

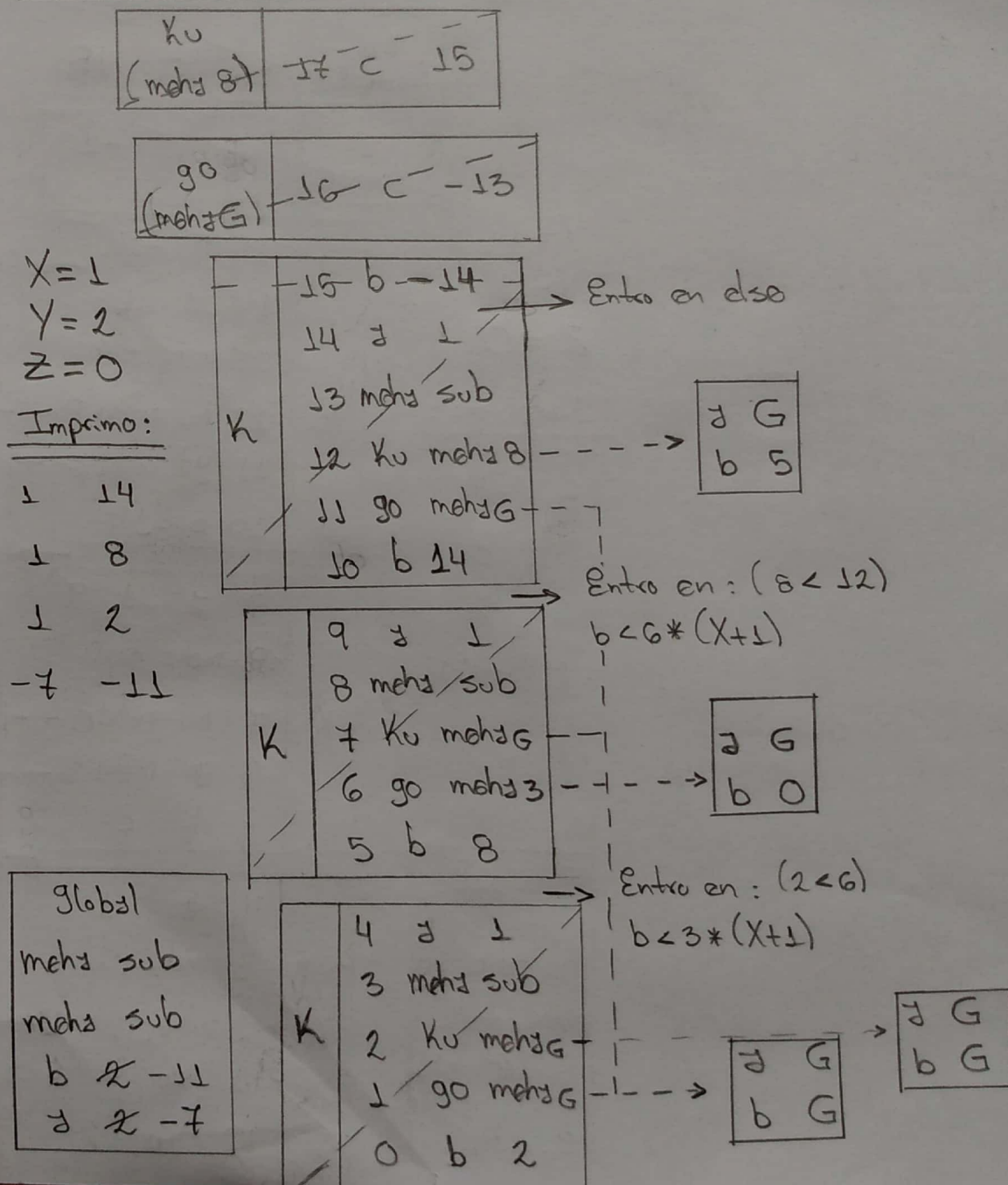
# Programa en pseudocódigo:

```

int a = X + 1, b = Y;
sub mehs (int c) {
    b := a + c;
}
sub K (int b, sub go, sub ku) {
    sub mehs (int c) {
        a := b - c;
    }
    int a = Z + 1;
    if (b < 3 * (X + 1)) {
        K (b + 3 * (X + 1), mehs, go);
    } else if (b < 6 * (X + 1)) {
        K (b + 3 * (X + 1), Ku, mehs);
    } else {
        int b = Z - b;
        go (a + b);
        ku (a - b);
    }
    print (a, b);
}
K (a, mehs, mehs);
print (a, b);

```

## Alcance estático - asociación profunda:



# Programa en pseudocódigo:

int  $a = X + 1$ ,  $b = Y$ ;

sub mehs (int c) {

$b := a + c$ ;

}

sub K (int b, sub go, sub Ku) {

sub mehs (int c) {

$a := b - c$ ;

}

int  $a = Z + 1$ ;

if ( $b < 3 * (X + 1)$ ) {

K ( $b + 3 * (X + 1)$ , mehs, go);

