

Automata and Formal Languages (9)

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Slides: KEATS (also home work is there)

While-Language

Stmt → skip
| *Id* := *AExp*
| if *BExp* then *Block* else *Block*
| while *BExp* do *Block*
| write *Id*

Stmts → *Stmt* ; *Stmts*
| *Stmt*

Block → {*Stmts*}
| *Stmt*

AExp → ...

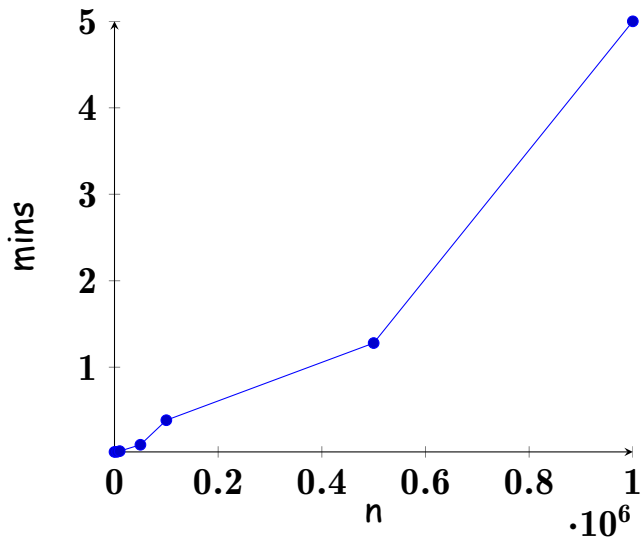
BExp → ...

Fibonacci Numbers

```
1  /* Fibonacci Program
2     input: n
3     output: fib_res */
4
5  n := 90;
6  minus1 := 0;
7  minus2 := 1;
8  temp := 0;
9  while n > 0 do {
10     temp := minus2;
11     minus2 := minus1 + minus2;
12     minus1 := temp;
13     n := n - 1
14 };
15 fib_res := minus2;
16 write fib_res
```

Interpreter

Compiled vs. Interpreted Code



Compiled vs. Interpreted Code

