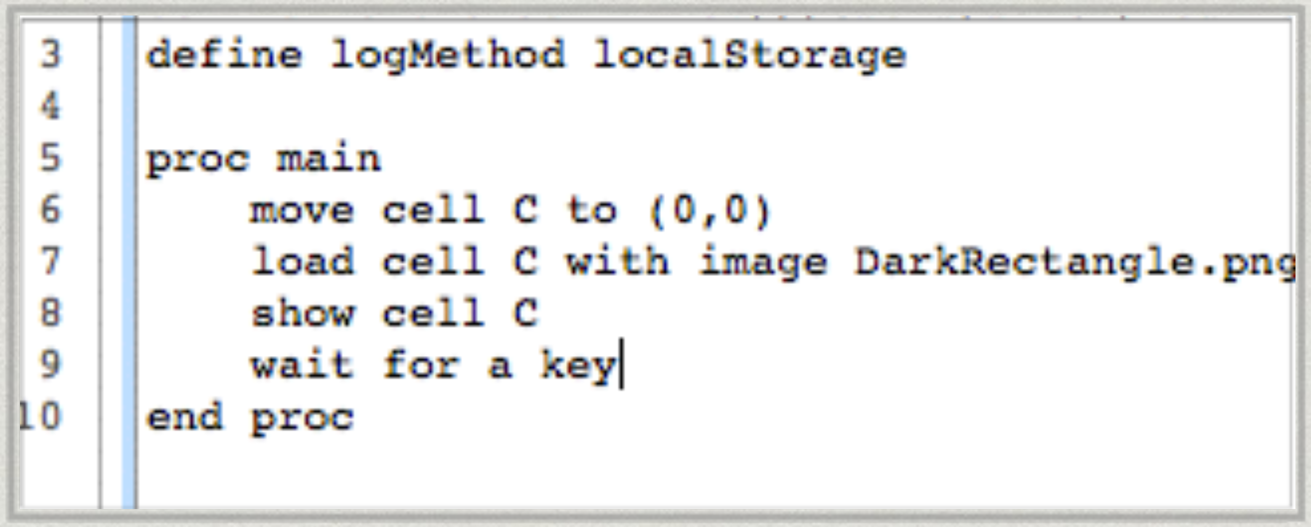
PSYSCRIPT3 TUTORIAL #2

- LOGGING RESPONSE DETAILS
- READING THE LOG FILE
- FIXATION POINT AND TIMING
- RESPONDING BY CLICKING
- MORE ?

SECTION 1:
LOGGING RESPONSE DETAILS

Using an image as a stimulus



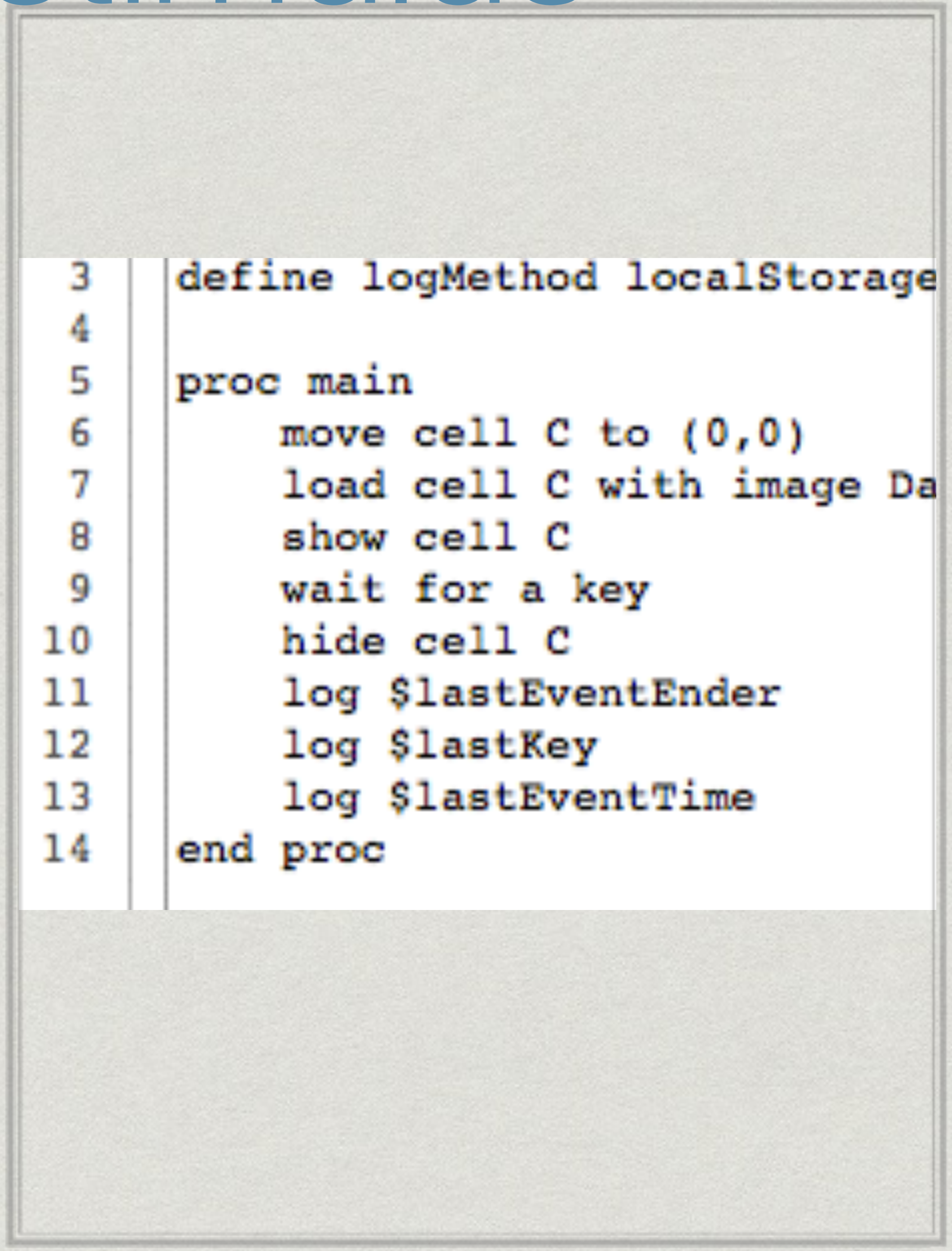
```
define logMethod localStorage

proc main
    move cell C to (0,0)
    load cell C with image DarkRectangle.png
    show cell C
    wait for a key
end proc
```

- at the end of tutorial 1 you should have got a script as shown on the left
- as you can see from it, it does some things with cell C, then waits for a key
- but as a psychologist you want the computer to log the participant's reactions
- so after the 'wait for a key' line add these lines:

```
hide cell C
log $lastEventEnder
log $lastKey
log $lastEventTime
```

