1 Introduction

(1) The original technique to execute an arbitrary command:

```
\immediate\write18{node
  "\CXmainroute"
  "\currfilepath"
  "helo"
  "readers (one)"
  > /tmp/temp.dat}\input{/tmp/temp.dat}
```

(2) With ugly details largely hidden, the `\exec{}` command is still fully general:

```
\exec{node
  "\CXmainroute"
  "\currfilepath"
  "helo"
  "readers (two)"}
```

(3) `\noderunscript{}` will execute NodeJS code that adheres to the call convention established by *Coffee*XǝLaTeX:

```
\noderunscript
  {\CXmainroute}
  {\currfilepath}
  {helo}
  {readers (three)}
```

(4) Like the previous example, but with standard values assumed as shown above. This is the form that you will want to use most of the time:

```
\noderun{helo}{readers (four)}
```

Outputs:

Hello, readers (one)!

Hello, readers (two)!

Hello, readers (three)!

Hello, readers (four)!

2 Configuration

To use *Coffee*XeLaTeX, put

```
\usepackage{coffeexelatex}
```

into the header section of your LaTeX file.

You may also want to include these lines in your LaTeX document; these define, respectively, the route to the *Coffee*XeLaTeX executable (`coffeexelatex/lib/main.js`) and the temporary file that is used to communicate between TeX and your scripts (relative routes are resolved with respect to the current working directory, so if you set a relative route, you must always run TeX from within the same directory):

```
\renewcommand{\CXmainroute}{../../lib/main}
\renewcommand{\CXtempoutroute}{/tmp/coffeexelatex.tex}
```

3 Geometry

Use geometry data from aux file to render a table of layout dimensions into the document; note the we could have used the `\auxgeo` command anywhere in the document and that this currently only works for documents with a single, constant layout.

Also note we're using a dash instead of an underscore here—in TEX, underscores are special, so we conveniently allow dashes to make things easier. The *Coffee*XELATEX command `show-geometry` does not take arguments, which is why the second pair of braces has been left empty:

Command:

```
\noderun{show-geometry}{}
```

Output:

firstlinev	10.00 mm
footskip	10.54 mm
headheight	4.22 mm
headsep	8.79 mm
marginparsep	3.87 mm
marginparwidth	1.05 mm
paperheight	210.00 mm
paperwidth	148.00 mm
textheight	174.80 mm
textwidth	103.60 mm
topmargin	–28.40 mm
voffset	25.40 mm

4 Character Escaping

The *Coffee*XeLaTeX command `show-special-chrs` demonstrates that it is easy to include TeX special characters in the return value. The simple rule is that whenever the output of a command is meant to be understood literally, it should be `@escape`d:

Command:

```
\noderun{show-special-chrs}{}
```

Output:

opening brace	{
closing brace	}
Dollar sign	$
ampersand	&
hash	#
caret	^
underscore	_
wave	~
percent sign	%

5 The aux Object

5.1 Labels

*Coffee*XƎLATEX will try and collect all labels from the `*.aux` file associated with the current job; from inside your scripts X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X

Command:

```
\noderun{show-aux}{}
```

Output:

```
{ auxroute: 'example-1.auxcopy',
  labels:
  { intro: { name: 'intro', ref: 1, pageref: 2, title: 'Introduction' },
    config: { name: 'config', ref: 2, pageref: 3, title: 'Configuration' },
      geo: { name: 'geo', ref: 3, pageref: 4, title: 'Geometry' },
    esc: { name: 'esc', ref: 4, pageref: 5, title: 'Character Escaping' },
      curl: { name: 'curl', ref: 6, pageref: 7, title: 'Curl' } },
  geometry:
   { paperwidth: 148,
     paperheight: 210.0001,
     textwidth: 103.5996,
     textheight: 174.7998,
     headheight: 4.2176,
     headsep: 8.7865,
     footskip: 10.5438,
     marginparsep: 3.8661,
     marginparwidth: 1.0544,
     voffset: 25.4,
     topmargin: -28.404,
     firstlinev: 10.0001 } }
```

5.2 Evaluating Expressions

The commands `\evalcs{}` and `\evaljs{}` allow you to evaluate an arbitrary self-contained expression, written either in CoffeeScript or in JavaScript:

Command:

```
$23 + 65 * 123 = \evalcs{23 + 65 * 123}$
```

Output:

$23 + 65 * 123 = 8018$

6 Curl

abcd%2Fefgh%25foo%23bar%20baz

Li%20YongQiang

Hello, 黎永強!

```
curl: (7) couldn't connect to host
```

/tmp/CXtemperr.tex is not empty. /tmp/CXtempout.tex is indeed empty.