Compilers
Lexical Analysis Examples
• FORTRAN rule: Whitespace is insignificant

• VAR1 is the same as VAR1
DO 5  I = 1,25

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1. The goal is to partition the string. This is implemented by reading left-to-right, recognizing one token at a time

2. “Lookahead” may be required to decide where one token ends and the next token begins
if (i == j)
    Z = 0;
else
    Z = 1;
PL/I keywords are not reserved

IF ELSE THEN THEN = ELSE; ELSE ELSE = THEN
DECLARE (ARG1, ..., ARGN)

Is DECLARE is a keyword or an array reference?
• C++ template syntax:
  \texttt{Foo<Bar>}

• C++ stream syntax:
  \texttt{cin >> var;}

The goal of lexical analysis is to
  – Partition the input string into lexemes
  – Identify the token of each lexeme

Left-to-right scan => lookahead sometimes required