CS453 Compiler Construction

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Plan for Today

Scanning/Lexing Quiz

PA1 - the Visitor Design pattern

Motivation
– Why study compilers?

Programming Assignment Overview
– The compiler we will be building

Structure of a Typical Compiler

Analysis

character stream

lexical analysis

IR code generation

IR

optimization

code generation

Synthesis

tokens

“words”

“sentences”

target language

AST

semantic analysis
> java TestInterpreter
The following program:
\[
a := 5 + 3;
b := (\text{print}(a, a - 1), 10 \times a);
\text{print}(b)
\]
has max args of 0 and produces the output shown below when run:
"<Interpreter not implemented yet>"

```java
public void visitCompoundStm(CompoundStm s) {
s.stm1.accept(this);
out.println(";");
s.stm2.accept(this);
}
```