Compiler Construction
Overextending with the bois

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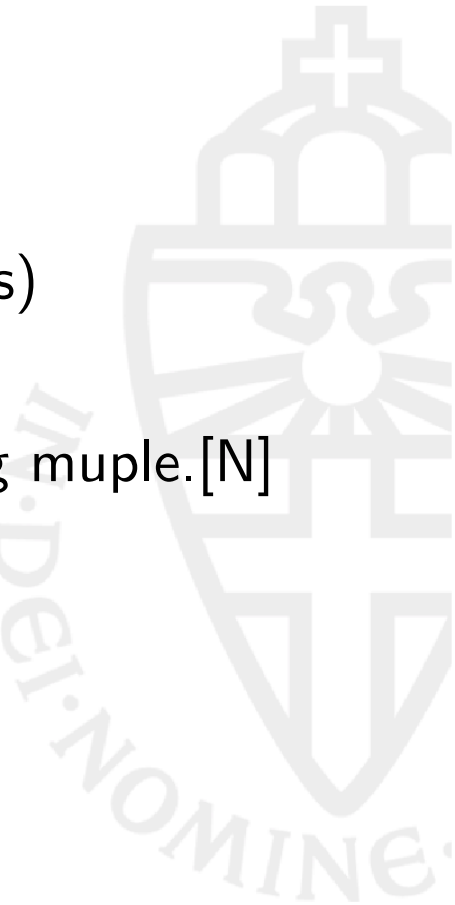
Extension idea

- More complex data structures
- Makes it easier for the user
- More understandable programs
- We added 2 aspects to SPL:
  - Muples
  - Structs

Muples

- Muples are tuples with more than two items
- Can be arbitrarily large (within memory constraints)
- Size is known at compile-time
- The Nth item of a muple can be accessed by using muple.[N]



Structs

- Similar to classes in Java
- Structs are user-defined
- Structs have variables and functions
- Both can be called via the struct reference
- Every struct has to have at least one constructor

Implementation

- Muples are simply tuples with more memory space allocated to them
- Struct variables are similar to muples, but are accessed with an id instead of a number
- Struct functions are similar to normal functions, but they use a different local memory
- To do this, we introduced an idea of domain to our compiler

Domain

- Domains are blocks of variable and function definitions
- Everything will normally be in the global domain
  - This includes struct declarations, normal functions, global variables
- Struct functions will be executed in the domain of their struct

Difficulties

- Implementing the domains
- Finalizing the rest of the code

Fun Metrics

LOC	3616	4474	LOC is a bad metric
Word count	9684	12396	Just like this
Character count	98470	124002	Except for this one
Slides made	17	25	34
Coffee consumed	0	Still 0	We just don't drink coffee
Sanity lost	A bunch	Even more	Unhinged
Experience	Priceless	Priceless*2	Mastercard

Questions ?