Character stream	_			
		Scanner (lexical analysis))	
Token stream			\leq	
		Parser (syntax analysis))	
Parse tree			\leq	
		Semantic analysis)	
Abstract syntax tree with		_		Front end
annotations (high-level IF)		T		Back end
Control flow graph with		Intermediate code generation		
pseudo-instructions in basic blocks (medium-level IF)				
blocks (medium-level ii)		Local redundancy		24 1:
Modified control flow graph		elimination	ノ	Machine- independent
0 1	*	Global redundancy		
Modified control flow graph		elimination)	
		Loop improvement		
Modified control flow graph			<i>_</i>	,
(Almost) second ly language		Target code generation		
(Almost) assembly language (low-level IF)			\prec	
,		Preliminary instruction scheduling)	
Modified assembly language		mistruction scheduling	\prec	Markins
		Register allocation)	Machine- specific
Modified assembly language			\prec	
		Final instruction scheduling	g)	
Modified assembly language			\prec	
		Peephole optimization)	
Final assembly language	*		ノ _	J