Short Description

Application should read a specified file in a separate thread to a buffer and save the buffer's content to another file through another one thread.

Classes

1. Reader (Thread A)

2. Buffer

3. Writer (Thread B)

1. Reader

- reads data blocks to a specified buffer from a specified file till the end of the file;

2. Buffer

- stores data block;

- provides thread-safe access to memory buffer;

- indicates when buffer is available for reading/writing.

3. Writer

- writes data blocks to a specified file from a buffer.

Algorithm

1. Reader waits till the buffer is empty and available for reading.

2. Reader gets the buffer and reads data block to it.

3. Reader release the buffer and indicates when data block reading is finished.

4. Buffer indicates that data block is full and available for writing.

5. Writer gets the buffer and writes data block to it.

The cycle 1-5 is continuing till the Reader indicates that file reading is complete.

6. Writer receives signal from Reader that reading is complete and closes the output file.