Lesim-Mode: Edit Learning Simulator Scripts in Emacs

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May 14, 2023

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.

```
###
title:   A simple test script
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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           = 0.1
start_w           = 0.1
alpha_v           = 0.1
u                 = reward:10, default:0

@phase training stop: stimulus==10
START_TRIAL   stimulus   | response: REWARD(.5) | NO_REWARD
REWARD        reward      | TART_TRIAL
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. It's enough to put `lesim-mode.el` somewhere in your Emacs load path and then (`require 'lesim-mode`) in your .emacs.

2   Using

- Syntax coloring is enabled automatically

- Unassigned parameters are automatically.

- `C-c C-c` runs the script in the Learning Simulator, highlighting any errors.

- `C-c C-a` aligns phase blocks at | signs and parameter blocks at = signs.

- `TAB` and `Shift-TAB` in move between fields in phase blocks, and by word elsewhere. In phase blocks, they also highlight misspelled stimuli, behaviors, and phase line names.

- `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 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.