

CS648 : Randomized Algorithms

Semester I, 2010-11, CSE, IIT Kanpur

Guidelines for using LEDA

LEDA is a C++ library of efficient data types and algorithms developed at the Max-Planck-Institut für Informatik. It provides libraries for graph and network algorithms, geometrical computations, combinatorial optimizations and many other problem domains.

Getting Started with LEDA

- Obtain a copy of the free edition of LEDA from <http://www.algorithmic-solutions.de/>.
- Extract the archive into some folder, say <LEDA-HOME>. (Note that with the 64-bit Linux package, extraction may fail and you will need to change the extension of file from .tar.gz to .gz before extracting).
- Run the following commands in a terminal:
 - `export LEDAROOT=<LEDA-HOME>`
 - `export LD_LIBRARY_PATH=$LEDAROOT`
- Suppose you have made a file named <filename.cpp>. You can compile this using the following command

```
g++ -L$LEDAROOT -I$LEDAROOT/include -lleda -lX11 -lm <filename.cpp>
```

- As usual, run your executable using the command: `./a.out`

Additional Tips

- You can access some useful header files like `circle.h` in the folder <LEDA-HOME>/include/LEDA/.
- You might need to install the package `libx11-dev` to use the graphical functions.
- You may add the export commands above to the file `.bashrc` in your home folder to avoid running them every time you open a new terminal. You can also add the line

```
alias g++='g++ -L$LEDAROOT -I$LEDAROOT/include -lleda -lX11 -lm'
```

to it, so that you can compile your file simply by using the command: `g++ <filename.cpp>`.

- Further information, tutorials and examples are available at <http://www.algorithmic-solutions.com/leda/resources/>, <http://www.leda-tutorial.org/> and http://www.algorithmic-solutions.info/leda_manual/Technical_Information.html.