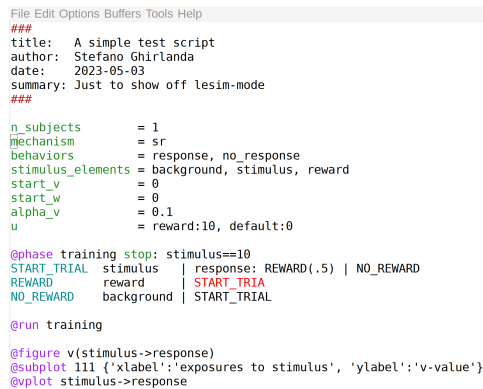# Lesim-Mode: Edit Learning Simulator Scripts in Emacs

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Lesim-Mode is an Emacs major mode to write and run Learning Simulator scripts. To learn more about the Learning Simulator, see this short article and the online documentation.

Lesim-Mode does not understand the full Learning Simulator syntax. That is a job for Superman, that is, Learning Simulator chief software architect Markus Jonsson.


```
File Edit Options Buffers Tools Help
###
title:   A simple test script
author:  Stefano Ghirlanda
date:    2023-05-03
summary: Just to show off lesim-mode
###

n_subjects       = 1
mechanism        = sr
behaviors        = response, no_response
stimulus_elements = background, stimulus, reward
start_v          = 0
start_w          = 0
alpha_v          = 0.1
u                = reward:10, default:0

@phase training stop: stimulus==10
START_TRIAL  stimulus   | response: REWARD(.5) | NO_REWARD
REWARD       reward      | START_TRIA
NO_REWARD    background | START_TRIAL

@run training

@figure v(stimulus->response)
@subplot 111 {'xlabel':'exposures to stimulus', 'ylabel':'v-value'}
@vplot stimulus->response
```

Figure 1: Sample screenshot

1 Installing

Install from here for now, hopefully from MELPA later.

2 Using

- Syntax coloring is enabled automatically. It also highlights some errors, line unassigned parameters.

- `C-c C-c` runs the script in the Learning Simulator (see 3), highlighting any errors.

- `C-c C-v` in a phase block aligns the block and highlights misspelled stimuli, behaviors, and phase line names.

- `C-c C-v` in a parameter block aligns the block.

- `TAB` and `Shift-TAB` in a phase block move between fields. Elsewhere, they move by word.

- `C-c C-t` inserts a template script (see 3).

3 Configuration

Using `M-x customize-group lesim` you can configure:

- The command used to run the Learning Simulator (default: `lesim.py`).

- The key binding to run scripts.

- The key binding to align and validate code.

- The key binding to insert a template script.

- Whether to insert a template script automatically upon opening an empty `.les` file (default: `nil`).

4 Bugs and planned features

Please use issues on Github for bug reports and feature requests.