

1 Necessary Software

- OCaml: <http://www.ocaml.org/>
- Galax: <http://db.bell-labs.com/galax/>
Source Code required
- UnixODBC: <http://www.unixodbc.org/>

2 Build Instructions

Build all of the above packages. They do not require configuration particular to *SilkRoute*. UnixODBC requires a valid datasource.

The file `config/makefile.constants` contains all the build configuration options for *SilkRoute*. *SilkRoute* needs to know the location of OCaml, the location of your galax source code, and the location of your UnixODBC installation.

Since portions of galax are linked into *SilkRoute* its configuration options are propagated into *SilkRoute*.

Once these files are edited, type `make`. It should take care of the rest.

3 Running Instructions

The library path will need to be adjusted so that it can find the unixODBC shared libraries.

Database connection information will need to be provided in the `.cv` file. Explained in the sample file.

3.1 Configuration Information

The file `config/options.ml` contains some configuration options - mostly debugging. However not all of them. If you wish to tweak the build of the minimization engine, which is written in a mix of OCaml, C and C++, then you must modify the makefile in that directory.

The debugging options have to do with normalization rules for SQL and minimization of SQL queries.

There are run-time options, available by typing:

```
silkroute -help
```

4 Sample Instructions

There is a provided sample database.

Public View queries: all have extension `.pv`

User Queries over the public view: all have extension `.uq`

The Canonical View of the database will need to be edited. The top line of the file `Student.cv` contains a `CONNECTION` statement, a sample is provided the format is:

```
CONNECTION <datasource> <user> <password>
```

datasource is the ODBC data source name. *user* is the user account you wish to connect with. *password* is the password information. In future versions, this information will probably not be necessary.

4.1 Loading the Relation Database

A sample database:

```
db_dump.txt
```

To load the database under Postgres:

```
psql <database_name> -f db_dump.txt
```

To load the database under MySQL:

```
mysql <database_name> db_mysql_dump.txt
```

For other databases, please make sure to edit the SQL syntax appropriately.

4.2 Executing the Queries

The samples must be run from the samples directory. This is because the `PublicView("...")` construct currently only supports relative file locations. As a result, executing from the sample directory should look like:

```
sample% ../silkroute Student1.uq
```