- Hit the 'neat' button

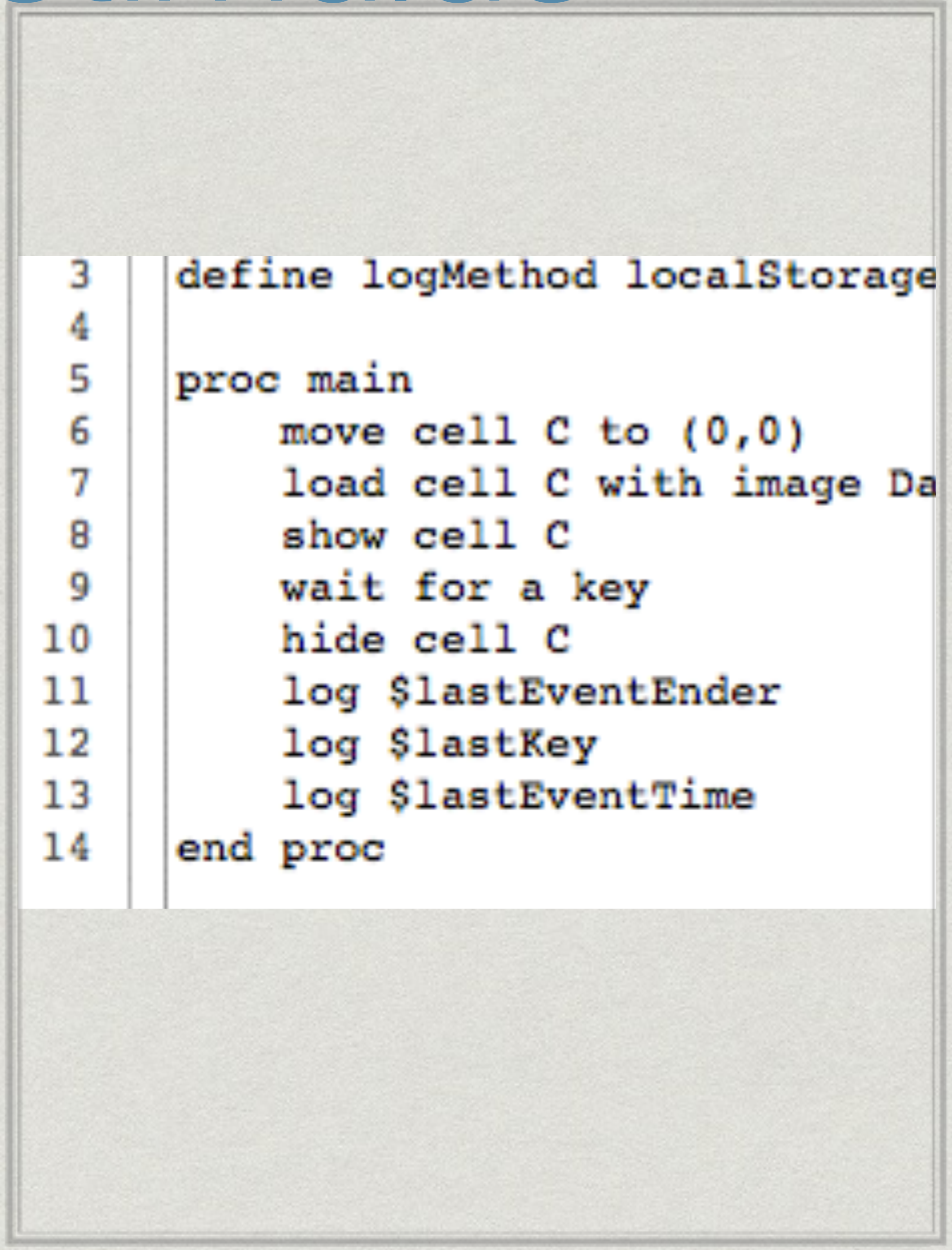
Using an image as a stimulus



```
define logMethod localStorage

proc main
    move cell C to (0,0)
    load cell C with image Da
    show cell C
    wait for a key
    hide cell C
    log $lastEventEnder
    log $lastKey
    log $lastEventTime
end proc
```

- Run the script but hitting the 'run' button.
- Now, once you have pressed a letter key the rectangle should disappear and then the script end and the log show.
- In the log shown, you will see why the event ended (a key was pressed), which key was pressed, and how long it took you to press the key.
- You can click 'again' to run the script again or 'finished' to return to the editor.

Using an image as a stimulus

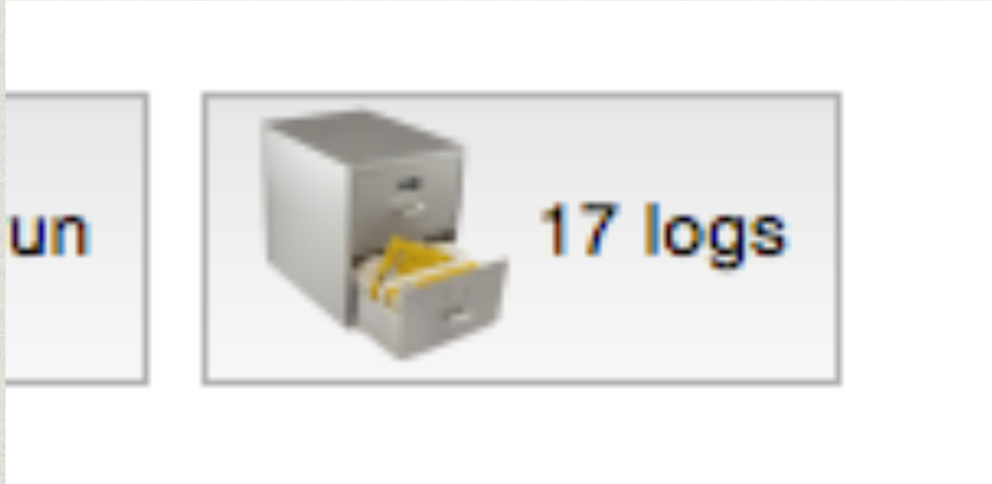


```
define logMethod localStorage

proc main
    move cell C to (0,0)
    load cell C with image Da
    show cell C
    wait for a key
    hide cell C
    log $lastEventEnder
    log $lastKey
    log $lastEventTime
end proc
```

- You should see the number of logs (shown on the logs button) has increased. Don't worry about them for now. You could have hundreds and they wouldn't take up much space on your computer.
- You now have (a very primitive) experiment which shows a stimulus and waits for a reaction. You could perhaps tell your participant to press a different key depending on how they felt about the stimulus image.
- Now we improve your experiment several ways.

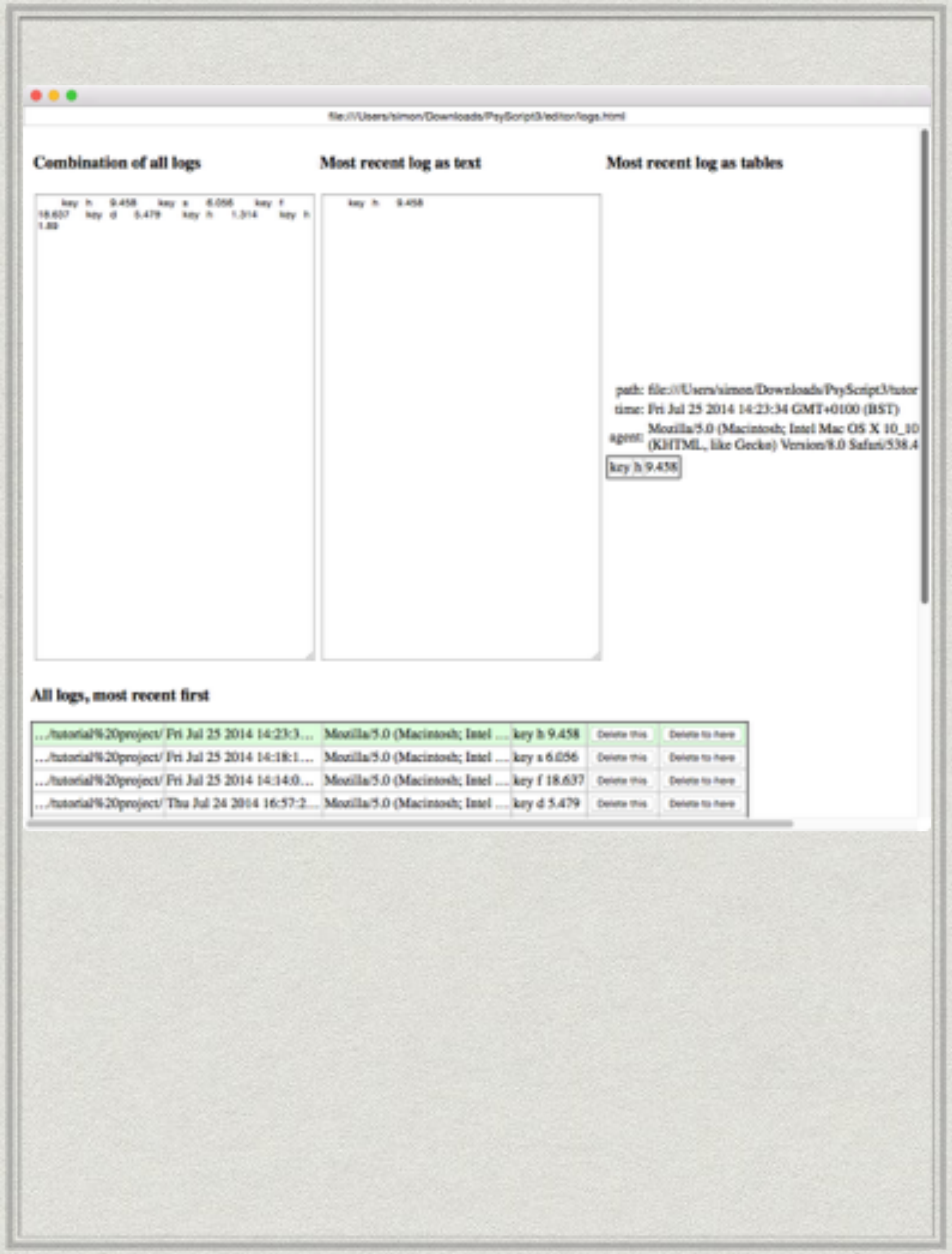
SECTION 2:
READING THE LOG FILE

Reading the log file



- As you've been running your scripts you should have seen the number in the 'logs' button increase.
- You can click on this button to see the logs of all your sessions.

