

Streams Reference

Jim Fawcett
CSE687 Spring 2005

Streams Library Classes

- **Streams:**

Part of the Standard C++ Library. They are a family of related classes designed to insert and extract data from devices and memory buffers. The most important classes are:

- *ios* which controls formatting and manages error state for all streams
- *streambuf* abstracts buffering of data during insertion and extraction from streams
- *istream* provides the basic client interface for extraction from a stream
- *ostream* provides the basic client interface for insertion into a stream
- *iostream* simply merges *istream* and *ostream*.
- *ifstream* derives from *istream* specialized for input streams that extract from files
- *ofstream* derives from *ostream* specialized for output streams that insert to files
- *filebuf* derives from *streambuf* specialized for file buffering
- *istringstream* derives from *istream* specialized for input streams that extract from buffers in memory
- *ostringstream* derives from *ostream* specialized for output streams that insert to buffers in memory
- *stringbuf* derives from *streambuf* specialized for in- memory buffers
- *stdiobuf* provides compatibility with `stdio`

- **Global objects:**

- `cin`, `cout`, `cerr`, and `clog`

iostream Hierarchy

