

S.M. for  
class  
members

S.M. for  
instance  
method  
implementations

Static memory  
for vTables

Static memory  
for classes

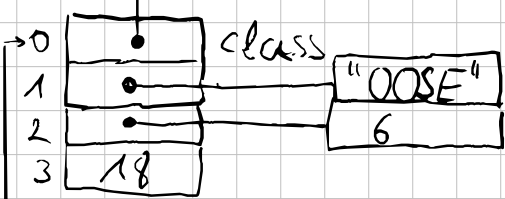
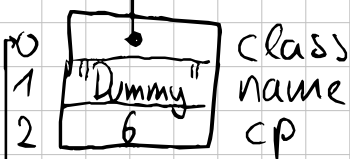
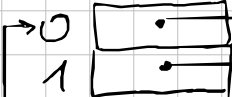
Heap

Stack

Module::get Name()

Module::register(s: Student)

Lecture::get Name()



module

oose

The variables "module" and "oose" are stored on the stack with pointers to their respective class instances which are stored on the heap. Since there are only non static

class properties, all of them are stored on the heap. The class method implementations on the other hand are stored on the static memory for class method implementations and can be accessed via pointers stored in the respective vTables.

The method `getName` is overridden by the `Lecture` class. This is achieved by replacing the pointer in the vTable of the class `Lecture`, which would normally point to the implementation of the `getName` method of the `Module` class. Now the same entry in the vTable points to a different implementation of the `getName` method. Therefore the method `getName` of the `Lecture` class varies from the one of the `Module` class.