Reading the log file



file:///Users/simon/Downloads/PsyScript3/editor/logs.html

Combination of all logs

```
    key h    9.458    key a    6.056    key f
18.637    key d    5.479    key h    1.314    key h
1.89
```

Most recent log as text

```
    key h    9.458
```

Most recent log as tables

path: file:///Users/simon/Downloads/PsyScript3/tutor
time: Fri Jul 25 2014 14:23:34 GMT+0100 (BST)
agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10_10 (KHTML, like Gecko) Version/8.0 Safari/538.4

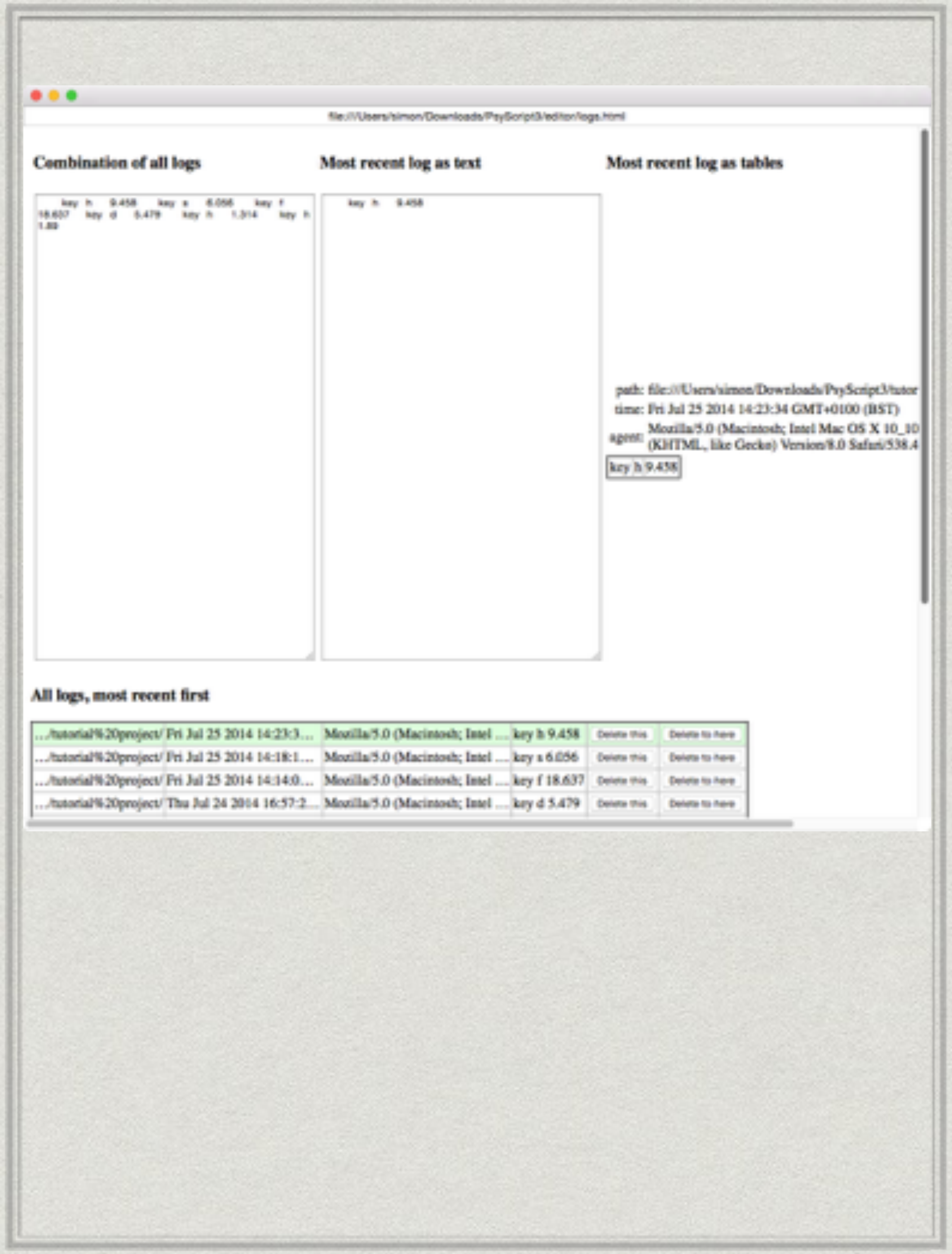
key	h	9.458

All logs, most recent first

…/tutorial%20project/	Fri Jul 25 2014 14:23:3…	Mozilla/5.0 (Macintosh; Intel …	key h 9.458	Delete this	Delete to here
…/tutorial%20project/	Fri Jul 25 2014 14:18:1…	Mozilla/5.0 (Macintosh; Intel …	key a 6.056	Delete this	Delete to here
…/tutorial%20project/	Fri Jul 25 2014 14:14:0…	Mozilla/5.0 (Macintosh; Intel …	key f 18.637	Delete this	Delete to here
…/tutorial%20project/	Thu Jul 24 2014 16:57:2…	Mozilla/5.0 (Macintosh; Intel …	key d 5.479	Delete this	Delete to here

- The log window is broken up into four sections
    - top left: all the logs as one long text file
    - top middle: the selected log as a text file
    - top right: the selected log details and contents as a table
    - bottom: list of all logs in chronological order, most recent at the top. Click on a log to select it.

Reading the log file



file:///Users/simon/Downloads/PsyScript3/editor/logs.html

Combination of all logs

```
    key  h    9.458    key  s    6.056    key  f
18.637    key  d    5.479    key  h    1.314    key  h
1.89
```

Most recent log as text

```
    key  h    9.458
```

Most recent log as tables

path: file:///Users/simon/Downloads/PsyScript3/tutor
time: Fri Jul 25 2014 14:23:34 GMT+0100 (BST)
agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10_10 (KHTML, like Gecko) Version/8.0 Safari/538.4

