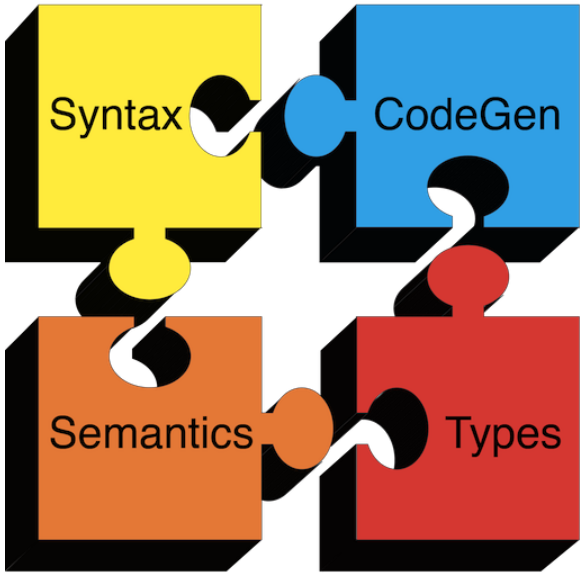


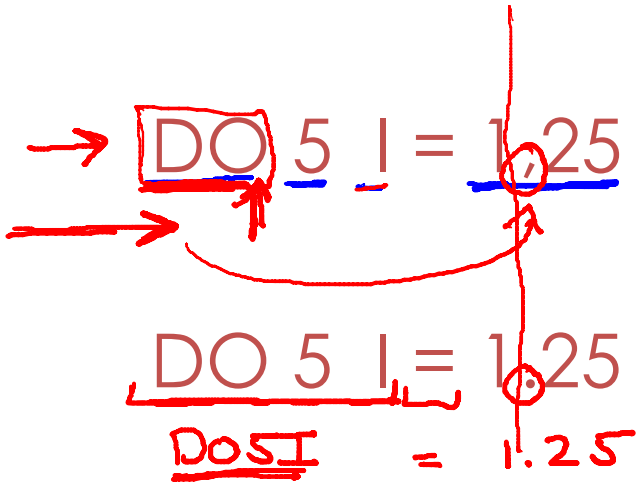
Compilers

Lexical Analysis Examples

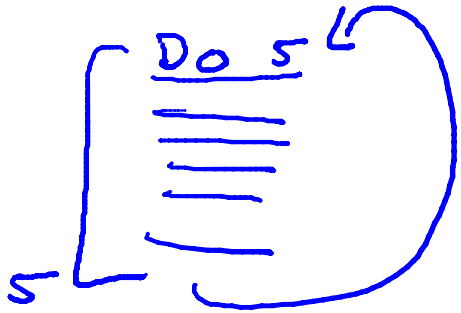
LA Examples

- FORTRAN rule: Whitespace is insignificant
- VAR1 is the same as VA R1

LA Examples



loop



lookahead

LA Examples

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

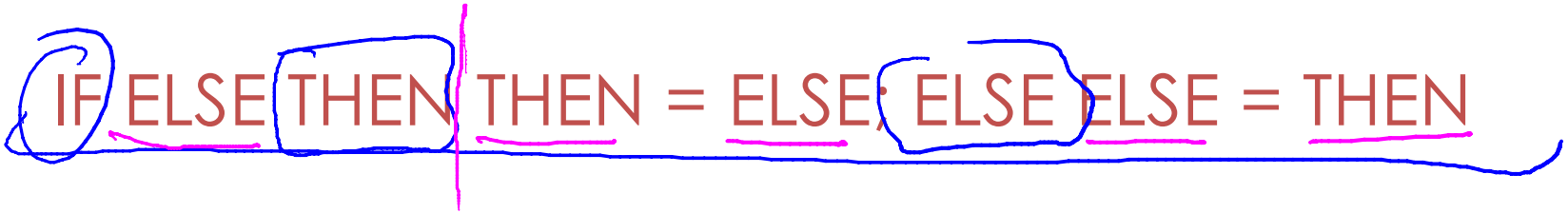
LA Examples

```
if (i == j)
    Z = 0;
else
    Z = 1;
```

LA Examples

Programming Language 1

PL/I keywords are not reserved



LA Examples

Is DECLARE is a keyword or an array reference?

unbounded lookahead

LA Examples

- C++ template syntax:

Foo<Bar>

- C++ stream syntax:

cin >> var;

LA Examples

- 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