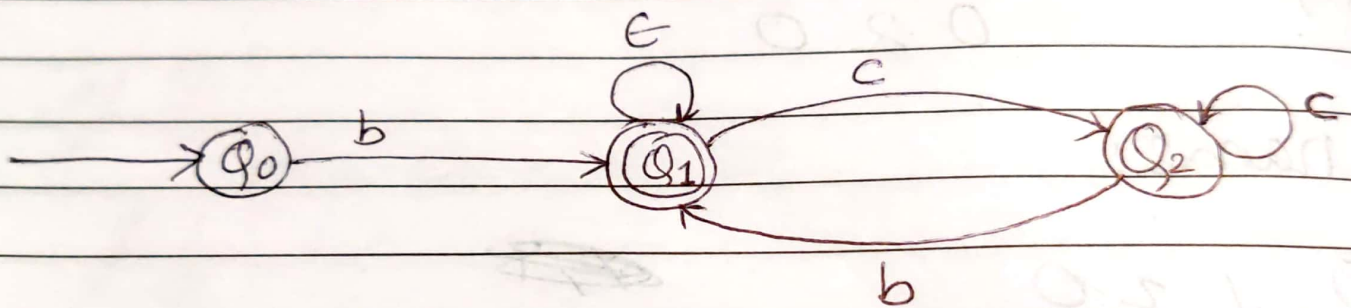


1] The Regular expression that describes L is

~~aab~~ $(a^+b^+)^+$

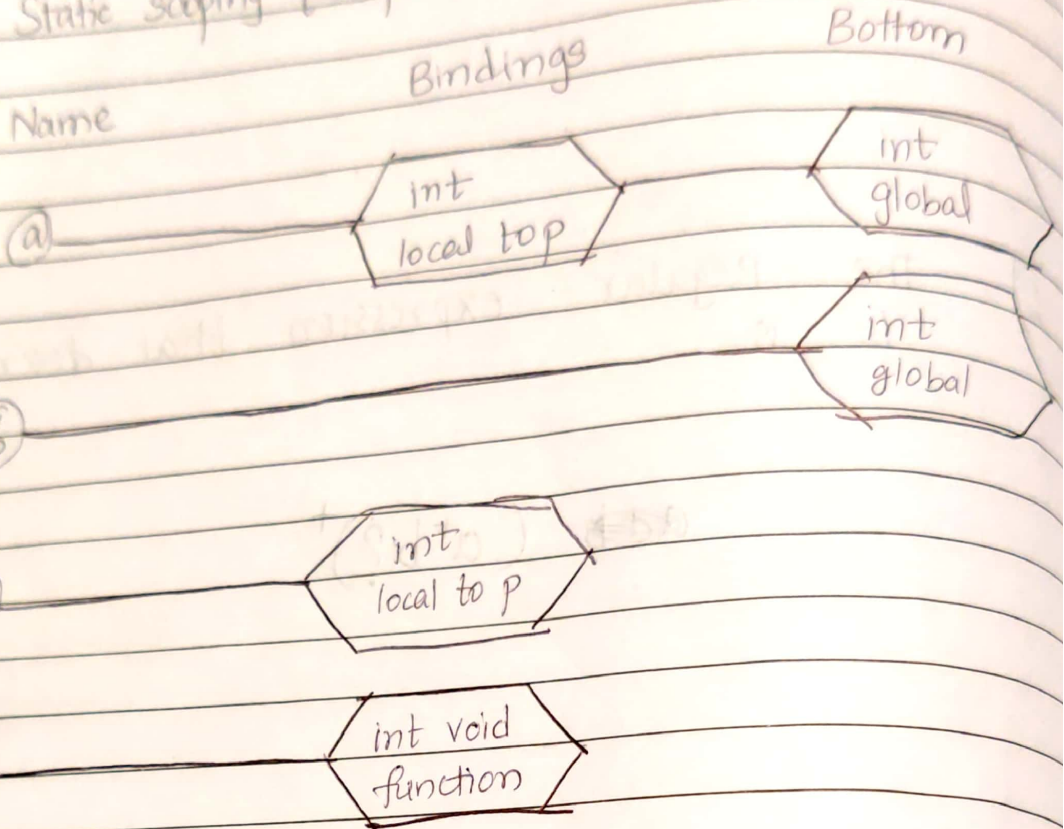
2) Automaton that accepts regular expression $b(c+b)^*$



