

$$\text{tq} :$$

# A Comprehensive Disciplinary Language for Materials Science

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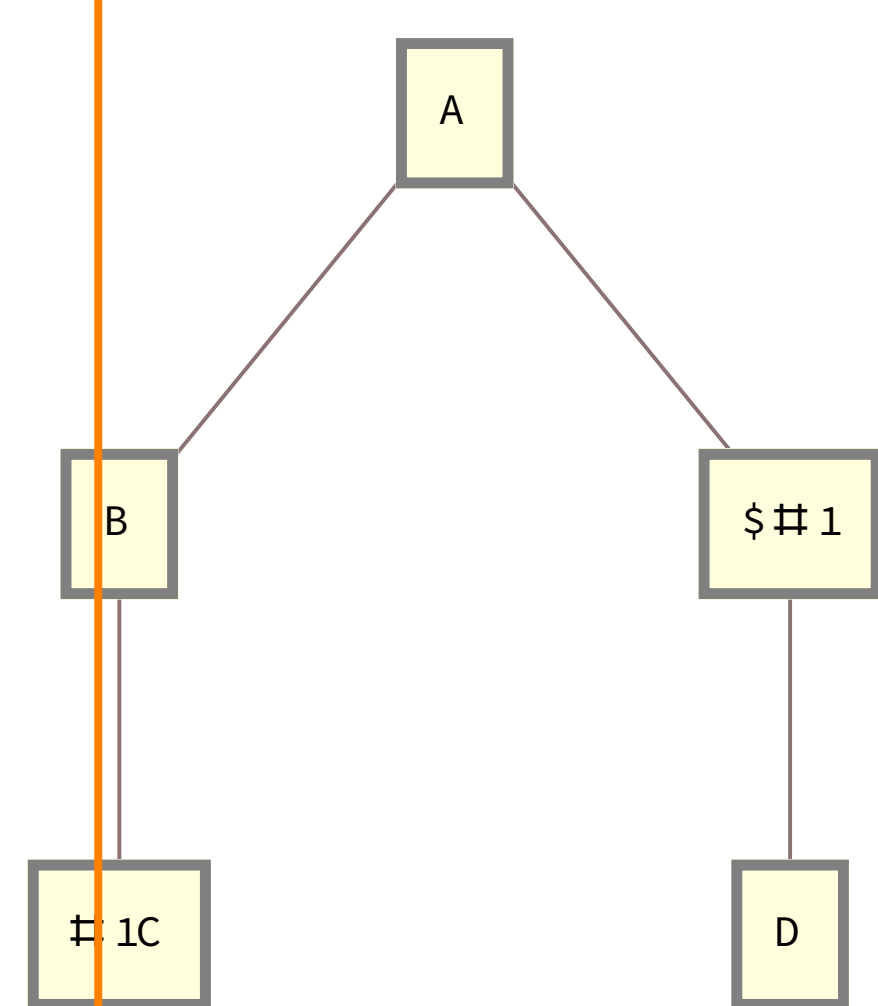
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# Parsing

## Parsing tree

Interpreted structure

## Statements



Input:

$$A(B(\#1C), \$\#1(D))$$

Output:

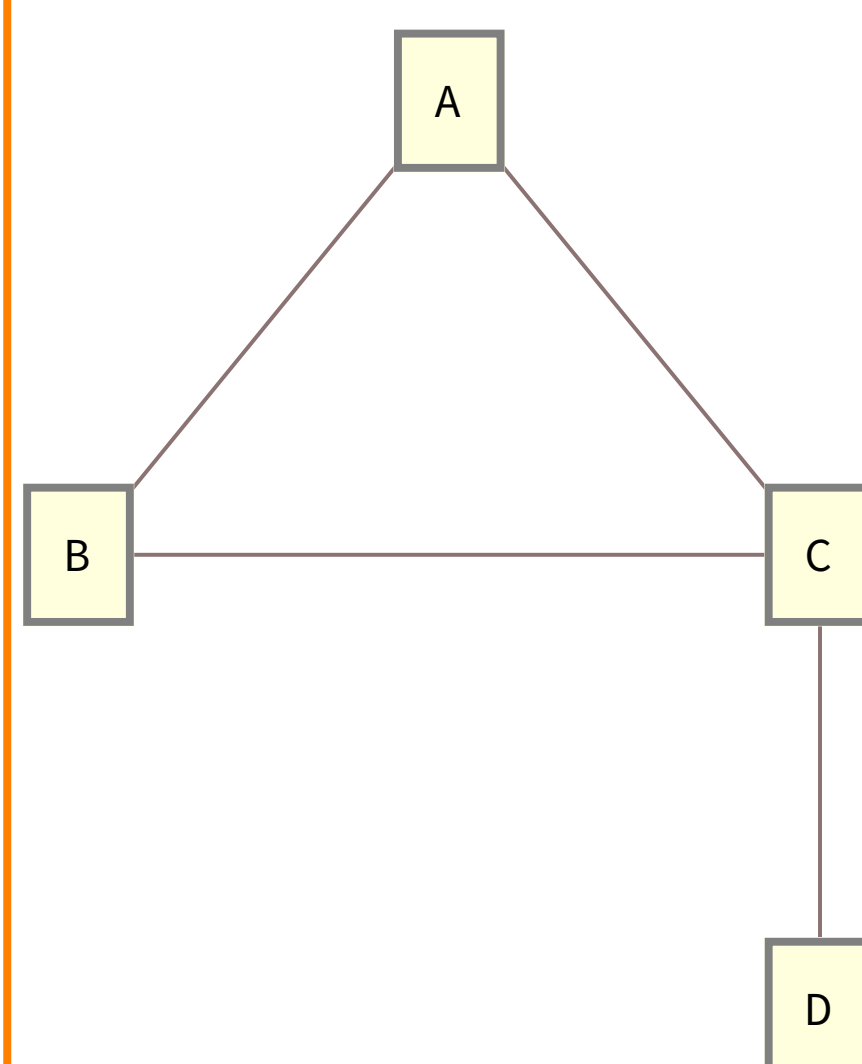
$$A(B(\#1C),\$ \#1@ \#1C(D))$$

## Parsing graph

## Implicit graph

Interpreted structure

## Statements



Input:

$$A(B(\#1C), \$\#1(D))$$

Adjacency matrix:

$$[:A:0], 1, 2, 3, \dots$$
$$,[:B:1],2,,$$
$$,,[:\#1C:2],,,$$
$$,,,[:\$ \# 1:3 \rightarrow 2], 4,$$
 $..., [:D:4],$ 

## Binding and reforming data

Interpreted structure

## Statements

Input:

```
(#1$1[2],#2$2[2],$3[3](#4$4[2]));  
$PI$($#1,Quantity($#4,$#2))
```

Data:

Length, Weight, mm, kg, 1,2, 322,4,  
5,68

Output:

```
((Length,Quantity(1,mm)),
 (Weight,Quantity(2,kg))),
((Length,Quantity(322,mm)),
 (Weight,Quantity(4,kg))),
((Length,Quantity(5,mm)),
 (Weight,Quantity(68,kg)))
```

