JAVAR-KAI: Automatic Parallelizing Compiler
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Abstract: This paper proposes an automatic parallelizing compiler, JAVAR-KAI, which exploits parallelisms in a sequential Java program and translates into a multithreaded Java program. JAVAR-KAI compiler implemented two kinds of parallelizations, which are inner loop parallelization and outer loop parallelization. Experimental evaluations of multithreaded Java programs generated by JAVAR-KAI compiler show about 3.5 times speedup in outer loop parallelization and 3.7 times speedup in inner loop parallelization on 4 CPUs shared memory multiprocessors. In addition, experimental implementation and evaluation of onetime thread generation library is also described.