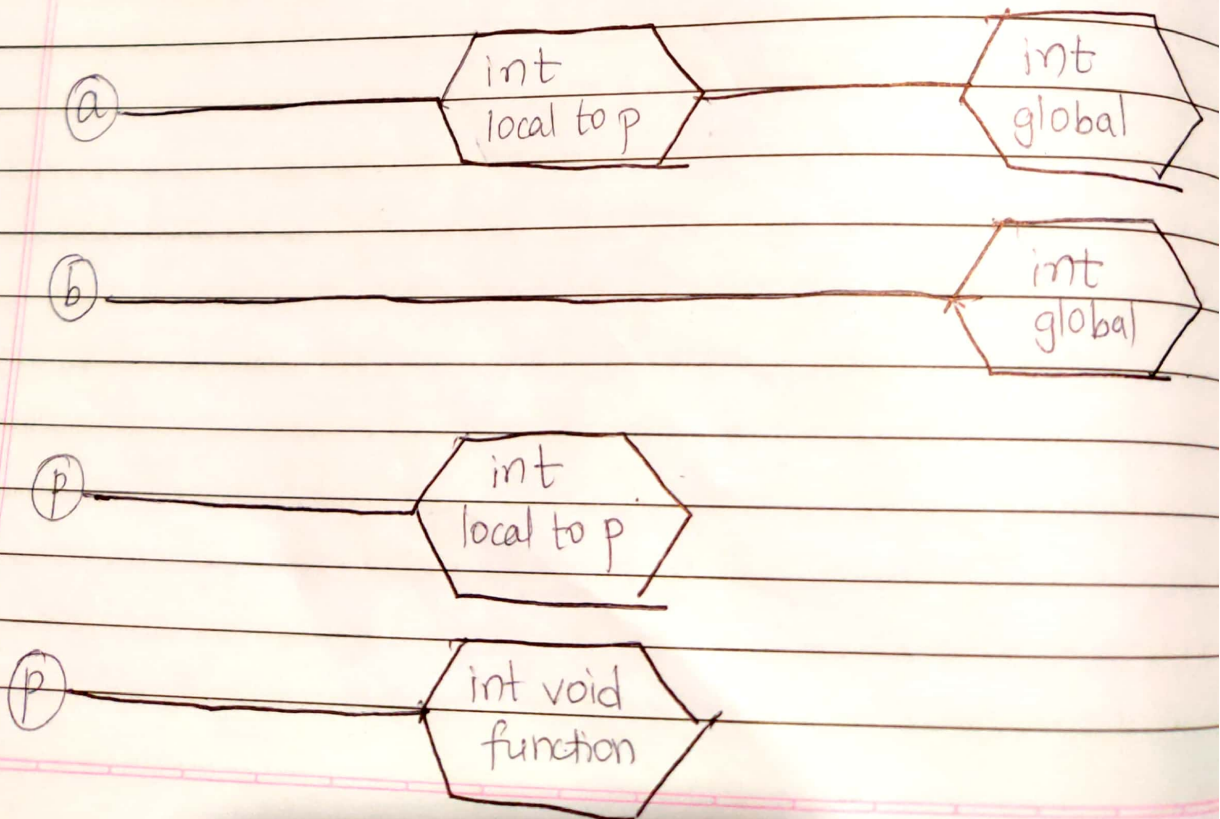
3]

