

Stream Iterators Solutions

- What is meant by a stream iterator?
 - An iterator which is associated with either an input stream or an output stream
- Which stream iterators are provided by the C++ Standard Library?
 - `istream_iterator` for input streams
 - `ostream_iterator` for output streams

- Describe how to create an instance of an ostream iterator
 - Instantiate with the data type as the parameter
 - Pass the associated output stream as argument
 - We can pass a C-style string as a second argument
 - This string will be pushed onto the stream after each iteration
 - `// Ostream iterator that will send ints to cout, separated by commas`
 - `ostream_iterator<int> oi(cout, ",");`

- Describe how to use an instance of an ostream iterator
 - Assigning through the iterator will push data onto the stream

// Push the value 7 onto the stream

*oi = 7;

// This will cause '7' to be displayed on cout

- Write a simple program that uses an ostream iterator to display a series of numbers, separated by commas

- Describe how to create an instance of an istream iterator
 - Instantiate with the data type as the parameter
 - Pass the associated input stream as argument
- Describe how to use an instance of an istream iterator
 - Dereferencing the iterator will read the next value from the stream
- Write a simple program that uses an istream iterator to read in a series of numbers from the keyboard into a vector and print out the contents of the vector

- Alter the program you wrote in the last exercise, so that it uses an insert iterator to populate the vector

- Make a copy of the final version of the refrigerator class and overloaded << operator from “Printing Out Class Member Data Exercises”
- Rewrite the program to use output iterators to display the refrigerator data and save its state to file