YesWorkflow

Comment Syntax Options Summary

Goal

To settle on a simple comment syntax* to define a code block, its name, its inputs, outputs, and author

*See formal EBNF syntax draft

Comment Characters

- Use Language-specific characters

- Python, Matlab, Java

```
1    # A Python comment
```

```
1    % A Matlab comment
```

```
1    // A Java comment
```

Code Blocks

- Use double square brackets

- Name the code block

- Allows for nested blocks

```
1   # [[ DetideTemperatures
2   raw_temps = open('/Users/cjones/temps.txt', 'r')
3   detided_temps = detide(raw_temps)
4   # DetideTemperatures ]]
```

Directives

- Option 1: Javadoc style

  - `@in`

  - `@out`

  - `@author`

```
1    # [[ DetideTemperatures
2    # @author Christopher Jones
3    # @in raw_temps
4    # @out detided_temps
5    raw_temps = open('/Users/cjones/temps.txt', 'r')
6    detided_temps = detide(raw_temps)
7    # DetideTemperatures ]]
```

Directives

- Option 2: JSON style

  - `in:`

  - `out:`

  - `author:`

```
1  # [[ DetideTemperatures
2  # author: Christopher Jones
3  # in: raw_temps
4  # out: detided_temps
5  raw_temps = open('/Users/cjones/temps.txt', 'r')
6  detided_temps = detide(raw_temps)
7  # DetideTemperatures ]]
```

Directives

- Option 3: combined, with read/write flags

  - `@trace in:var1(r,w) out:var2(r,w)`

  - `@notrace in:var3() out:var4()`

```
1   # [[ DetideTemperatures
2   # @author: Christopher Jones
3   # @trace in: raw_temps(r) out: detided_temps(w)
4   # @notrace temps_figure
5   raw_temps = open('/Users/cjones/temps.txt', 'r')
6   detided_temps = detide(raw_temps)
7   temps_figure = plot(detided_temps)
8   # DetideTemperatures ]]
```

Directive Lists

- Do we support single line, or per line, or both?
  - `@in var1 var2 var3`
  - `@in var1`
  - `@in var2`
  - `@in var3`

```
1  # [[ DetideTemperatures
2  # @in temps2012 temps2013
3  # @out detided_temps
4  # @out temps_figure
5  temps2012 = open('/Users/cjones/temps2012.txt', 'r')
6  temps2013 = open('/Users/cjones/temps2013.txt', 'r')
7  detided_temps = detide(temps2012, temps2013)
8  temps_figure = plot(detided_temps)
9  # DetideTemperatures ]]
```

Input Aliases

- Do we support mapping of more readable variables?

  - `@in internalVar1 @as externalVar1`

- How would this work in a list?

```
1  # [[ DetideTemperatures
2  # @author Christopher Jones
3  # @in rt @as raw_temperatures
4  # @out dt @as detided_temperatures
5  rt = open('/Users/cjones/temps.txt', 'r')
6  dt = detide(rt)
7  # DetideTemperatures ]]
```