# Input and Output

**Stream Library Overview**

C++ language overloads two operators for extracting values from an input stream and inserting values into an output stream:

* **>>** (extracts from an input stream)
* **<<** (insert into an output stream)

**Standard I/O**

The iostream system header file contains the definitions for stream from and to standard devices

#include <iostream>

The header file includes the definition of the

* std::istream Class for processing input from the standard input device
* std::ostream Class for processing output from the standard output device

std::istream

* std:cin :standard input

std:ostream

* std:cout : Standard Output
* std:cerr : Standard Error
* std::clog : Standard Log

**File I/O**

This header file includes the definitions of the:

* std::ifstream Class: For processing input from a file stream
* std::ofstream Class: Processing output to a file stream
* std::fstream Class: Processing input from and output to a file stream

**Standard I/O Operators**

The prototypes for the overloaded insertion and extraction operators for standard input and output on objects of our own classes take the form

| std::istream& operator>>(std::istream&, Type&); std::ostream& operator<<(std::ostream&, const Type&); |
| --- |

**File I/O Operators**

Input File Objects: To create a file object for reading we define an instance of the std::ifstream class.

| *std::ifstream fin; // defines a file object named fin fin.open("input.txt"); // connects input.txt to fin* |
| --- |