1 Daimi Scheme

VM

VM state

- env-lex   lexical environment
- env-temp   temporary values. Some saved in activation Record
- env-lib   library functionss
- env-glo   global variables
- aux-vec   Vector. Holds arguments.
- aux-res   1-element vector with return value
- cont   Continuation records list
- ip
  - ip
  - env-lex
  - temp

Values

```
struct
{
    type
    union
    {
        data
        ;
    }
}
```

we also used tagging
to reduce memory consumption

[1] Pointer

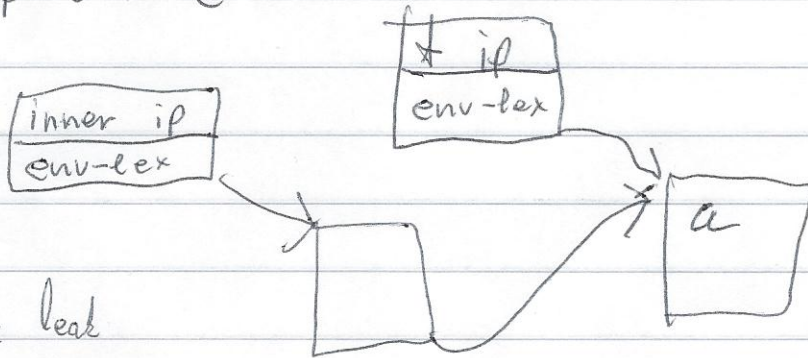[0] 31 bit integer
- can do many operations
  without shifting

Closures

Closure
- ip
- env-lex

```
(define f
  (lambda (a)
    (lambda ()
      a )))
```

Deep closure:

- Memory leak
+ Simple
- Variable search

Flat:

- might not see changes. use 1 level of indirection (like Lua)
+ Fast

Continuation closure:
- ~~Keep~~ Hold cont register
- when restore
  - cont restored
  - aux-vec[0] to aux-res[0]