key	h 9.458

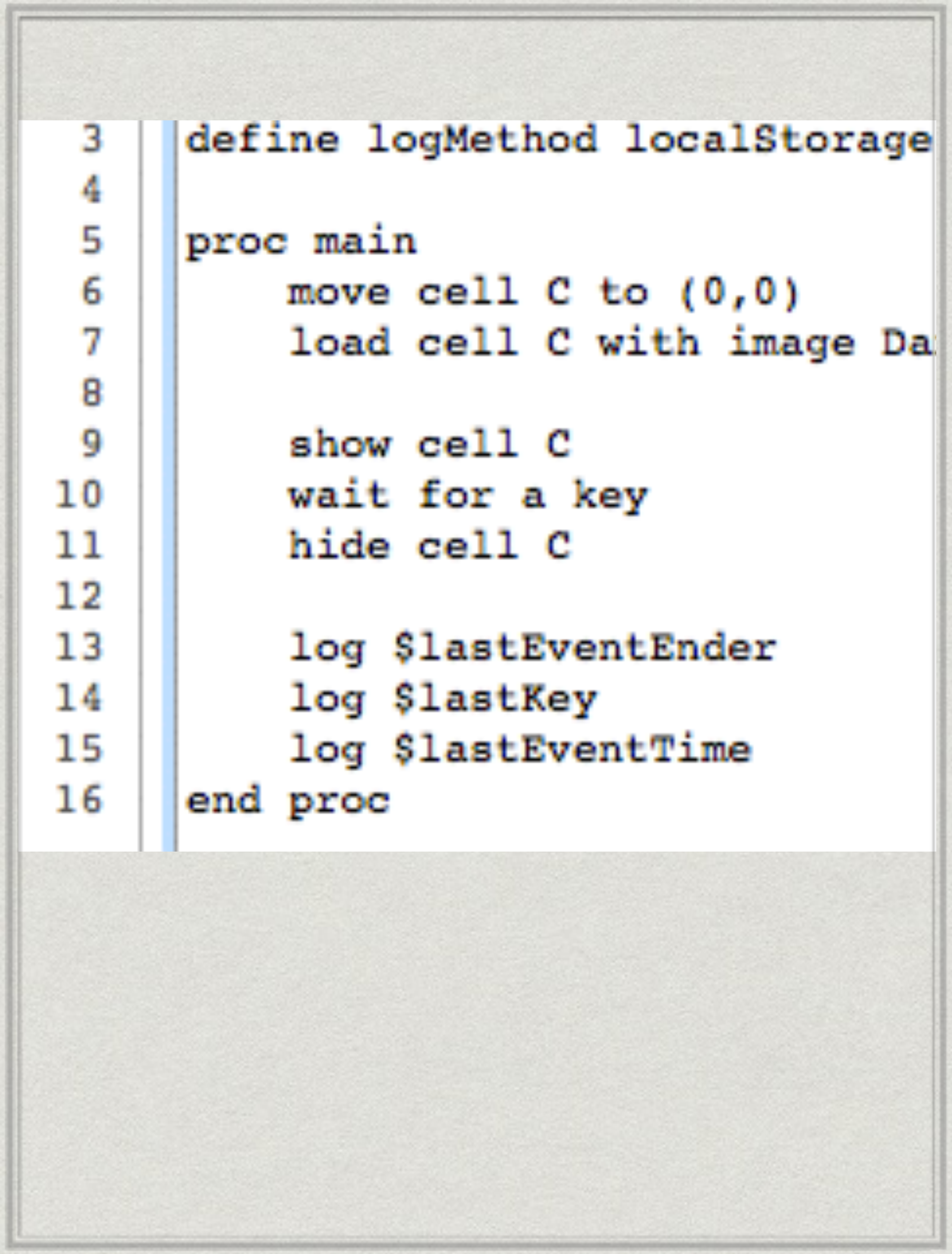
All logs, most recent first

.../tutorial%20project/	Fri Jul 25 2014 14:23:3…	Mozilla/5.0 (Macintosh; Intel …	key h 9.458	Delete this	Delete to here
.../tutorial%20project/	Fri Jul 25 2014 14:18:1…	Mozilla/5.0 (Macintosh; Intel …	key s 6.056	Delete this	Delete to here
.../tutorial%20project/	Fri Jul 25 2014 14:14:0…	Mozilla/5.0 (Macintosh; Intel …	key f 18.637	Delete this	Delete to here
.../tutorial%20project/	Thu Jul 24 2014 16:57:2…	Mozilla/5.0 (Macintosh; Intel …	key d 5.479	Delete this	Delete to here

- The selected log is too short to look good in this layout. The log from a real experiment shows better as a table with rows and columns.
- The text versions of the logs are intended for pasting into a stats package like SPSS.
    1. click in the log text field to select it
    2. use "Select All" to select it all
    3. use "Copy" to copy the whole log
    4. switch to a stats package
    5. paste

SECTION 3:
FIXATION POINT AND TIMING

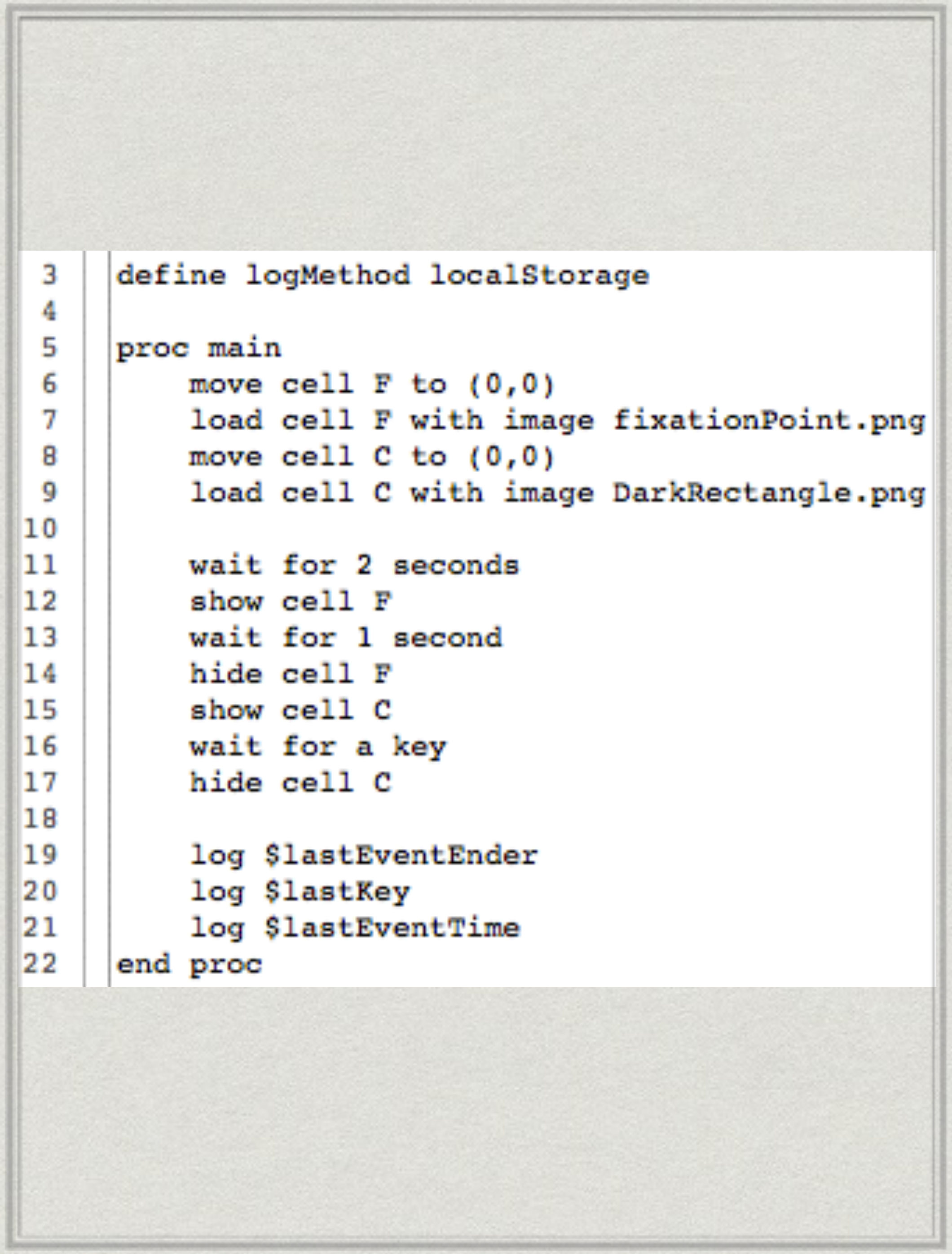
Fixation point and timing



```
define logMethod localStorage

proc main
    move cell C to (0,0)
    load cell C with image Da

    show cell C
    wait for a key
    hide cell C

    log $lastEventEnder
    log $lastKey
    log $lastEventTime
end proc
```

- Normally you would show a fixation point for a short time before showing your stimulus. Here's how to do it.
- You will find a fixationpoint.png file in the tutorial folder that came with PsyScript. Copy it to your project folder.
- Add some blank lines (as shown on the left) to your script to split it up into sections to make it easier to understand.

Fixation point and timing



```
3   define logMethod localStorage
4
5   proc main
6       move cell F to (0,0)
7       load cell F with image fixationPoint.png
8       move cell C to (0,0)
9       load cell C with image DarkRectangle.png
10
11      wait for 2 seconds
12      show cell F
13      wait for 1 second
14      hide cell F
15      show cell C
16      wait for a key
17      hide cell C
18
19      log $lastEventEnder
20      log $lastKey
21      log $lastEventTime
22  end proc
```

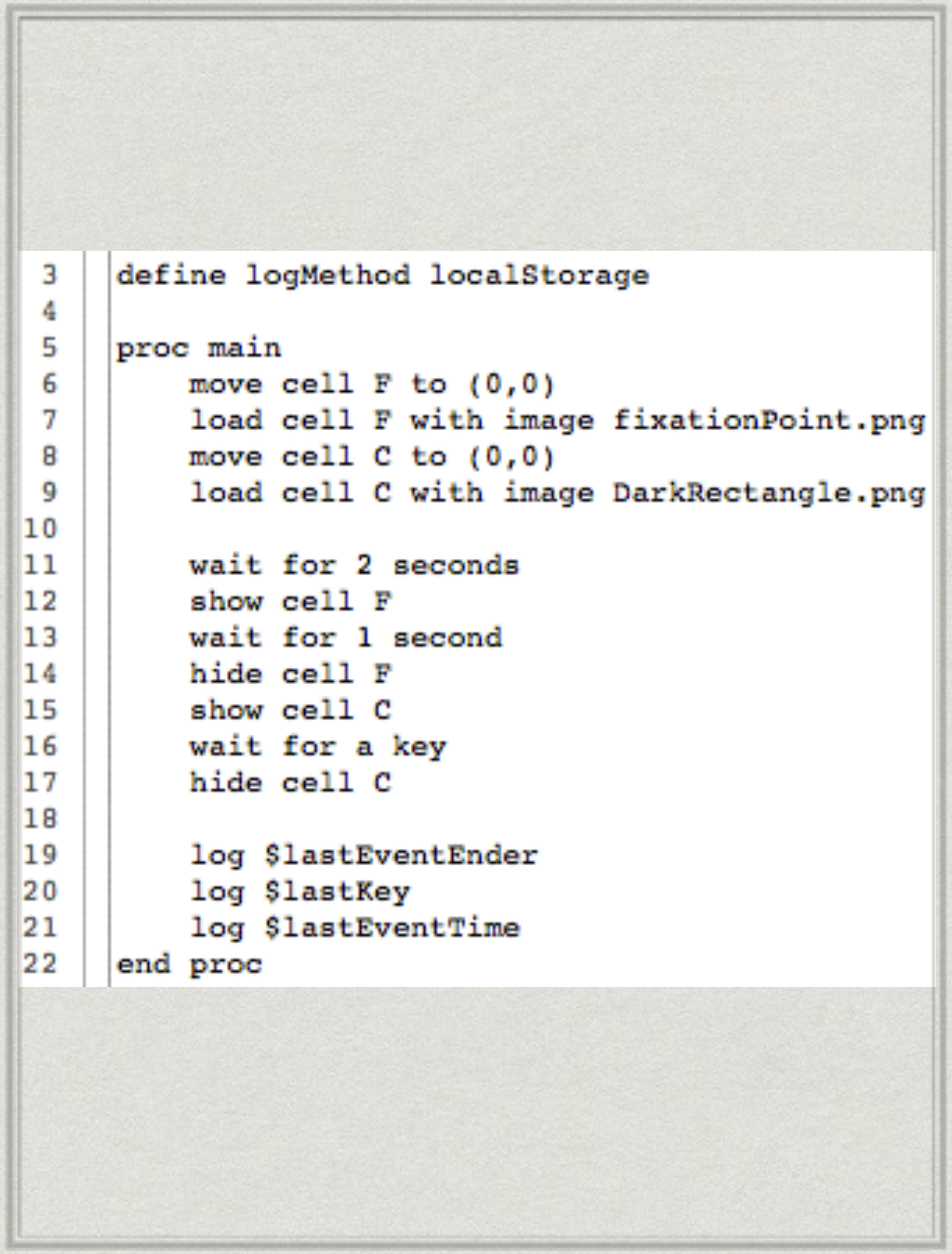
- You will find a fixationPoint.png file in the tutorial folder that came with PsyScript. Copy it to your project folder.
- Add the extra script lines (lines 8 and 9, then lines 11 to 14) to your script
- If the status line underneath your script is 'No errors found.' in green click the 'run' button to run your script.

Fixation point and timing

- You've now seen
  - how to show a stimulus image
  - wait for and log a key pressed in reaction to it
  - how to do the display and timing for a fixation point
- Next comes
  - letting your participant click on an image as a response instead of pressing a key

SECTION 4:
RESPONDING BY CLICKING

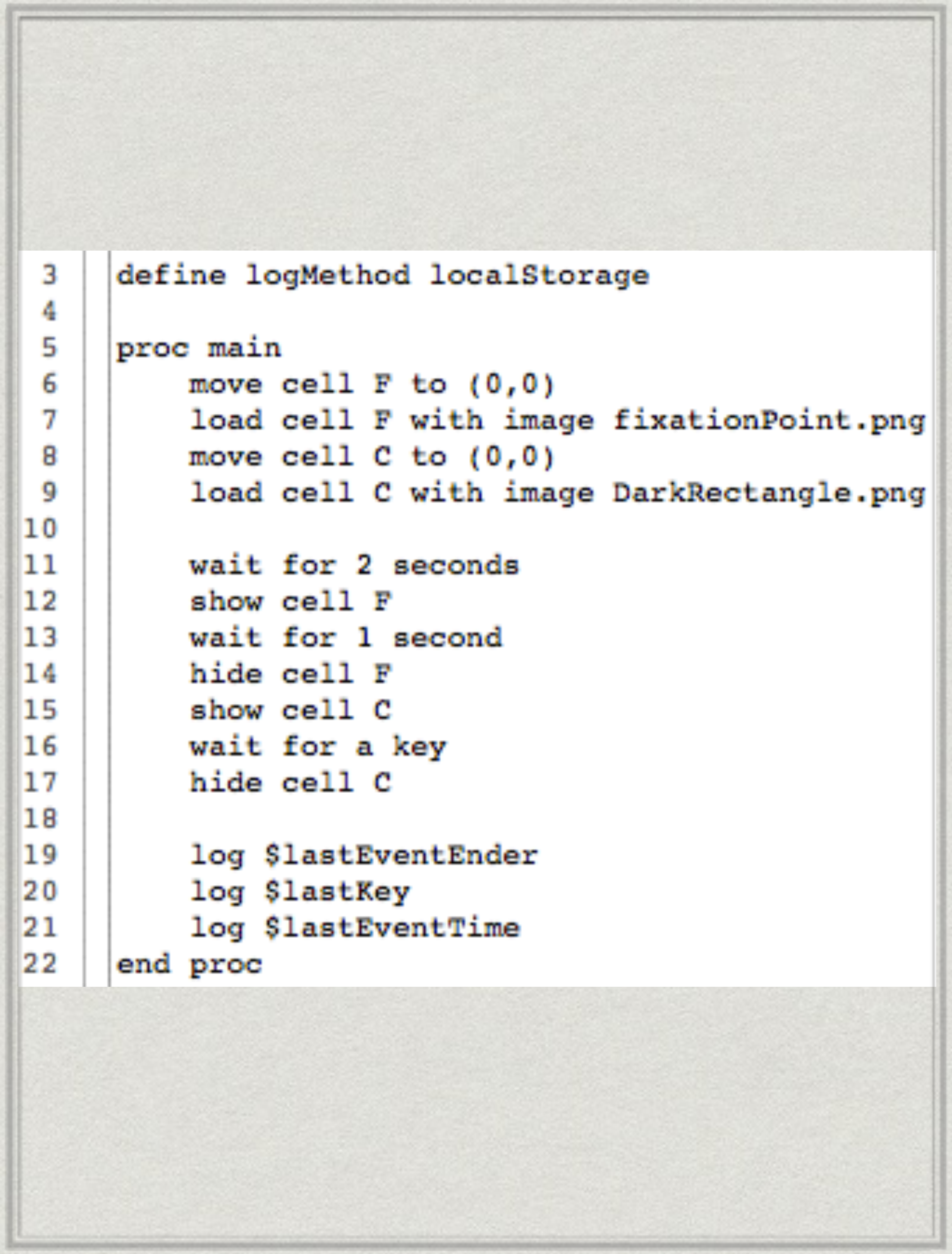
Responding by clicking



```
define logMethod localStorage

proc main
    move cell F to (0,0)
    load cell F with image fixationPoint.png
    move cell C to (0,0)
    load cell C with image DarkRectangle.png

    wait for 2 seconds
    show cell F
    wait for 1 second
    hide cell F
    show cell C
    wait for a key
    hide cell C

    log $lastEventEnder
    log $lastKey
    log $lastEventTime
end proc
```

