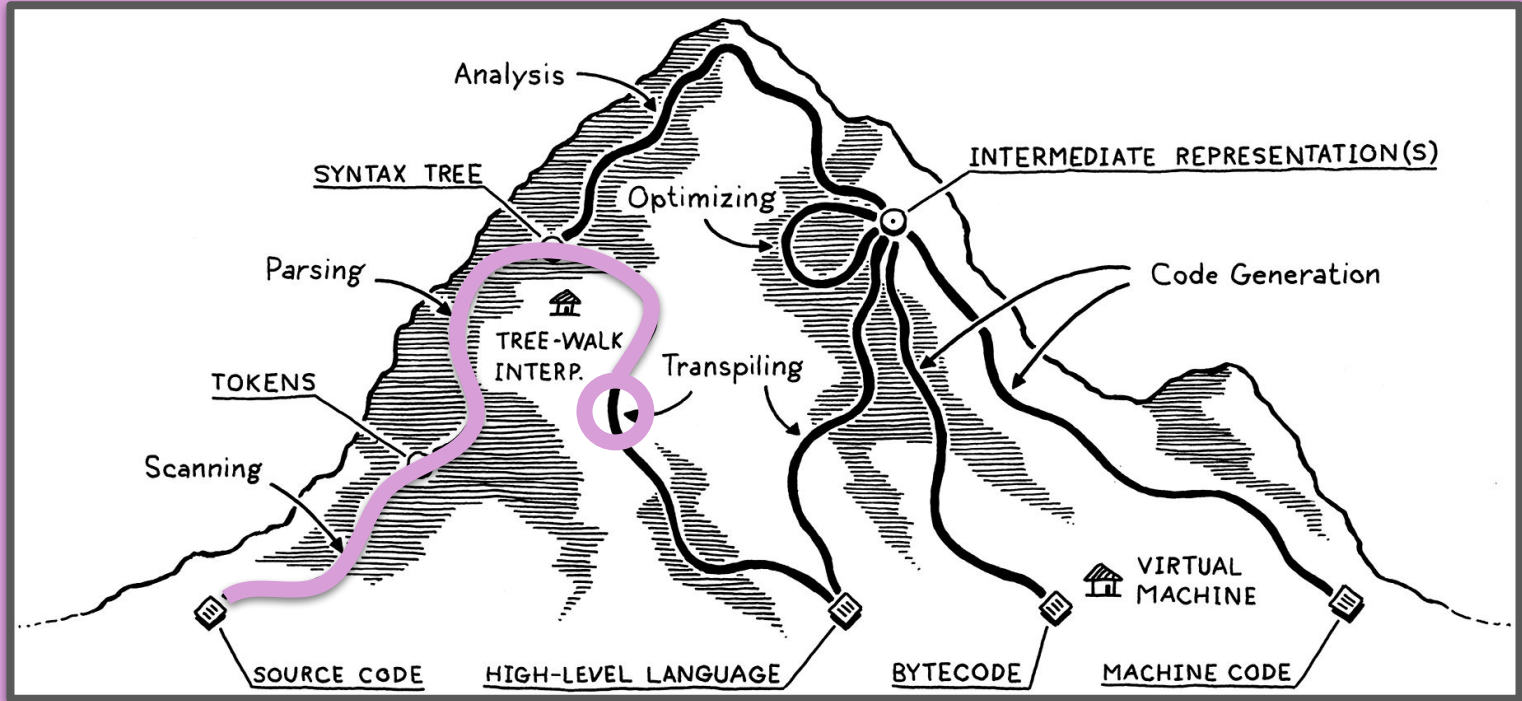


CMPSC 201: PROGRAMMING LANGUAGES



Functions

declaration

```
fun f(i,s,h){
```

```
  var sum = i + s + h;
```

```
  return sum;
```

```
}
```

```
f(1, 2, 3);
```

call

body

Function grammar

Expressions

call \rightarrow primary ("(" arguments? ")")^{*} ;

arguments \rightarrow expression ("," expression)^{*} ;

Function grammar

Statements

declaration \rightarrow funDecl | varDecl | statement ;

funDecl \rightarrow "fun" function ;

function \rightarrow IDENTIFIER "(" parameters? ")" block ;

parameters \rightarrow IDENTIFIER ("," IDENTIFIER)* ;

return \rightarrow "return" expression? ";" ;

Environmental impact

```
fun f(i,s,h) {
```

```
  var sum = i + s + h;
```

```
  return sum;
```

```
}
```

```
f(1, 2, 3);
```

"arity"

Each has an
"arity" of 3

```
fun add(a, b, c) { ... }
```

```
add( 1, 2, 3 );
```

ENVIRONMENT

a → 1

b → 2

c → 3

Batteries included

Lox

1

Python

70

Batteries included

Lox


`clock()`

Arity: 0



Python

`abs(), dir(), filter(),
map(), min(), max(), pow(),
print(), sorted(), str()...`



Arity: various