Soar Language Server

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Existing SoarIDE is an Eclipse plugin.
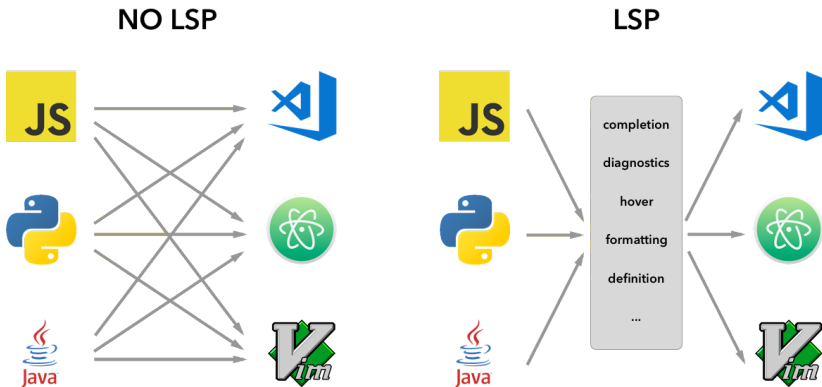
- ▶ Hasn't been maintained
- ▶ Only supports Eclipse

https://github.com/soartech/soaride

Microsoft's Language Server Protocol (LSP) is an increasingly popular way to bring IDE features to multiple editors.

Language Server Protocl

Defines a common interface for editors to talk to programs that provide IDE features.

https://microsoft.github.io/language-server-protocol/

Features

- ▶ Works in many IDEs and editors
- ▶ **Error reporting** backed by JSoar
- ▶ **Tcl expansion** for inline code
- ▶ **Go to definition** for Tcl variables and procs
- ▶ **Find references** for Tcl variables and procs
- ▶ **Autocomplete** - for Tcl variables and procs
- ▶ **Hover tooltips** for variable values and procedure docs
- ▶ **Rename** for Tcl variables
- ▶ **Code folding**

Setup

Create a `soarAgents.json` file to tell the server where the entry point is.

```json
{} soarAgents.json
{
    "entryPoints": [
        {
            "name": "goal-based",
            "path": "GoalBased/load.soar"
        },
        {
            "name": "wander",
            "path": "Wander/load.soar"
        }
    ],
    "active": "goal-based"
}
```

Error reporting

Autocomplete

Hover docs

Definitions


```
≡ main-agent.soar  GoalBased                              ↻  ▭  ⋯

 #        The top level decision is what maneuver to do
 ##################################################################

 □ sp "maneuver-decision
 │ 💡 [ngs-match-goal <s> AchieveWinTankSoar <g>]
```

```
lhs-fragments.tcl  ~/git/ngs4-tanksoar/new-goal-system-4/ngs-4_0_0/macros        ✕
```

```
 # goal_pool_id - (Optional) If provided, this is a    proc ngs-...
 #    goal pool for goals of the given goal_type
 #💡
proc ngs-match-goal { state_id
                      goal_type
                      goal_id
                      {basetype ""}
                      {goal_pool_id ""}} {

   # Default value initialization
   CORE_GenVarIfEmpty goal_pool_id "goal-pool"
```

```
 -->
    [ngs-irequest-decision <g> $TS_DECISION_MANEUVER <g> maneuver

 □ ##################################################################
 #        Select the best ranked choice if more than one exists
```

Tcl expansion

Try it

- https://github.com/soartech/soar-language-server/releases
- `Soar Language Support` in the VSCode Marketplace
- Tested in Emacs, Sublime; lightly tested in IntelliJ, Eclipse
- Expected to work in other editors

Please send feedback via GitHub issues or to
anthony.j.deschamps@gmail.com

Thank you

- Bob Marinier
- Robert Picking
- Dana Foley
- Previous SoarIDE developers (Dave Ray, Kyle Aron, and others)
- Bryan DeGrendel and Nathan Glenn for syntax highlighters

https://github.com/soartech/soar-language-server