- So far your participant has been pressing a key in response to the stimulus
- But you can have them choose an image to click on instead
- To do this you need to have at least two things for them to click on

Responding by clicking

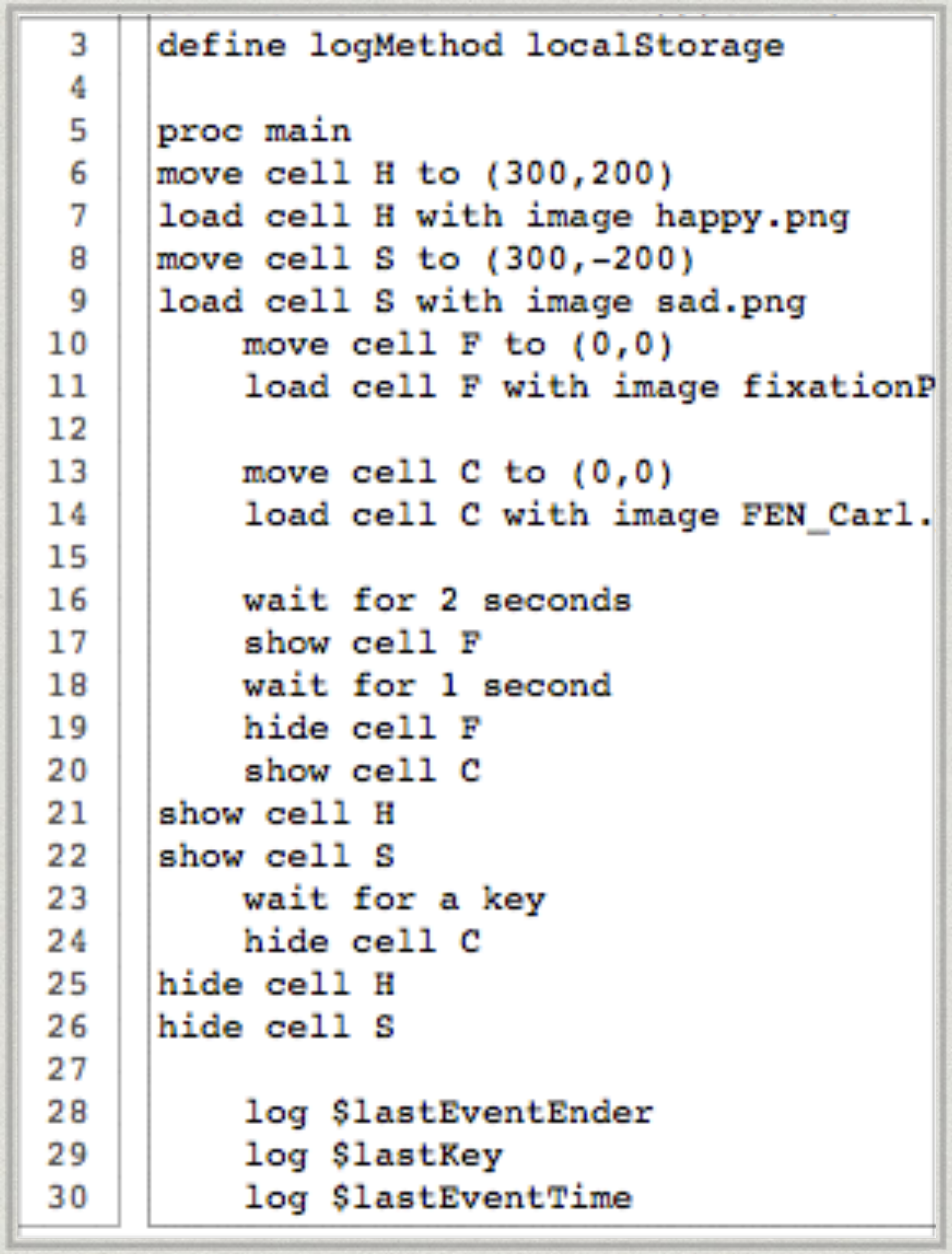


```
 3  define logMethod localStorage
 4
 5  proc main
 6      move cell F to (0,0)
 7      load cell F with image fixationPoint.png
 8      move cell C to (0,0)
 9      load cell C with image DarkRectangle.png
10
11      wait for 2 seconds
12      show cell F
13      wait for 1 second
14      hide cell F
15      show cell C
16      wait for a key
17      hide cell C
18
19      log $lastEventEnder
20      log $lastKey
21      log $lastEventTime
22  end proc
```

- Copy the 'Faces' folder and happy.png and sad.png from the tutorial folder to your project folder
- You can delete your copy of DarkRectangle if you like. We won't be using it any more.
- Replace line 9 with (one long line)

```
load cell C with image FEN_Carl.png
from folder faces
```

Responding by clicking



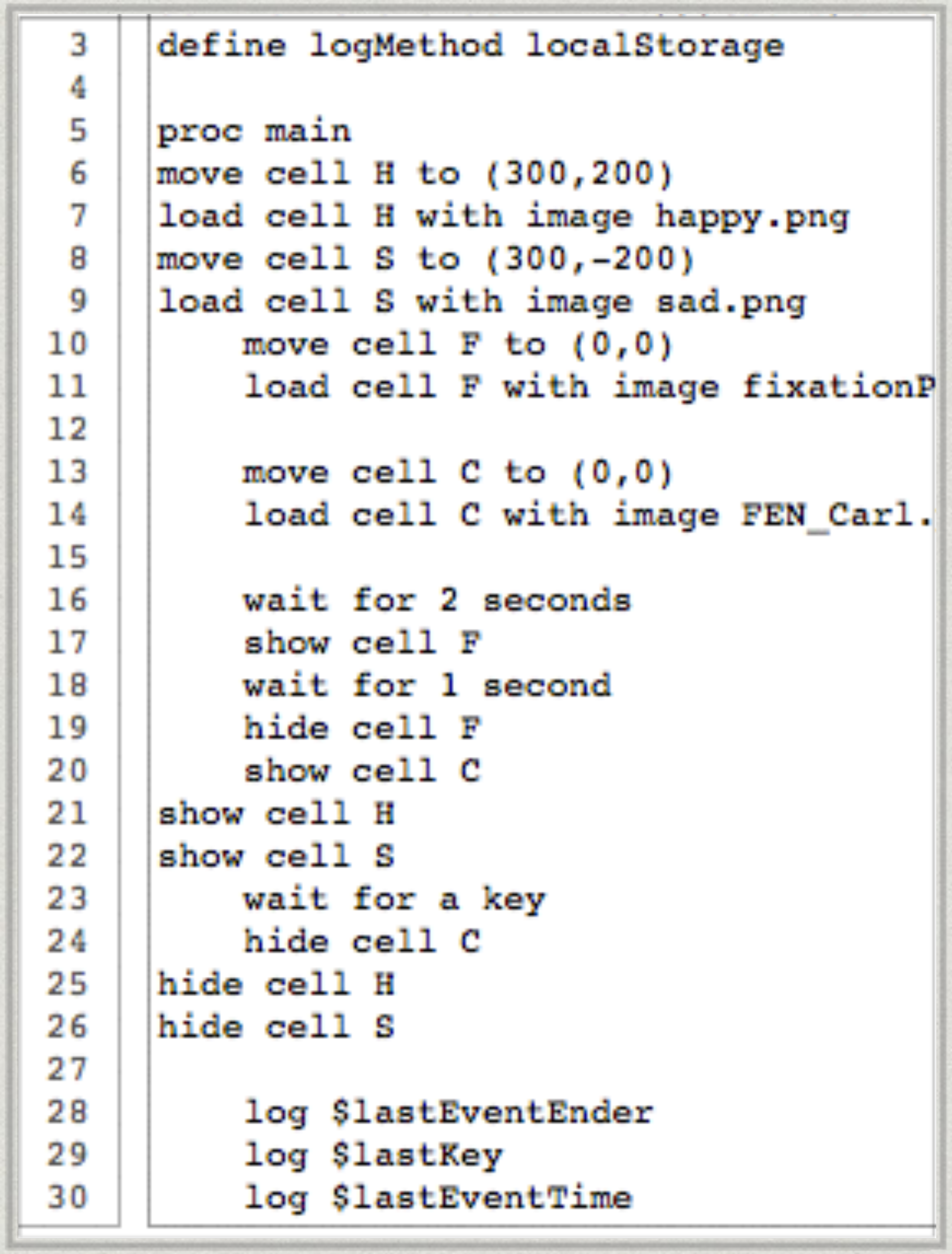
```
define logMethod localStorage

proc main
move cell H to (300,200)
load cell H with image happy.png
move cell S to (300,-200)
load cell S with image sad.png
    move cell F to (0,0)
    load cell F with image fixationP

    move cell C to (0,0)
    load cell C with image FEN_Carl.

    wait for 2 seconds
    show cell F
    wait for 1 second
    hide cell F
    show cell C
show cell H
show cell S
    wait for a key
    hide cell C
hide cell H
hide cell S

    log $lastEventEnder
    log $lastKey
    log $lastEventTime
```