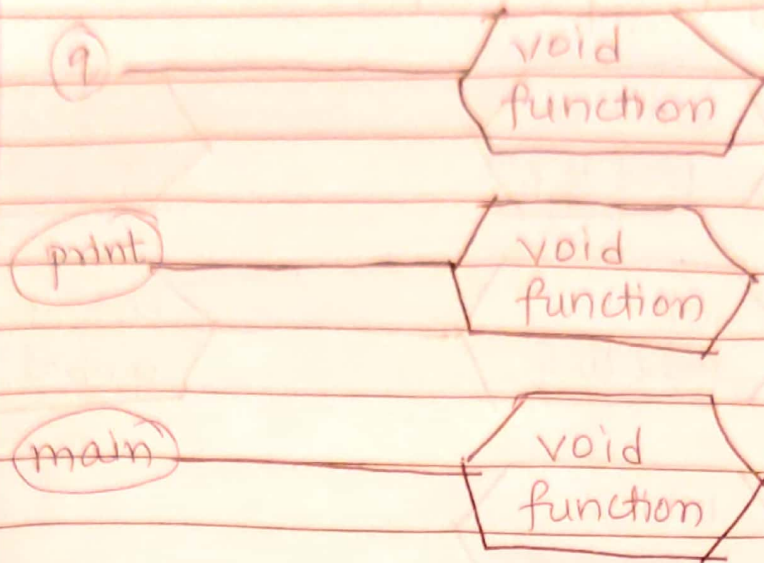
Symbol table at point 1

Static scoping [At point 1]

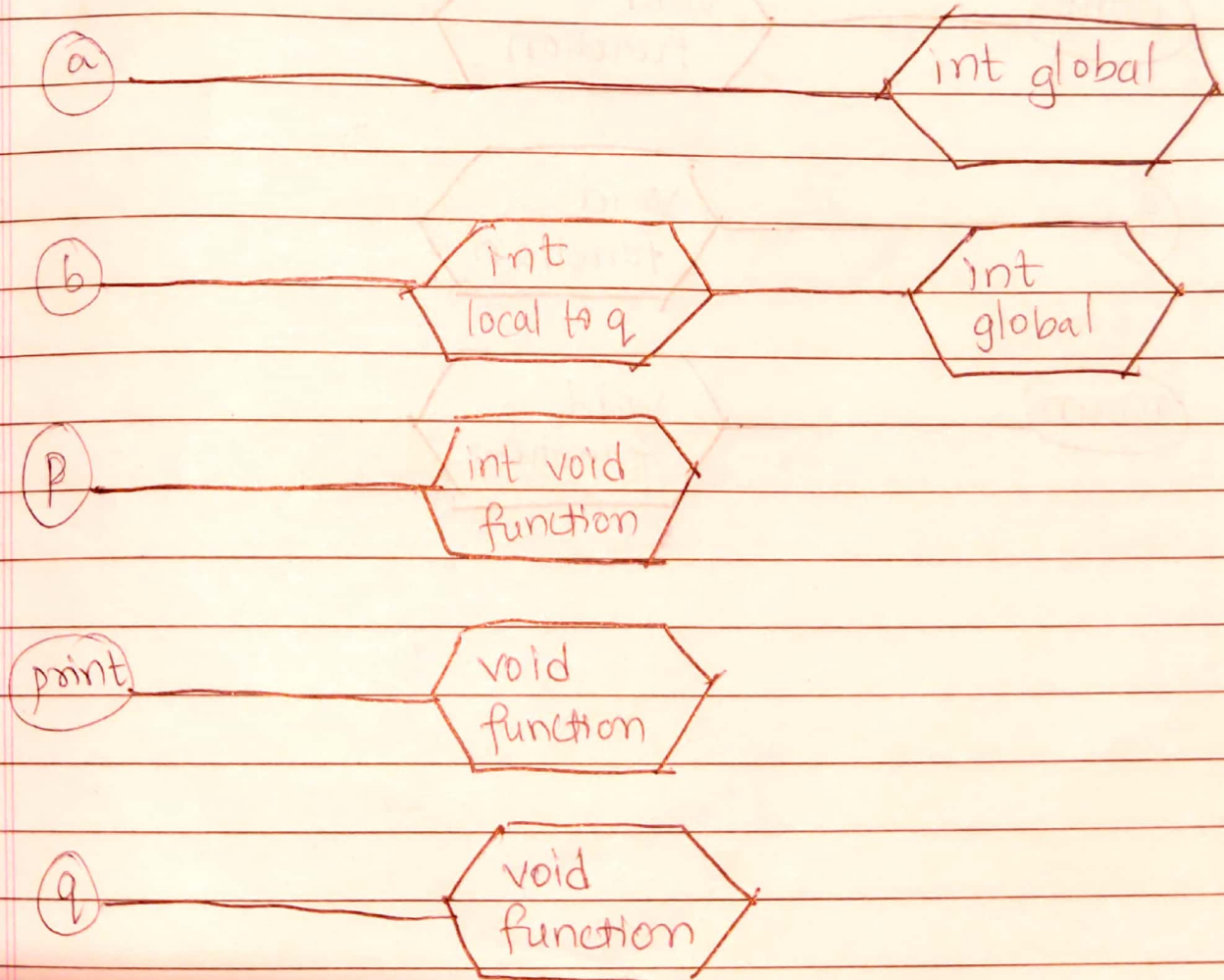


Dynamic scoping [At point 1]





Static scoping [At point 2]



Dynamic Scoping [At point 2]

(a)

int = 0
local to p

int = 2
global

(b)

int
local to q

int = 1
global

(p)

int = 2
local to p

(p)

int
function

(print)

void
function

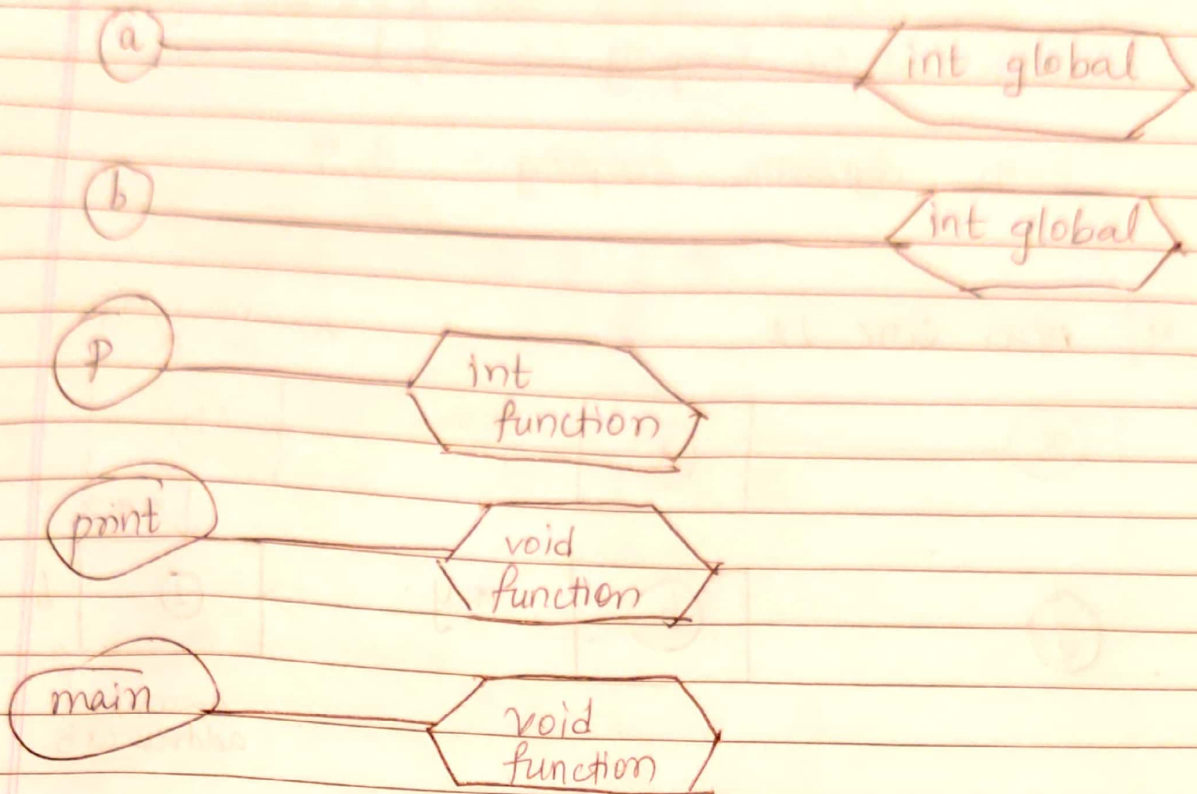
(q)

