RUNNING λProlog

1 Finding λProlog

1.1 On Computer Science Department Machines

The λProlog system we use is called `Teyjus`. (It should be in your PATH by default.)

The main commands to use are: the compiler, `tjcc`, the simulator (virtual machine), `tjsim`, and rudimentary user interface, `teyjus`.

2 Compilation

Usually a λProlog module is written in two files, a signature file and a code file. (C++ programmers can think of these as like the header file and the implementation file.) For example, `foo.sig` and `foo.mod`. After writing these, you would use the Unix command

```
tjcc foo
```

to compile the module. This command reads the files `foo.sig` and `foo.mod`, and writes out a bytecode file in `foo.lp`.

3 Querying

After a module has been compiled, you can run queries against it using the simulator. For example, to query the module `foo`, you use the following Unix command.

```
tjsim foo
```

This command starts an interactive query loop.

In query mode, the simulator doesn't evaluate your input until you type a period (`.`) to end it. To exit, type `stop.` (with the period!) (Typing control-D will also work.)

To interrupt the simulator, use your interrupt character, which is usually control-C.

When you give λProlog a query, it may respond with the message "yes" or some answer substitution will be printed out. When you see the prompt `More solutions (y/n)?` , it is waiting to see if you want more solutions to your query. You should answer either `y` or `n` here. (Don't just type return, there's no default.)

4 Working with the User Interface

To me working with `tjcc` and `tjsim` seems more convenient than using the user interface `teyjus`. But if you are interested in using that, use the Unix command `teyjus`. This gives a prompt, `Teyjus>` . At this command prompt, input is terminated with a period (.), and must all be one one line.

To exit, use the `#quit.` command. Don't forget the period.

At the command prompt, to compile, load, and query the module `foo` you use the commands.

```
#compile foo.
#load foo.
#query foo.
```

5 Errors

If the simulator doesn't seem to understand you when you erase characters in your input, then you should try to fix Unix's idea of what your erase character is. Make sure that the output of the Unix command `stty -a` says that your erase character is what you think it is. You might want to put `stty erase '^H'` in your initialization files (`.login` or `.profile` or `.bashrc`) if you see something else and want backspace to work.

If you get a message like:

```
./schedule.mod:7.12: syntax error, unexpected ID, expecting COMMA or PERIOD
```

this means that you have a syntax error in file `schedule.mod`, on line 7, character 12.

If you have syntax errors, sometimes adding parentheses helps. Using a LISP-like style, `(f x)` may sometimes help the parser.

6 Where to Find More

After λProlog starts, type `#help.` (don't forget the period) for more information. This gives basic help on the command prompt. The library of λProlog code available for loading is in `/usr/unsup/Terzo/lib/`. The grammar is available from the URL `http://teyjus.cs.umn.edu/language/teyjus_toc.html`.

The web page for Teyjus is `http://teyjus.cs.umn.edu/`.

The web page for λProlog itself is `http://www.cse.psu.edu/~dale/lProlog/`

7 Other Interpreters

You can run Teyjus on a Windows PC machine if you first install Cygwin, from `http://sources.redhat.com/cygwin/`, including a shell, gcc, and make.

An older interpreter for λProlog is `Terzo`, which is also servicible.

See `http://www.cse.psu.edu/~dale/lProlog/` for information about this and other implementations.