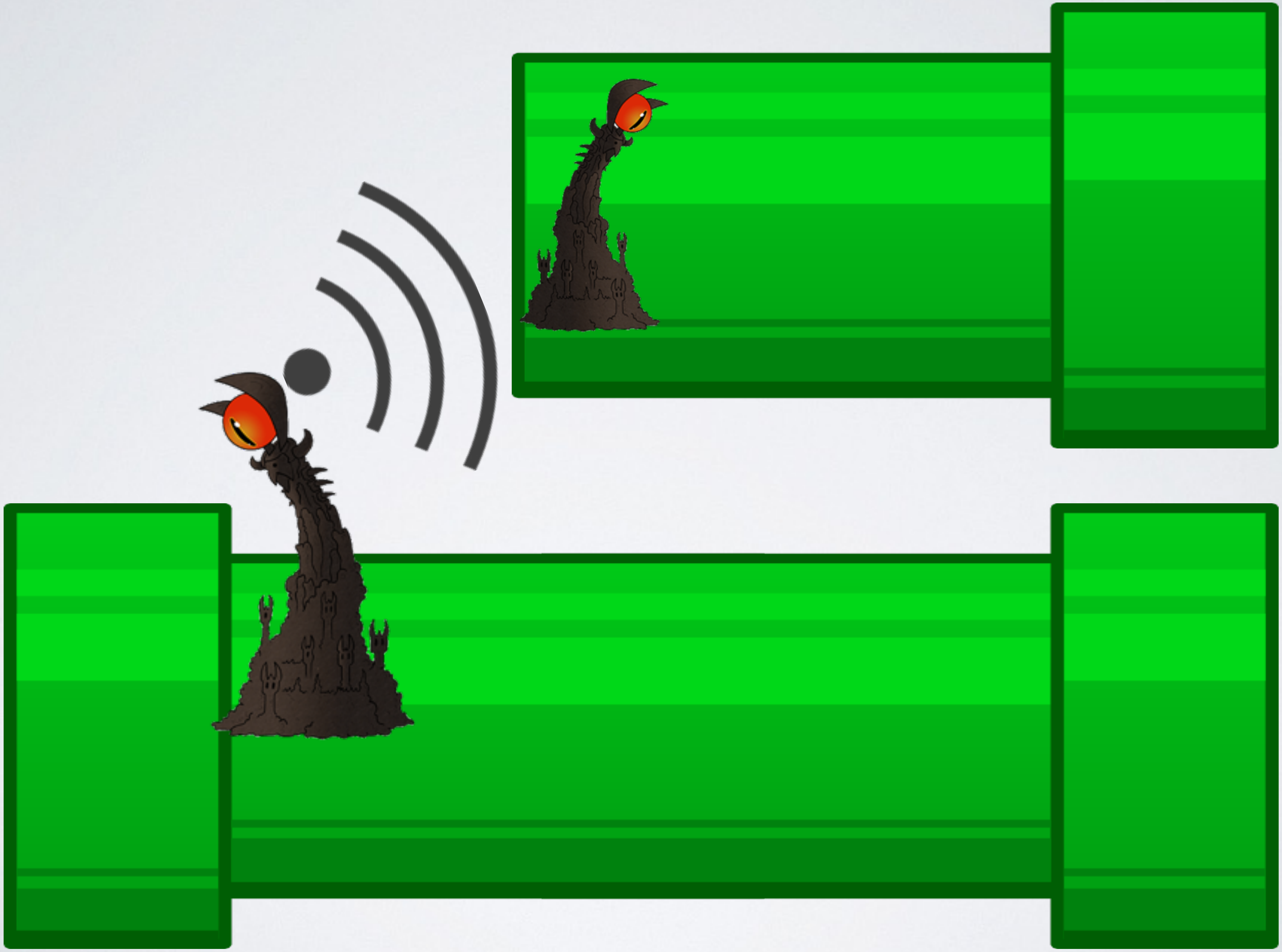

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- Most core Node.js content sources/sinks are streams already!

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- Passthrough -- Stream spy

HOW TO IMPLEMENT

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- Use handy abstractions like mississippi module (easy way)
- Subclass appropriate Stream Class and implement required methods, i.e., _read(), _write(), etc (hard way)

github.com/maxogden/mississippi

a collection of useful stream utility modules

```
var miss = require('mississippi')
```

- **from** - Make a custom readable stream
- **to** - Make a custom writable stream
- **through** - Make a custom transform stream.
- **duplex** - Take two separate streams, a writable and a readable, and turn them into a single duplex (readable and writable) stream.
- **pipeline** - Combine streams together

check github for example code

LINKS

https://github.com/bionode-hack/discussions#useful-nodejs-modules

https://github.com/bionode-hack/discussions#presentation-slides

Follow @maxogden, @mafintosh and @substack

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