void
function

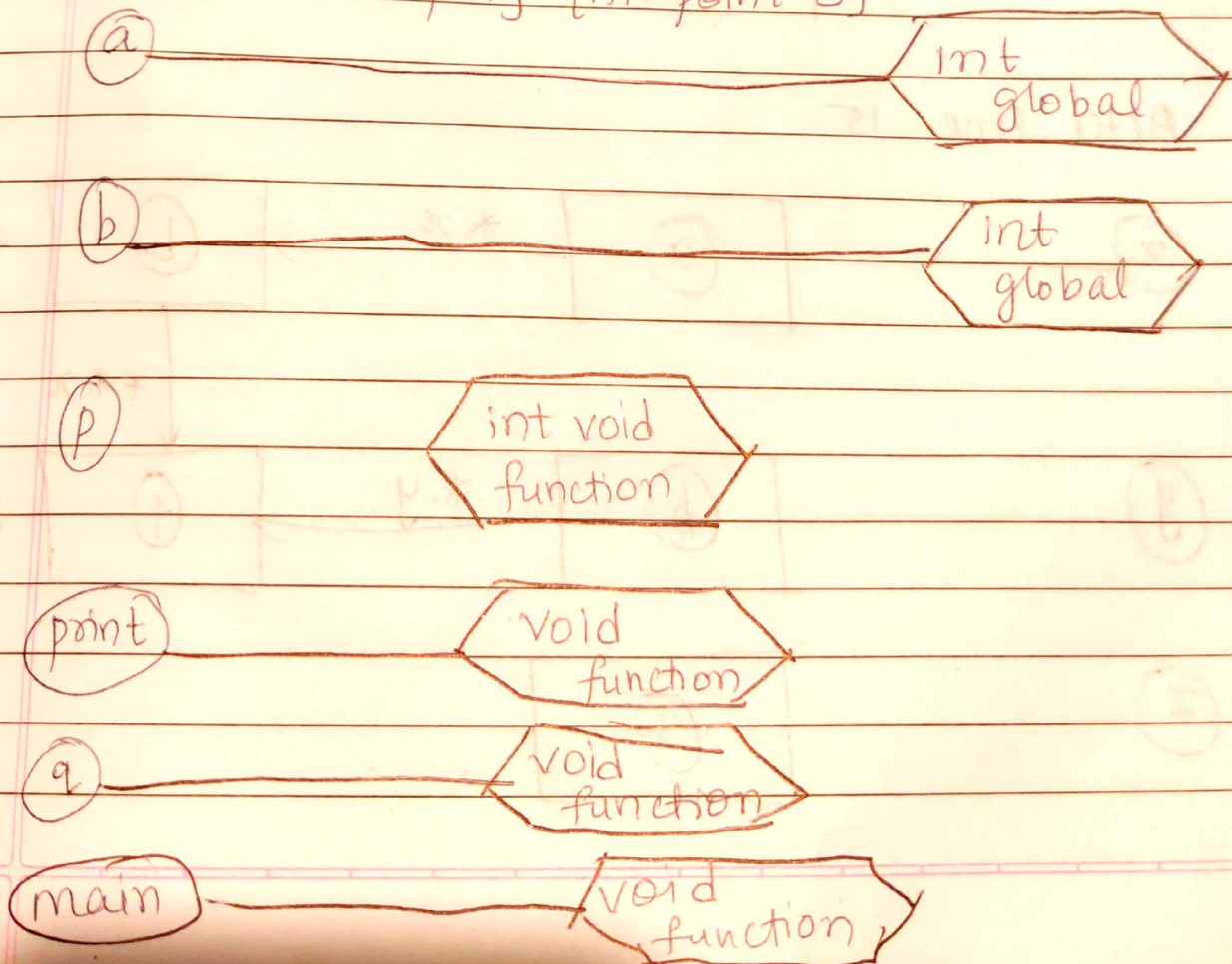
(main)

void
function

Static Scoping [At point 3]



Dynamic Scoping [At point 3]

