

```

# Implemented as a list

mystack <- function(){
  stack <- list()

  # push(v) Push a value onto the stack
  push <- function(v){
    stack[[length(stack)+1]] <- v
  }

  # peek() Return the top of the stack
  peek <- function(){
    stack[[length(stack)]]
  }

  # show() Show the complete stack
  show <- function(){
    stack
  }

  # pop() Return the top value and remove from stack
  pop <- function(){
    ret <- stack[[length(stack)]]
    stack[[length(stack)]] <- NULL
    ret
  }

  list(push=push, peek=peek, pop=pop, show=show)
}

s <- mystack()

ls(env=fn_env(s$push))

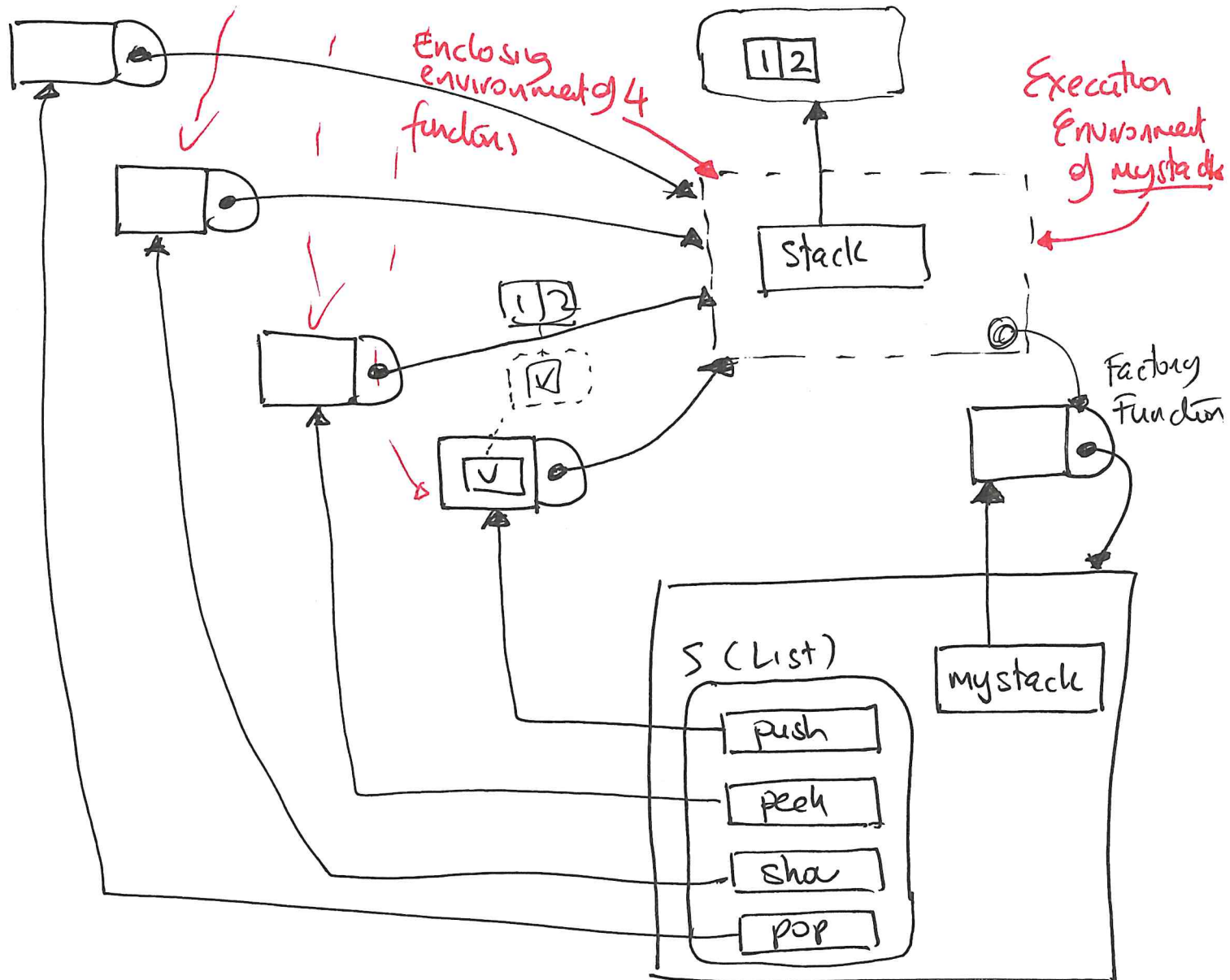
s$push(1:2)
fn_env(s$push)$stack
s$push(99)
s$show()

```

WEB Link for Code

The "factory" creates 4 functions.

This is the closure state.
Accessible by all 4 functions.



Factory Function

RGlobal

S is
A List of
Functions

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$\leftarrow S = \text{mystack}() \rightarrow$ A Function Factory

$S\$push(1:2)$