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Insertion Sort using Binary Search

Summary:

Insertion sort uses **linear search** to find the right place for the next item to insert. Would it be faster to find the place using **binary search** (**reduce number of comparisons**)? We still have to shift 1 item at a time from the largest till the right place.

This program uses binary search on the **already sorted items** to find the place where **the new element should go** and then **shift** the **exact number of items** that need to be shifted and placing the new item in its place. The algorithm works the same, except that instead of comparing and shifting item by item, it **will compare quickly** using **binary search** but it will still shift one by one till the right place (without comparison).

The performance of this algorithm **against the original** insertion sort is plotted in the **attached excel file.**

The project is built using **C++, Code::Blocks**.

Result: