Abstract

We have used two known principles in todays software development scene, namely: contract based programming, advocated by Bertrand Meyer as the creator of Design by Contract$^{\text{TM}}$, and Defensive Programming, described by Barbara Liskov et al. We compared two compilers implemented by using Programming by Contract, a contract based programming principle, and Defensive Programming. The size of each compiler is in the region of 4500 lines of code. The comparison is made by performing measurements on the code.

After completion of the experiment we found no discernible difference in the size or complexity of the source code of the two compilers. We did however come to the conclusion that contract based programming should not be used without automated support. Neither of the two principles could be said to be part of the solution for creating reliable software systems unless the programmers have the discipline to follow the ideas behind the principles.