- Add these lines at the beginning of the script

```
move cell H to (300,200)
load cell H with image happy.png
move cell S to (300,-200)
load cell S with image sad.png
```

- After the line that shows cell C, add lines that show cells H and S
- After the line that hides cell C, add lines that hide cells H and S

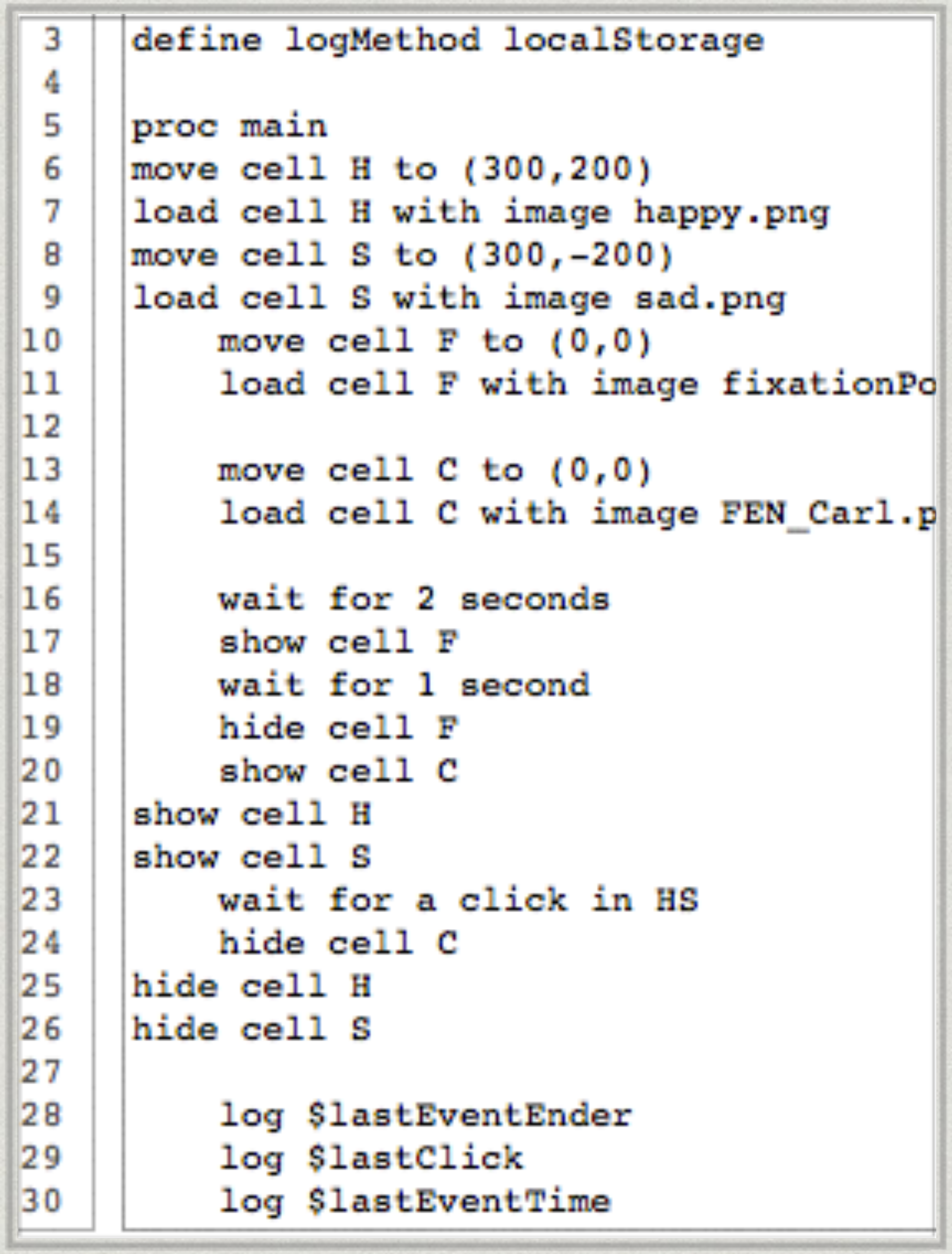
Responding by clicking



```
define logMethod localStorage

proc main
move cell H to (300,200)
load cell H with image happy.png
move cell S to (300,-200)
load cell S with image sad.png
    move cell F to (0,0)
    load cell F with image fixationP

    move cell C to (0,0)
    load cell C with image FEN_Carl.

    wait for 2 seconds
    show cell F
    wait for 1 second
    hide cell F
    show cell C
show cell H
show cell S
    wait for a key
    hide cell C
hide cell H
hide cell S

    log $lastEventEnder
    log $lastKey
    log $lastEventTime
```

- Run the script. Remember that the script still waits for a key in reaction to the stimulus. We haven't made that change yet. But you should now see 'Happy' and 'Sad' buttons appear when the stimulus appears.
- If the script works fine you can press the 'neat' button to make PsyScript indent your new lines correctly.

Responding by clicking



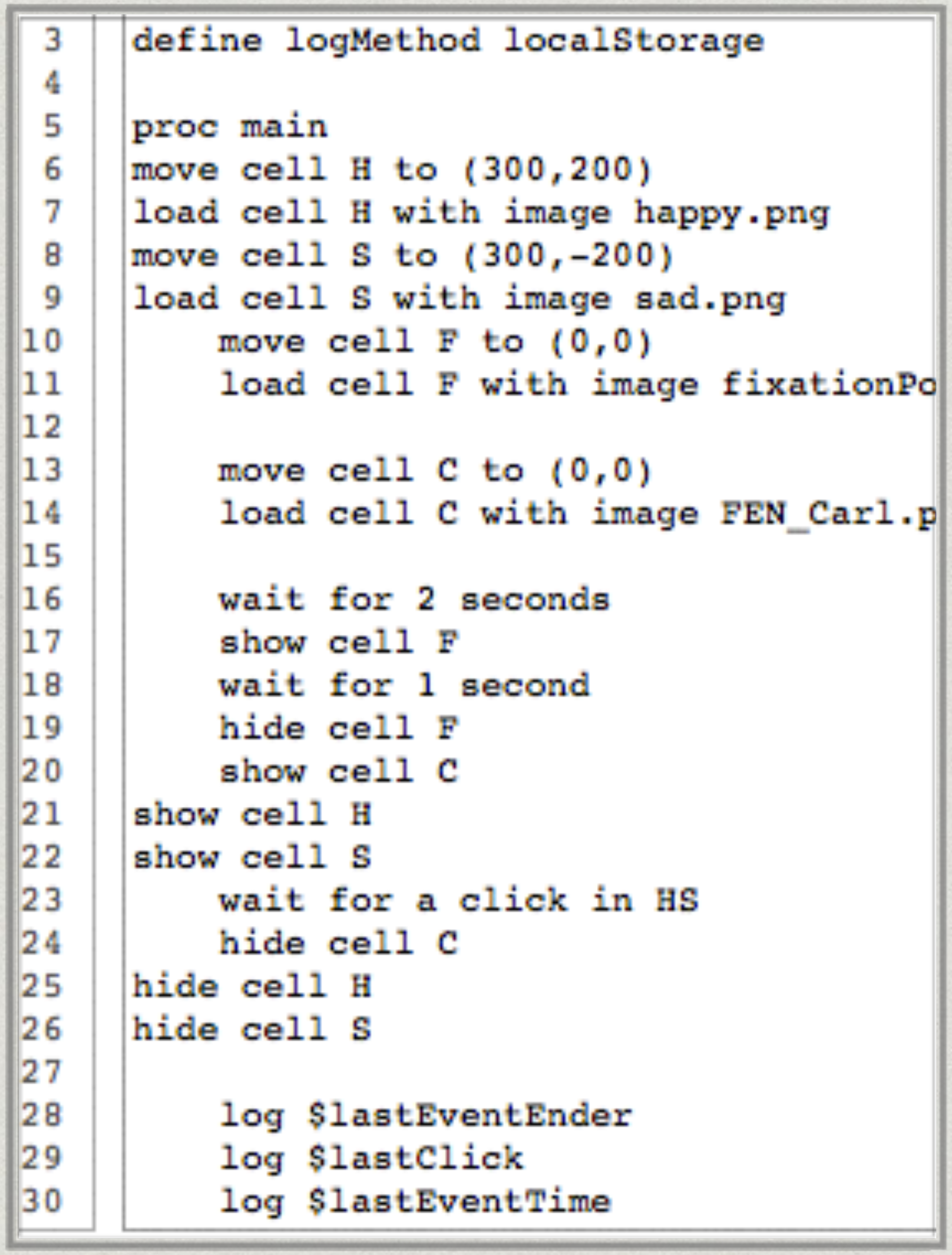
```
 3  define logMethod localStorage
 4
 5  proc main
 6  move cell H to (300,200)
 7  load cell H with image happy.png
 8  move cell S to (300,-200)
 9  load cell S with image sad.png
10      move cell F to (0,0)
11      load cell F with image fixationPo
12
13      move cell C to (0,0)
14      load cell C with image FEN_Carl.p
15
16      wait for 2 seconds
17      show cell F
18      wait for 1 second
19      hide cell F
20      show cell C
21  show cell H
22  show cell S
23      wait for a click in HS
24      hide cell C
25  hide cell H
26  hide cell S
27
28      log $lastEventEnder
29      log $lastClick
30      log $lastEventTime
```

- Now we're going to switch from waiting for a key to waiting for a click.
- We could just use 'wait for a click' but then the participant might click on the stimulus image instead of one of the buttons.
- So instead we use

  `wait for a click in HS`

- This tells it to watch for clicks only in cells H and S
- So replace line 23 with that.

Responding by clicking



```
 3  define logMethod localStorage
 4  
 5  proc main
 6  move cell H to (300,200)
 7  load cell H with image happy.png
 8  move cell S to (300,-200)
 9  load cell S with image sad.png
10      move cell F to (0,0)
11      load cell F with image fixationPo
12  
13      move cell C to (0,0)
14      load cell C with image FEN_Carl.p
15  
16      wait for 2 seconds
17      show cell F
18      wait for 1 second
19      hide cell F
20      show cell C
21  show cell H
22  show cell S
23      wait for a click in HS
24      hide cell C
25  hide cell H
26  hide cell S
27  
28      log $lastEventEnder
29      log $lastClick
30      log $lastEventTime
```

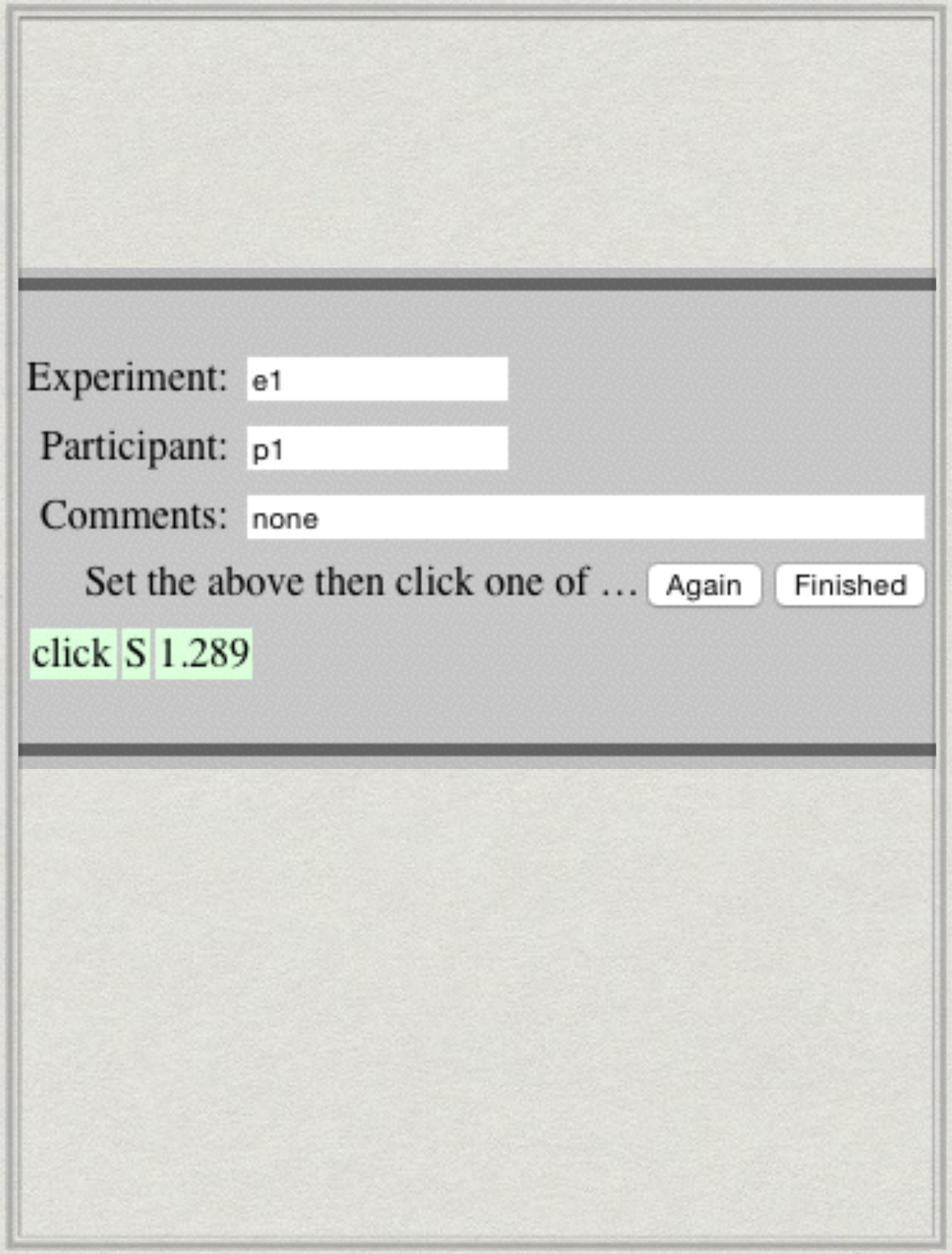
- Also note that in line 29 we were logging the last key pressed. But now we want to log clicks instead.

- So change line 29 to

```
log $lastClick
```

- Run the script again. This time you will react to the stimulus by clicking on one of the two words shown.

Responding by clicking



Experiment: e1

Participant: p1

Comments: none

Set the above then click one of … Again Finished

click	S	1.289

- Looking at the log this time you can see that the event ended with a click, that the click was in cell S, and how many seconds it took you to click in that cell.
- If you want you can click the 'neat' button to have PsyScript neaten-up the indentation for you

SECTION 5:
MORE ?

More ?

- So far you've seen what it takes to present one stimulus and get one reaction
- That's a short experiment session
- Tutorial #3 shows you how to provide a list of stimulus files, and present instructions and thankyou text to your participant