Lab 15

Move Semantics

In this exercise you extend a class to include a move constructor and overloaded move assignment operator. The starter version class follows the "rule of three". The main routine uses a a vector class container to manage storage. The vector class uses move semantics to perform the insertion operation efficiently by moving the elements of the vector instead of copying them.

Suggested time: 30 minutes

Instructions:

1. In the working directory is the starter version, with a test program that exercises populating and inserting objects. A timer is used to calculate the duration in microseconds. Run the program and observe the elapsed time.

2. Start by implementing a move assignment operator:
   BigData &operator=(BigData &&other){ … }

3. Next add a move constructor:
   BigData(BigData &&other) : _data(nullptr), _length(0) { … }

   Tip: If you provide both a move constructor and a move assignment operator for your class, you can eliminate redundant code by writing the move constructor to call the move assignment operator.

4. Run the program and compare the elapsed time to the original version.

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