} else if ( $b < 6 * (X + 1)$ ) {

K ( $b + 3 * (X + 1)$ , Ku, mehs);

} else {

int  $b = Z - b$ ;

go ( $a + b$ );

Ku ( $a - b$ );

}

print ( $a, b$ )

}

K ( $a$ , mehs, mehs);

print ( $a, b$ )

## Alcance dinámico - Asociación profunda

Ku (mehs 8)	17	15
----------------	----	----

go (mehs G)	16	-13
----------------	----	-----

$X = 1$

$Y = 2$

$Z = 0$

Imprimo:

1 14

9 8

1 2

2 -11

15	14	
14	1	
13	mehs	sub
12	Ku	mehs 8
11	go	mehs G
10	b	14

→ Entro en else

a	9
b	5

→ Entro en: ( $a < 12$ )  
 $b < 6 * (X + 1)$

9	a	9
8	mehs	sub
7	Ku	mehs G
6	go	mehs 3
5	b	8

a	4
b	0

→ Entro en: ( $2 < 6$ )  
 $b < 3 * (X + 1)$

4	a	1
3	mehs	sub
2	Ku	mehs G
1	go	mehs G
0	b	2

a	G
b	G

a	G
b	G

global
K sub
mehs sub
b 2 -11
a 2

## Programa en pseudocódigo:

```
int x = X + 1, b = Y;
```

```
sub mehs (int c) {
```

```
    b := x + c;
```

```
}
```

```
sub K (int b, sub go, sub Ku) {
```

```
    sub mehs (int c) {
```

```
        x := b - c;
```

```
    }
```

```
    int z = Z + 1;
```

```
    if (b < 3 * (X + 1)) {
```

```
        K (b + 3 * (X + 1), mehs, go);
```

```
    } else if (b < 6 * (X + 1)) {
```

```
        K (b + 3 * (X + 1), Ku, mehs);
```

```
    } else {
```

```
        int b = Z - b;
```

```
        go (x + b);
```

```
        Ku (x - b);
```

```
    }
```

```
    print (x, b)
```

```
}
```

```
K (x, mehs, mehs);
```

```
print (x, b)
```

## Alcance estático - Asociación superficial.

Ku (mehs)	17	c	10
--------------	----	---	----

go (mehs)	16	c	-13
--------------	----	---	-----

X = 1

Y = 2

Z = 0

Imprimo:

1 14

1 8

1 2

-21 2

global	
K sub	
mehs sub	
b 2	
x -21	

K	15	b	-14	-11
	14	x	1	
	13	mehs	sub	
	12	Ku	mehs	8
	11	go	mehs	6
	10	b	14	

K	9	x	1	
	8	mehs	sub	
	7	Ku	mehs	6
	6	go	mehs	3
	5	b	8	

K	4	x	1	
	3	mehs	sub	
	2	Ku	mehs	6
	1	go	mehs	6
	0	b	2	

Entro en else

Entro en: (8 < 12)  
b < 6 \* (X + 1)

x	G
b	15

Entro en: (2 < 6)  
b < 3 \* (X + 1)

x	G
b	15



# Programa en pseudo código:

int  $a = X + 1$ ,  $b = Y$ ;

sub mehs (int  $c$ ) {

$b := a + c$ ;

}

sub K (int  $b$ , sub  $go$ , sub  $Ku$ ) {

sub mehs (int  $c$ ) {

$a := b - c$ ;

}

int  $a = Z + 1$ ;

if ( $b < 3 * (X + 1)$ ) {

K ( $b + 3 * (X + 1)$ , mehs,  $go$ );

} else if ( $b < 6 * (X + 1)$ ) {

K ( $b + 3 * (X + 1)$ ,  $Ku$ , mehs);

} else {

int  $b = Z - b$ ;

go ( $a + b$ );

Ku ( $a - b$ );

}

print ( $a, b$ )

}

K ( $a$ , mehs, mehs);

print ( $a, b$ )

## Alcance dinámico - Asociación superficial

Ku (mehs)	17	c	13
--------------	----	---	----

go (mehsG)	16	c	-13
---------------	----	---	-----

$X = 1$

$Y = 2$

$Z = 0$

Imprimo:

-25 14

1 8

1 2

2 2

	15	b	-14	-12
	14	a	1	-23
	13	mehs	sub	
K	12	Ku	mehsG	
	11	go	mehsG	
	10	b	14	

Entro en else.

	9	a	1	
	8	mehs	sub	
K	7	Ku	mehsG	
	6	go	mehsG	
	5	b	8	

Entro en: ( $8 < 12$ )  
 $b < 6 * (X + 1)$

a	14
b	15

Global

K sub  
mehs sub

b 2

a 2

	4	a	1	
	3	mehs	sub	
K	2	Ku	mehsG	
	1	go	mehsG	
	0	b	2	

Entro en: ( $2 < 6$ )  
 $b < 3 * (X + 1)$

a	14
b	15