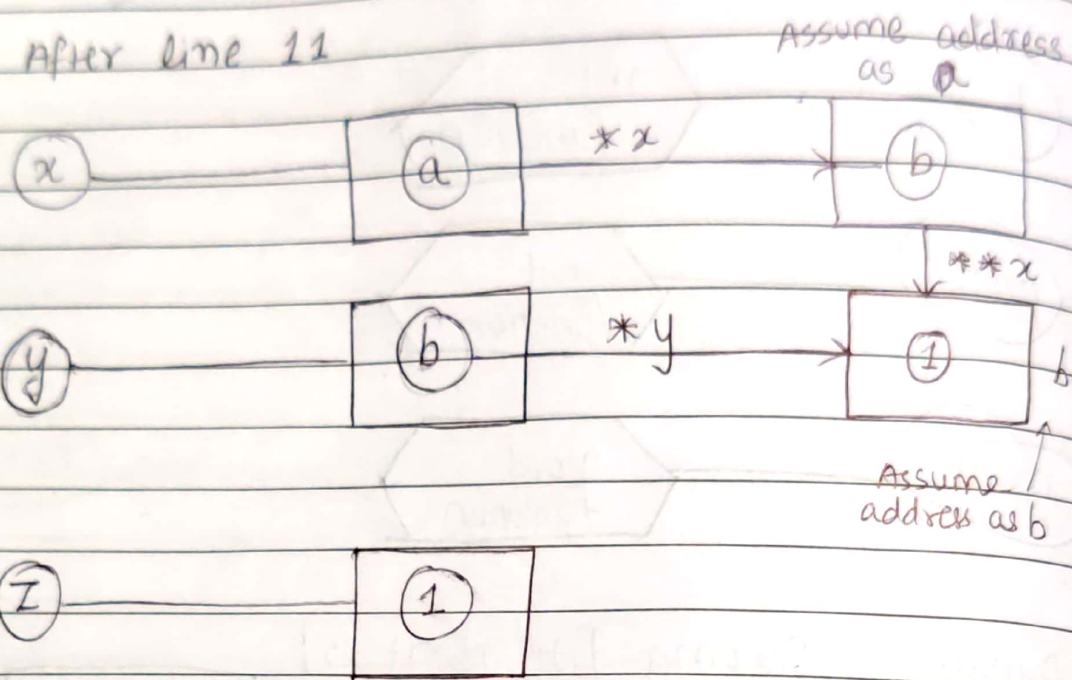


Output:

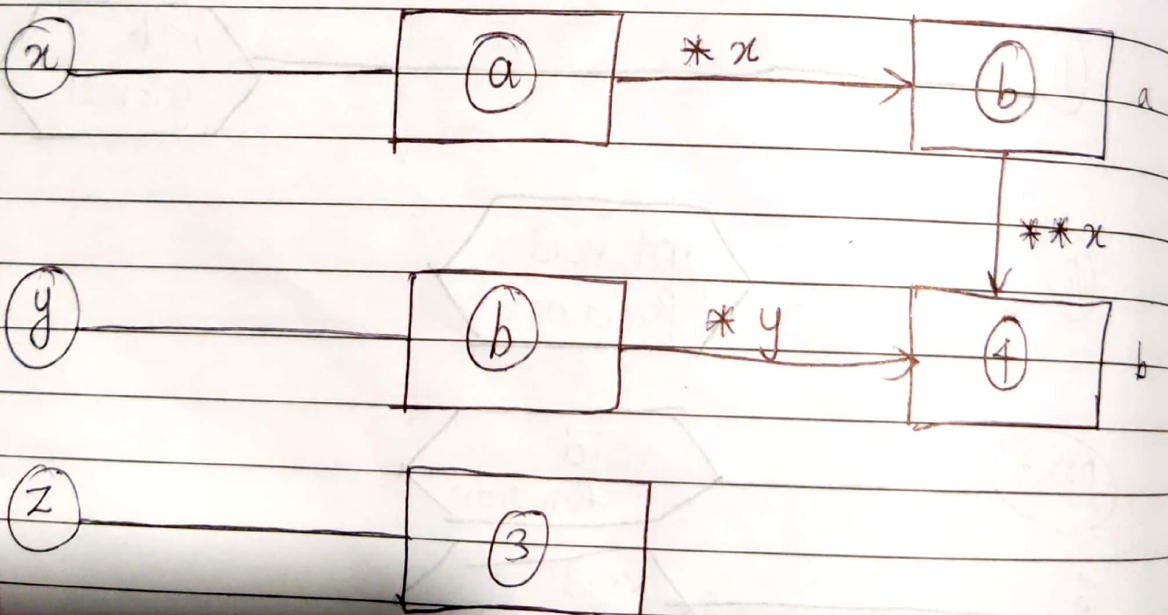
With Static Scoping - 3, 1

With dynamic scoping - 3, 4

4] After line 11



After line 15



Output of program - 1, 1, 3
*y and **x are aliases of each other

5)

call by value:

Output: 1 2 1 0
2 1 0

Call by Reference:

Output: 1 2 1 0
2 0 0

Call by Name:

Output: 0 2 1 2
0 1 2