

```
data Module = .....  
data Class   = .....  
data Method  = .....  
data Stat    = .....  
data Expr    = .....  
data Decl    = .....  
data Type    = .....
```

```
type ESem a b c d e f  
= ( (...,...,...)   
    , (...,...)   
    , (...,...,...,...,...,...)   
    , ...
```

```
compSem :: ESem
```

Attributes
that are passed
top-down

```
(..... → .....)  
(..... → .....)  
(..... → .....)  
(..... → .....)  
(..... → .....)  
(..... → .....)  
(..... → .....)
```

Attributes
that are
generated
bottom-up

```
compSem = (...dozens of functions...) .....
```