Streams Reference

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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