

# Stream Member Functions and State Solutions

# open()

- Explain what the open() member of fstream does
  - It will open the file and bind it to the stream
  - It will apply the file mode when opening the file.
  - For an ofstream, if the output file does not already exist, open() will create it

# is\_open()

- Explain what the is\_open() member of fstream does
  - is\_open() returns if the stream is bound to an open file

# Stream State Member Functions

- Name the member functions which can be used to check the state of a stream
  - `good()`, `fail()`, `bad()`
- Name the member function which resets the state of the stream after an error
  - `clear()`
- Name the member function which checks for end of file
  - `eof()`
- Is it safe to call this member function in a loop?
  - No, unless extra error checking is added

# Example of Checking Stream State

- Write a simple program which reads a number entered by the user and checks the state of the standard input stream
- Test your program by entering invalid data

# Error Recovery

- Write a simple program which reads a number entered by the user
- If the user enters invalid data, the program prompts the user to try again
- Test your program by entering invalid data